PUBLIC

SECTION 83D

REQUEST FOR PROPOSAL APPLICATION FORM

MAINE CLEAN POWER CONNECTION

APPLICANT INFORMATION

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Table of Contents

1. Frequently Used Terms iii
2. Acronyms iii
3. CERTIFICATION, PROJECT AND PRICING DATA 1
4. EXECUTIVE SUMMARY OF THE PROPOSAL (INCLUDING THE BASE PROPOSAL AND ANY ALTERNATIVE PROPOSALS) 2
   - I. Overview 2
   - II. The Maine Clean Power Connection Project 6
     - A. The MCPC Clean Energy Generation 6
     - B. The MCPC Transmission Project 8
     - C. The MCPC Joint Bids 12
   - III. MCPC Costs and Benefits 19
     - A. The MCPC Transmission Pricing Proposal 19
     - B. The Direct Contract and Indirect Economic Benefits of the MCPC 27
     - C. The Economic Development and Employment Benefits of the MCPC 33
     - D. The Qualitative Benefits of the MCPC 33
5. OPERATIONAL PARAMETERS 42
6. ENERGY RESOURCE AND DELIVERY PLAN 48
7. FINANCIAL/LEGAL 53
8. SITING, INTERCONNECTION, AND DELIVERABILITY 71
9. ENVIRONMENTAL ASSESSMENT, PERMIT ACQUISITION PLAN AND NEW CLASS I RPS CERTIFICATION 93
10. ENGINEERING AND TECHNOLOGY, COMMERCIAL ACCESS TO EQUIPMENT 118
11. OPERATION AND MAINTENANCE 130
12. PROJECT SCHEDULE 135
13. PROJECT MANAGEMENT/EXPERIENCE 139
14. EMISSIONS 149
15. CONTRIBUTION TO EMPLOYMENT AND ECONOMIC DEVELOPMENT AND OTHER DIRECT AND INDIRECT BENEFITS 155
16. ADDITIONAL INFORMATION REQUIRED FOR TRANSMISSION PROJECTS (AND ALL SYSTEM UPGRADES ASSOCIATED WITH PROPOSED TRANSMISSION 170
17. PROJECT) 170
18. EXCEPTIONS TO FORM PPA AND OR VARIATIONS FROM THE PROPOSED TARIFF REQUIREMENTS 186

Confidential Information

In accordance with Section 1.7.4 of the RFP, CMP clearly identifies all confidential and proprietary information including pricing that appears in the following proposal, including Exhibits. To clearly identify all such information, CMP has either (1) marked text containing confidential information in yellow highlight; or (2) marked the top of pages containing confidential information as **CONFIDENTIAL**. CMP has not designated as confidential any materials that do not merit such treatment in its judgment.

Frequently Used Terms

Term	Definition
MCPC Clean Energy Generation Developers	NextEra Bidding Affiliates and EDF Renewable Energy, Inc.
MCPC Clean Energy Generation	Clean Energy Generation included in Joint Bids [redacted]
Maine Clean Power Connection Project	Collective term for the MCPC Transmission Project and the MCPC Clean Energy Generation
MCPC Transmission Project, the Project, or MCPC	Transmission included in Joint Bids [redacted]
NextEra Bidding Affiliates	Penobscot Wind, LLC, Moose Wind, LLC, and NextEra Energy Resources Acquisitions, LLC

Acronyms

Acronym	Full Name
AC	Alternating Current
ACEEE	American Council For An Energy Efficient Economy
ADSS	All Dielectric Self Supporting
AFUDC	Allowance For Funds Used During Construction
ANSI	American National Standards Institute
APE	Area of Potential Effect
ASCE	American Society of Civil Engineers
AT	Appalachian Trail
B/C Ratio	Benefit/Cost Ratio
CCIS	Capacity Capability Interconnection Standard
CCVT	Coupling Capacitor Voltage Transformers
CEA	Corporate Environmental Advisors
CEC	Clean Energy Credit
CES ACP	Clean Energy Standard Alternative Compliance Payment
CETU	Cluster Enabling Transmission Upgrades
CH_4	Methane
CMP	Central Maine Power Co.

Acronym	Full Name
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
CPCN	Certificate of Public Convenience and Necessity
CPPD	Certification, Project, and Pricing Data
CWA	Clean Water Act
DOER	Massachusetts Department of Energy Resources
DFR	Digital Fault Recording
DG	Distributed Generation
DOT	Maine Department of Transportation
DPU	Massachusetts Department of Public Utilities
EDF RE	EDF Renewable Energy, Inc.
EPA	U.S. Environmental Protection Agency
ETU	Elective Transmission Upgrade
FCAQ	Forward Capacity Auction Qualification
FERC	Federal Energy Regulatory Commission
FLIR	Forward-Looking Infrared
FPA	Federal Power Act

Acronym	Full Name
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GWSA	Global Warming Solutions Act
IEEE	Institute of Electronics and Electronics Engineers
ISO-NE	ISO-New England, Inc.
KOP	Key Observation Point
kW	Kilowatt
kV	Kilovolt
LEAN	Low-Income Energy Affordable Network
LIHEAP	Low-Income Home Energy Assistance Program
LMP	Locational Marginal Price
LUPC	Maine Land Use Planning Commission
MASSCAP	Massachusetts Association for Community Action
MCBER	Maine Center for Business and Economic Research
MCPC	Maine Clean Power Connection
MDEP	Maine Department of Environmental Protection
MIS	Minimum Interconnection Standard
MOD	Model on Demand
MPRP	Maine Power Reliability Program
MPUC	Maine Public Utilities Commission
MRIS	Maine Resource Interconnection Study
MTA	Maine Turnpike Authority
MW	Megawatt
MWh	Megawatt Hour
NESC	National Electric Safety Code
NCIS	Network Capability Interconnection Standard
NETA	InterNational Electrical Testing Association
NO_x	Nitrogen Oxides
NPV	Net Present Value

Acronym	Full Name
NRPA	Natural Resources Protection Act
O&M	Operations and Maintenance
OATT	Open Access Transmission Tariff
OPA	Maine Office of the Public Advocate
OPGW	Optical Ground Wires
P&C	Protection and Control
PEV	Partial Emissions Vehicle
PM 2.5	Particulate Matter
Pnode	Pricing Node
PP-10	ISO-NE Planning Procedure No. 10
PPA	Power Purchase Agreement
PTF	Pool Transmission Facility
PV	Present Value
REC	Renewable Energy Certificate
REMI	Regional Economic Models Inc.
RFP	Request For Proposals
RLC	RLC Engineering
ROE	Return Of Equity
RPS	Renewable Portfolio Standards
RTO	Regional Transmission Organization
RTU	Remote Terminal Unit
SCADA	Supervisory Control and Data Acquisition
SF_6	Sulfur Hexafluoride
SIS	System Impact Study
SLODA	Maine Site Location of Development
SO_x	Sulfur Oxide
STATCOM	Static Compensators
TSA	Transmission Service Agreement
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
VIA	Visual Impact Assessment
ZEV	Zero Emission Vehicle

SECTION 1 OF APPENDIX B TO THE RFP
CERTIFICATION, PROJECT AND PRICING DATA

Central Maine Power Company (CMP or the Company) provides the Certification, Project and Pricing Data (CPPD) for the Maine Clean Power Connection (MCPC) Transmission Project as **Exhibit 1.1** ([redacted]); **Exhibit 1.2** ([redacted]); **Exhibit 1.3** ([redacted]); and **Exhibit 1.4** ([redacted]).

The MCPC Transmission Project is a High Voltage Alternating Current (AC) transmission project that is tailored to deliver Clean Energy Generation to the New England Control Area from an array of generation solutions with megawatt capacities of [redacted], [redacted], respectively (the MCPC Transmission Project, or the MCPC, or the Project), in response to the Request For Proposals For Long-Term Contracts For Clean Energy Projects dated March 31, 2017 (RFP). CMP proposes the MCPC Transmission Project as part of four joint bids for Clean Energy Generation and associated transmission.[1] Penobscot Wind, LLC, Moose Wind, LLC, and NextEra Energy Resources Acquisitions, LLC (NextEra Bidding Affiliates) and EDF Renewable Energy, Inc. (EDF RE) (together, the MCPC Clean Energy Generation Developers) propose the generation included in the joint bids, and provide full details and terms of that generation in their separate submissions.

Exhibits 1.1 – 1.4, respectively, contain the information requested in the CPPD form for each of the tailored Transmission Options included in the joint bids. The CPPDs for the MCPC Clean Energy Generation are provided in the separate proposals submitted by the MCPC Clean Energy Generation Developers.

[1] The MCPC Clean Energy Generation joint bids are submitted pursuant to RFP Section 2.2.1.3.iv (Clean Energy Generation from New Class I RPS Eligible Resources with Class I RECs and Environmental Attributes via Long-Term Contract with a Transmission Project under a FERC Tariff).

I. Overview

CMP is pleased to propose the Maine Clean Power Connection, a High Voltage Alternating Current (AC) transmission project that is tailored to deliver Clean Energy Generation to the New England Control Area from an array of generation solutions with megawatt capacities of [redacted] MW, respectively (the MCPC Transmission Project, the MCPC, or the Project), in response to the Request For Proposals For Long-Term Contracts For Clean Energy Projects dated March 31, 2017 (RFP).

CMP proposes the MCPC Transmission Project as part of four joint bids for Clean Energy Generation and associated transmission.[2] Penobscot Wind, LLC, Moose Wind, LLC, and NextEra Energy Resources Acquisitions, LLC (NextEra Bidding Affiliates), and EDF Renewable Energy, Inc. (EDF RE) (together, the MCPC Clean Energy Generation Developers) propose the generation and energy storage included in the joint bids, and provide full details and terms of those resources in their separate submissions. Such resources consist of wind and solar generation, as well as battery storage that the MCPC Clean Energy Generation Developers will construct in western Maine and Québec Province, Canada (the MCPC Clean Energy Generation). Together, the MCPC Clean Energy Generation and the MCPC Transmission Project constitute the Maine Clean Power Connection Project.

NextEra Bidding Affiliates and EDF RE will use the MCPC Transmission Project to interconnect their generation facilities to the ISO-New England, Inc. (ISO-NE) administered

[2] The MCPC Clean Energy Generation joint bids are submitted pursuant to RFP Section 2.2.1.3.iv (Clean Energy Generation from New Class I RPS Eligible Resources with Class I RECs and Environmental Attributes via Long Term Contract with a Transmission Project under a FERC Tariff).

New England Transmission System at the Larrabee Road Substation in Lewiston, Maine to deliver the MCPC Clean Energy Generation to the New England Control Area. CMP proposes tailored and cost-effective transmission solutions to deliver this generation. These generation and transmission proposals comprise four joint bids for the following amounts of generation capacity: [redacted] The supporting transmission solution is designed to provide the necessary scope to permit the interconnection and delivery of this generation capacity to the New England Control Area. CMP details all joint bids in Section 2.II.C below. In this way, the Maine Clean Power Connection Project provides the Evaluation and Selection Teams with optionality in selecting the generation and transmission solution that best meets the needs of Massachusetts ratepayers.

Each of the joint bids included in the Maine Clean Power Connection Project offers a low-cost, technically viable, and financeable solution that will benefit the Commonwealth of Massachusetts[4] in the following respects:

- ✓ **Substantial Clean Energy and Environmental Attribute Deliveries**

The new RPS Class I eligible wind, solar, and battery storage Clean Energy Generation facilities proposed by the MCPC Clean Energy Generation Developers and delivered by the MCPC Transmission Project will provide annually up to [redacted] MWh of clean energy, along with RECs and other Environmental Attributes, to help meet the

[3] As detailed below, NextEra Bidding Affiliates offer [redacted] of Clean Energy Generation as part of two separate joint bids.

[4] Throughout this response, all references to the "Commonwealth" refer to the Commonwealth of Massachusetts.

Commonwealth's renewable portfolio standards (RPS) and greenhouse gas (GHG) emissions reduction requirements.

- ✓ **Increased Deliverability of Clean Energy Resources**

The MCPC Transmission Project will permit the interconnection and delivery of the MCPC Clean Energy Generation's wind, solar and battery storage resources to the New England Control Area in accordance with Section I.3.9 and the Capacity Capability Interconnection Standard (CCIS) in the ISO-NE's Open Access Transmission Tariff (OATT).

- ✓ **Low-Cost Transmission with Significant Cost Protections for Ratepayers**

By including all transmission upgrades needed to both obtain all necessary ISO-NE approvals and ensure interconnection of the MCPC Clean Energy Generation under the CCIS, the MCPC Transmission Project provides an effective and certain transmission solution for the Commonwealth's clean energy needs. To protect the Distribution Companies and their ratepayers from transmission cost overruns and other transmission cost risks, CMP will:

[redacted]

✓ **Significant Direct and Indirect Economic Benefits to Massachusetts**

Together with the MCPC Clean Energy Generation, the MCPC Transmission Project will provide significant direct contract and indirect economic benefits to ratepayers in Massachusetts. In fact, applying the evaluation criteria in the RFP, CMP expects that the Maine Clean Power Connection Project will provide:

[redacted]

✓ **Experienced Developers**

CMP, NextEra Bidding Affiliates, and EDF RE are experienced developers of generation and transmission facilities with excellent track records of completing projects in Maine and Québec for the benefit of electricity ratepayers across the Northeast. All three developers possess significant financial wherewithal and are prepared to dedicate substantial resources to the successful and timely completion of the Maine Clean Power Connection Project.

II. The Maine Clean Power Connection Project

The Maine Clean Power Connection Project consists of proposals for transmission and Clean Energy Generation supporting four joint bids under Section 2.2.1.3.iv of the RFP. This section introduces the generation, energy storage, and transmission components of the Project and the submitted joint bids. CMP and the MCPC Clean Energy Generation Developers have structured the joint bids to provide the Selection Team with an array of viable, cost-effective solutions to meet the clean energy needs of Massachusetts ratepayers.

A. The MCPC Clean Energy Generation

The MCPC Clean Energy Generation consists of the following wind and solar generation, as well as battery storage resources, to be constructed in western Maine and Québec, Canada:

Figure 2.1 – MCPC Clean Energy Generation

Project	Owner	Nameplate Capacity (MW)		Location
		Wind/ Solar	Battery Storage	
Alder Stream Wind Energy Center	NextEra Bidding Affiliates	[redacted]	[redacted]	Western Maine
Moose Wind Energy Center	NextEra Bidding Affiliates	[redacted]	[redacted]	Western Maine
Wintergreen Solar Project	NextEra Bidding Affiliates	[redacted]	[redacted]	Western Maine
St-Theóphile Wind Project	EDF RE	[redacted]	[redacted]	Québec, Canada
Haute-Chaudière Wind Project	EDF RE	[redacted]	[redacted]	Québec, Canada
Timberline 2 Wind Project	EDF RE	[redacted]	[redacted]	Western Maine

The output of the MCPC Clean Energy Generation will provide approximately [redacted] MWh (for the [redacted] joint bid), [redacted] MWh (for the [redacted] joint bid) and [redacted] MWh (for the combined [redacted] joint bids). These deliveries represent between [redacted]% and [redacted]% of the procurement loads for Clean Energy Generation and/or RECs specified in Section 1.1 of the RFP.

[redacted]

The MCPC Clean Energy Generation Developers submit separate proposals to provide Clean Energy Generation and RECs to the Distribution Companies via Long-Term Contracts, tied to the MCPC Transmission Project. The generation proposals of NextEra Bidding Affiliates and EDF RE, respectively, provide the required details of the MCPC Clean Energy Generation, including expected facility siting, permitting, outreach, support, generation output, delivery profile, interconnection point, technology, and pricing.

B. The MCPC Transmission Project

The MCPC Clean Energy Generation provides solutions of varying scope, tied to the generation options that allow the Evaluation and Selection Teams optionality in meeting the clean energy needs of Massachusetts ratepayers. The MCPC Transmission Project facilitates this optionality by providing the needed transmission upgrades to permit the interconnection and delivery of the selected MCPC Clean Energy Generation to the New England Control Area.

The base component of the MCPC Transmission Project is a new radial 345 kV high voltage AC transmission line that will run from the proposed Gold Brook Substation in Skinner Township, Maine to the existing Larrabee Road Substation in Lewiston, Maine. This line and certain other minor transmission upgrades will permit the interconnection of up to [redacted] of Clean Energy Generation at the Larrabee Road Substation in accordance with the requirements of Section I.3.9 and the CCIS in the ISO-NE OATT.

Under Section I.3.9 and the CCIS, the interconnection of more than [redacted] of generation at the Larrabee Road Substation will require additional transmission system upgrades. CMP has tailored the MCPC Transmission Project to include these upgrades as necessary to permit the interconnection of the proposed MCPC Clean Energy Generation.

[redacted]

Figures 2.2 and 2.3 below list the transmission line and substation core project components for Transmission Options 1 through 3. Additional, transmission-option specific network upgrades are listed below at Figures 2.4 and 2.5.

Figure 2.2 – Core Project Components: Transmission Line Equipment

	Component	Option 1	Option 2	Option 3
Transmission Line	New 140.2-mile 345 kV Transmission Line from the new Gold Brook Substation in Skinner Township, Maine, to the existing Larrabee Road Substation in Lewiston, Maine	✓		
	New 60.2-mile 345 kV Transmission Line from the new Gold Brook Substation to the new Moscow Substation in Moscow, Maine		✓	✓
	New 80-mile 345 kV Transmission Line from the new Moscow Substation to the existing Larrabee Road Substation in Lewiston, Maine		✓	✓

Figure 2.3 – Core Project Components: Substation Equipment

	Component	Option 1	Option 2	Option 3
Substation	New 345 kV Gold Brook Substation in Skinner Township, Maine	✓	✓	✓
	New terminal addition at existing 345 kV Larrabee Road Substation in Lewiston, Maine	✓	✓	✓
	New 345 kV Moscow Substation located in Moscow, Maine		✓	✓
	New shunt reactor (line side) at Gold Brook Substation (4 x 35 MVAR) in Skinner Township, Maine	✓		
	New shunt reactor at Moscow Substation (1 x 35 MVAR) in Moscow, Maine		✓	✓
	New shunt reactor (line side) at new Gold Brook Substation (3 x 35 MVAR) in Skinner Township, Maine		✓	✓
	250 MVAR 345 kV STATCOM at new Moscow Substation in Moscow, Maine			✓
	Switched 345 kV Capacitor Banks at Moscow Substation (2 x 50 MVAR) in Moscow, Maine			✓

Figure 2.4 – Network Upgrades: Transmission Line Equipment

	Component	Option 1	Option 2	Option 3
Substation	Partial rebuild of 1.5 miles each (3.0 miles total) of 115 kV Section 66/83 Transmission Line from Wyman Hydro Substation in Moscow, Maine to Athens/Heywood Road Substation in Athens/Winslow Maine	✓	✓	✓
	Partial rebuild of 0.8 miles of 34.5 kV Section 72 Transmission Line from Crowleys Substation in Lewiston, Maine to Gulf Island Substation in Lewiston, Maine	✓	✓	✓

	New 26.5-mile 345 kV Section 3027 Transmission Line from the existing Coopers Mills Road Substation in Windsor, Maine to the existing Maine Yankee Substation in Wiscasset, Maine			✓
	New 0.3-mile 345 kV Section 3005 Transmission Line from the existing Surowiec Substation in Pownal, Maine to the new Fickett Road Substation in Pownal, Maine			✓
	Partial rebuild of 0.5 miles of 345 kV Section 392 Transmission Line from the existing Coopers Mills Road Substation in Windsor, Maine to the existing Maine Yankee Substation in Wiscasset, Maine			✓
	Partial rebuild of 0.5 miles of 345 kV Section 3025 Transmission Line from the existing Coopers Mills Road Substation in Windsor, Maine to the existing Larrabee Road Substation in Lewiston, Maine			✓
	Partial rebuild of 0.6 miles each (1.2 miles total) of 115 kV Section 60/88 Transmission Line from Coopers Mills Substation in Windsor Maine to Bowman Street/Augusta East Substation in Farmingdale/Augusta, Maine			✓

Figure 2.5 – Network Upgrades: Substation Equipment

	Component	Option 1	Option 2	Option 3 [redacted]
Substation	New terminal addition at existing 345 kV Maine Yankee Substation in Wiscasset, Maine			✓
	New terminal addition at existing 345 kV Surowiec Substation in Pownal, Maine			✓
	200 MVAR 345 kV STATCOM at Fickett Road Substation in Pownal, Maine			✓
	New terminal addition and 200 MVAR 345 kV STATCOM addition at existing 345kV Coopers Mills Road Substation in Windsor, Maine			✓

	Switched 115kV Capacitor Banks at Larrabee Road Substation (2 x 50 MVAR) in Lewiston, Maine			✓

CMP configured each option of the MCPC Transmission Project to permit interconnection of the identified MCPC Clean Energy Generation in accordance with the CCIS. CMP provides the planning studies supporting the MCPC Transmission Project as **Exhibit 6.7.1**, **Exhibit 6.7.2**, and **Exhibit 6.7.3**. These studies identify the system upgrades necessary to permit the interconnection of the Clean Energy Generation proposed in the joint bids ([redacted] (Transmission Option 1), [redacted] (Transmission Option 2), and [redacted] (Transmission Option 3)) at the Larrabee Road Substation in accordance with the CCIS and Section I.3.9 of the ISO-NE OATT.

Importantly, CMP's planning study reflects and comports with ISO-NE's ongoing Maine Resource Integration Study (MRIS). The MRIS is assessing the transmission upgrades necessary to interconnect 1,200 MW of generation in western Maine.

For more information regarding the power flow, reliability, and resiliency benefits of the MCPC Transmission Project, please see Section 3.3 and Section 6.7 below.

C. The MCPC Joint Bids

CMP and NextEra Bidding Affiliates submit three joint bids for Clean Energy Generation and transmission pursuant to Section 2.2.1.3.iv of the RFP. Also pursuant to Section 2.2.1.3.iv of the RFP, CMP and EDF RE submit one joint bid for Clean Energy Generation and transmission. Transmission Options 1 through 3 of the MCPC Transmission Project support interconnection of the Clean Energy Generation offered in each submitted joint bid.

[redacted]

[redacted]

Figures 2.7 through 2.9 provide a geographic depiction of the joint bids of the Maine Clean Power Connection Project. Additional details concerning the generation components of these joint bids are provided in the separate submissions of NextEra Bidding Affiliates and EDF RE, respectively.

[redacted]

[redacted]

[redacted]

III. MCPC Costs and Benefits

The delivery profiles and pricing offers for the MCPC Clean Energy Generation are provided in the separate submissions of NextEra Bidding Affiliates and EDF RE. CMP provides the pricing offer for the MCPC Transmission Project below.

A. The MCPC Transmission Pricing Proposal

1. The MCPC Proposed Transmission Services Agreement and Rate Schedule

Pursuant to Section 15 and Appendix C-3 of the RFP, CMP provides its proposed Transmission Service Agreement for the MCPC Transmission Project (MCPC TSA) as **Exhibit 15.1**. The parties to the MCPC TSA will be CMP and the Distribution Companies. As discussed below, CMP has structured the MCPC TSA to provide the Distribution Companies a comprehensive and competitive allocation of risks and responsibilities among the parties, including regarding price, price certainty, project delays, unexcused outages, events of default, force majeure, and remedies. CMP provides a summary of the key provisions of the MCPC TSA as **Exhibit 15.2.**

[redacted]

[redacted]

[redacted]

[10] The 345 kV Bus at the Larrabee Road Substation to which the MCPC Clean Energy Generation will be delivered is a PTF under the ISO-NE OATT. The Larrabee Road Bus is not listed as a Pricing Node (Pnode) in ISO-NE's current Pnode table, but CMP commits to work with ISO-NE to ensure that the Bus is identified as a Pnode prior to the commencement of deliveries from the MCPC Clean Energy Generation.

[redacted]

[11] CMP is aware that one or more other generators who are not formally participating as part of a Maine Clean Power Connection Project joint bid may be proposing Clean Energy Generation located in western Maine that could make use of the MCPC Transmission Option 3. CMP is willing to work with the Distribution Companies and such generators in the event that such generators are selected in the RFP in addition to the MCPC Transmission Project.

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

B. The Direct Contract and Indirect Economic Benefits of the MCPC

The combination of the MCPC Clean Energy Generation and MCPC Transmission Project will provide significant direct contract and indirect economic benefits to Massachusetts ratepayers that far exceed the costs of the Projects to ratepayers. [redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[15] MassDEP, 310 CMR 7.75: Proposed Regulations, page 7, available at

[redacted]

(footnote continued)

http://www.mass.gov/eea/agencies/massdep/climate-energy/climate/ghg/ces.html.

[redacted]

[redacted]

C. The Economic Development and Employment Benefits of the MCPC

The Maine Clean Power Connection Project will also provide significant employment and economic development benefits to Massachusetts and the New England region as a whole. These benefits are discussed in detail in Section 13 below and in the attached report of the Maine Center for Business and Economic Research (MCBER) at the University of Southern Maine, a copy of which is provided as **Exhibit 13.1**. In particular, MCBER finds that the savings that Massachusetts ratepayers are expected to realize from just the LMP reductions arising from the Maine Clean Power Connection Project will support nearly 734 jobs annually, over $91 million in GDP, and over $77 million in total compensation each year in the Commonwealth over the 20-year term of the PPA. In addition, the transmission infrastructure investments necessary to complete the MCPC Transmission Project are expected to support on a regional basis approximately $485 million in GDP and $372 million in total compensation over the Project's six-year development and construction period [redacted]

D. The Qualitative Benefits of the MCPC

1. Project Viability

The MCPC Transmission Project is a technically viable solution to deliver the MCPC Clean Energy Generation to the New England Control Area, and CMP is confident that it can

develop, finance, and construct the Project to achieve the proposed [redacted] commercial operation date for the reasons discussed below.

i. Developer Experience

As discussed in detail in Sections 5.2(A), 11.2 and 11.5, CMP is an experienced and financially strong developer and operator of transmission facilities in New England, with a proven track record of delivering major transmission projects on time and on budget. The Company's recent completion of the MPRP, a $1.4 billion transmission project to improve the reliability of the New England Transmission System, which included constructing a total of 440 miles of transmission line, including 184 miles of new 345 kV transmission lines, 100 miles of new 115 kV transmission lines, and 156 miles of rebuilt transmission lines, and constructing six new substations and major expansions to six existing substations, demonstrates CMP's capabilities. In addition, CMP has the full support of its parent companies, AVANGRID, Inc. (AVANGRID) and Iberdrola, S.A., which together are among the United States' and the world's largest energy companies. CMP has and will draw on their significant experience and expertise developing large transmission projects and financial strength to successfully complete the MCPC Transmission Project on time and on budget.

ii. Credible Financing Plan

As detailed in Section 5.2(B) below, the financial strength of CMP and its parent companies, reflected in their strong balance sheets and credit ratings, ensures that the Company will be able to attract the capital needed to finance the MCPC Transmission Project on financially viable and favorable terms. CMP will use short- and long-term debt financing including AVANGRID'S significant existing credit facilities, and equity funding

sourced through retained earnings and capital contributions from AVANGRID, if necessary, to finance the Project. With the firm revenue stream provided under the MCPC TSA, these sources of capital will be more than sufficient for CMP to finance the MCPC Transmission Project.

iii. Commercially Reasonable Technology

The MCPC Transmission Project is technically viable and based on commercially available and proven technology. The transmission lines and substation components of the proposed MCPC Transmission Project all use mature technologies which are used extensively across CMP's existing transmission system and other transmission systems throughout New England.

iv. Reasonable and Achievable Commercial Operation Date

[redacted] CMP is confident that it will permit, construct, and commission the MCPC transmission facilities by this date for the reasons discussed below.

2. Transmission Route and Site Control

As demonstrated in Section 6.2 and **Exhibit 6.2**, CMP has control over the entire route of the MCPC Transmission Project. The Company owns in fee, or holds easement or option rights for, the entire corridor in which the 345 kV transmission line will run from the new Gold Brook Substation to the existing Larrabee Road Substation, as well as the locations of all necessary substation improvements, and other AC upgrades included in the Project. CMP holds letters of intent with the NextEra Bidding Affiliates for the locations of the proposed Moscow and Gold Brook substations.

3. Environmental Impacts and Permitting

The MCPC Transmission Project is designed to avoid and minimize environmental impacts and to provide significant GHG reduction benefits to the Northeast region. These critical environmental attributes promise to maximize stakeholder support and minimize stakeholder opposition, and will facilitate the successful and timely permitting of the Project at the federal, state, and local levels.

i. Minimal Environmental Impacts

Based on experience, CMP knows that siting a transmission project to minimize impacts on the environment and neighboring landowners and stakeholders is critical to the Project's success. Accordingly, CMP and its real estate and environmental professionals have identified and secured necessary rights for a route that to the maximum extent possible (1) uses existing transmission corridors; and (2) avoids environmentally sensitive areas and resources. These efforts have been successful as approximately 74% of the MCPC Transmission Project components will be constructed within existing transmission corridors owned by CMP, thereby minimizing impacts to existing land uses as well as the environment. The remainder of the route will be located almost entirely in privately owned, commercial forest land, which is periodically harvested for wood products.

To further minimize the impacts of the Project, CMP, through its environmental and design professionals, is actively coordinating with state and federal natural resources and wildlife agencies to identify and minimize impacts to sensitive habitats and wildlife species. CMP and its consultants are also developing in cooperation with state and federal environmental regulators (the Maine Department of Environmental Protection (MDEP) and the United States Army Corps of Engineers (USACE)), construction performance standards

to avoid and minimize disturbances and impacts to the natural environment and will maintain all newly cleared transmission line corridors as early successional (scrub – shrub or meadow habitat). These multiple steps represent best practices and have already fostered a strong and collaborative relationship between CMP and the environmental regulators with respect to the MCPC Project.

ii. GHG Reductions

The MCPC Transmission Project also promises significant regional environmental benefits by reducing GHG emissions over the life of the PPA. [redacted]

[redacted]

iii. Permitting Progress and Expectations

CMP is confident that it will obtain all environmental permits needed for the MCPC Transmission Project in a timely fashion consistent with the project schedule provided as **Exhibit 10.1**. To date, CMP has completed pre-application meetings with MDEP and USACE, and has held meetings with other state and federal natural resource agencies to discuss resource issues and studies in support of state and federal permit applications.

The MDEP and USACE's Maine Project Office, as the primary permitting agencies, have considerable experience with permitting similar large transmission projects in Maine, including, most notably, MPRP, which CMP successfully permitted on schedule in 2010. The MDEP and USACE have indicated they will work closely with CMP's permitting team with respect to the Company's preparation of the MCPC permit applications, which do not present any issues that were not encountered and successfully addressed in the course of MPRP permitting. MDEP and USACE MCPC Project applications will address and comply with all applicable approval standards and will reflect the permitting team's considerable experience with permitting transmission projects in Maine, particularly the MPRP.

4. Reliability Benefits

The Maine Clean Power Connection Project will provide reliability benefits to Massachusetts and the New England region. Importantly, as detailed in Sections 3.3, 6.7, 6.8, and **Exhibit 6.7.2** and **Exhibit 6.7.3**, MCPC Transmission Options 2 and 3 will ensure the interconnection and delivery of [redacted], respectively, of Clean Energy Generation to the New England Control Area at the existing Larrabee Road Substation in accordance with the CCIS in the ISO-NE OATT.[16] The Maine Clean Power Connection Project also provides additional deliverability, reliability, and resiliency benefits, including benefits resulting from the Project's energy storage capabilities.

i. Deliverability of Clean Energy Generation

Western Maine is rich in wind and solar energy resources that are not currently deliverable to the New England Control Area. CMP's transmission solutions will interconnect the MCPC Clean Energy Generation to the rest of the region and help solve this problem. The MCPC transmission line will also retain residual capacity upon interconnection of the Clean Energy Generation included in the selected joint bid. Such headroom capacity will allow for the interconnection of additional generation that is either selected in the RFP or developed in the future, better enabling Massachusetts to satisfy the procurement requirements of its clean energy statutes and regulations. Any such interconnection will be subject to the generator's construction of all system upgrades necessary to meet the interconnection requirements of an ISO-NE System Impact Study (SIS).

[16] As discussed in Section 3.3 below, Transmission Option 3 of the MCPC will increase the transfer limits at the existing Surowiec South interface by at least 600 MW. This increase will permit other generation located in northern or western Maine, or eastern Canada, including other existing wind and hydroelectric resources, to flow across this interface for the benefit of Massachusetts and the rest of the region.

Transmission Options 2 and 3 also provide for upgrades to the existing transmission system in Maine that will increase the transfer limits at the Surowiec South interface, consistent with the CCIS under ISO-NE's OATT. As such, these two solutions provide not only the essential transmission link between western Maine and the region, but also allow for increased amounts of Clean Energy Generation to flow from western and northern Maine and Québec Province onto and across the existing transmission system.

ii. Energy Storage Benefits

The MCPC Clean Energy Project will use battery storage systems to enhance deliverability of Clean Energy Generation. As detailed in the separate submission of the NextEra Bidding Affiliates, the Alder Stream Wind and Moose Wind facilities each include

[redacted]

[redacted]

5. Low-Income Ratepayer Benefits

As part of the MCPC Transmission Project, CMP proposes to implement a long-term, flexible, and collaborative program in connection with its successful bid to provide demonstrated and material benefits to the Commonwealth's low-income ratepayers. Specifically, CMP proposes to contribute approximately $750,000 million for 20 years to fund low-income benefits. This proposal will provide funding over a 20-year commitment period (all without affecting the MCPC price) for the advancement of programs that benefit low-income ratepayers, while incorporating flexibility to modify or adapt supported programs in order to secure meaningful benefits for low-income customers. In addition, the proposed enhanced funding for these programs will also help to advance important goals of the Massachusetts Clean Energy and Climate Plan (Clean Energy Plan) by providing complementary resources addressing market barriers and similar challenges facing implementation of programs to serve low-income ratepayers. This funding level equates to a net benefit to low-income ratepayers of approximately $8.0 million in [redacted] dollars (assuming a 6.99% discount rate).

3.1 Maintenance Outage Requirements – Specify partial and complete planned outage requirements in weeks or days for all generation facilities and transmission facilities. 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).

The transmission facilities and associated substation upgrades that make up the MCPC Transmission Project are expected to have a useful life of at least 40 years, and with normal maintenance are not expected to require major equipment overhauls over this useful life. There are projected overhauls of associated relays and protection and control (P&C) equipment in year 20 of operation, but CMP plans to sequence this maintenance work to avoid outages. Maintenance outages for transmission lines themselves are rare and are typically scheduled during low load periods when the full capability of the transmission network is not required. Additionally, transmission outages are, to the extent practicable, coordinated with generators likely to be affected by such outages. In this way, transmission outages are scheduled during generation plant planned outages, if possible. The typical availability rate of high voltage transmission on the CMP system, taking into account both scheduled and unscheduled outages, is in excess of 99%. Similarly, the scheduled maintenance plan for STATCOMs will reflect coordination with the generation facilities and will also maintain expected availability for both scheduled and unscheduled in excess of 99%.

CMP set the specifications for the MCPC transmission facilities in order to ensure the consistent delivery of all of the MCPC Clean Energy Generation called for in the proposed PPAs in accordance with the delivery schedules submitted by the MCPC Clean Energy Generation Developers. To further ensure that the Distribution Companies and their

ratepayers receive the full benefit of the MCPC Clean Energy Generation during the Winter Peak Period months of December, January, and February, CMP commits to coordinate with the MCPC Clean Energy Generation Developers to avoid scheduling any planned transmission outages of the MCPC Transmission Project during the Winter Peak Period.

3.2 Operating Constraints – Specify all the expected operating constraints and operational restrictions for the project (*i.e.*, limits on the number of hours a unit may be operated per year or unit of time). If the bid includes firm deliveries, list the anticipated situations and frequency of interruptions of transmission sources which would affect power deliveries.

There will be no operating constraints on the MCPC transmission facilities that will limit the time of their operation. Under applicable ISO-NE rules, the new MCPC transmission line from the proposed Gold Brook Substation to the existing Larrabee Road Substation will be operated to transmit no more than 1,200 MW at any time. As discussed in detail in Section 6.7, Section 6.8, and **Exhibits 6.7.1 – 6.7.3**, CMP has designed the MCPC Transmission Project in order to allow for the simultaneous operation and deliverability of the selected MCPC Clean Energy Generation along with existing generation likely to be on-line at the same time in western Maine under a wide range of operating conditions in accordance with the Network Capability Interconnection Standard (NCIS) and CCIS provisions of the ISO-NE tariff.

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

The MCPC Project will provide enhanced reliability benefits to Massachusetts through the agreement of the MCPC Clean Energy Generation Developers, consistent with Section 2.2.2.4 of the RFP, to commit any qualifying capacity to ISO-NE exclusively. To support this commitment, the MCPC Transmission Project is designed as required by Section 2.2.1.9 of the RFP to permit (1) the interconnection of the MCPC Clean Energy

Generation to the PTF in accordance with the CCIS set forth in ISO-NE's Planning Procedure 10 (PP-10); and (2) the full dispatch of the MCPC Clean Energy Generation across a broad range of operating conditions. For more information about the capacity commitment of the MCPC Clean Energy Generation Developers, please see the separate submissions of NextEra Bidding Affiliates and EDF RE. For analyses of the deliverability of the MCPC Clean Energy Generation, please see **Exhibit 2.1**, **Exhibit 6.7.1, Exhibit 6.7.2,** and **Exhibit 6.7.3**.

Each MCPC Transmission Project option is tailored to ensure the delivery of the selected MCPC Clean Energy Generation, [redacted] from the MCPC Clean Energy Generation at the existing Larrabee Road Substation by including all necessary transmission upgrades to satisfy the NCIS and CCIS under appropriate planning assumptions, and at the same time to increase the transfer limits at the existing Surowiec South interface in Maine. By including the identified AC upgrades listed in Section 2(II)(B) and Section 8.5, and as depicted in **Exhibit 6.11.3**, including in particular the Coopers Mills Road and Surowiec STATCOMs, Transmission Option 3 of the MCPC Transmission Project will increase the transfer limits at the Surowiec South interface from 1,600 MW to 2,200 MW. Additionally, studies at the higher transfer level were performed that also show this new limit will not be thermally constrained at 2,200 MW. This transfer limit increase will provide enhanced reliability to Massachusetts by permitting additional power flows from western and northern Maine and Québec onto and across the existing 345 kV transmission system in Maine. These upgrades ensure that the MCPC Clean Energy Generation will meet the Forward Capacity Auction Qualifications (FCAQ) and will be deliverable to the New England Control Area, as required in the RFP.

CMP is confident that these transfer limit increases and related reliability benefits will be realized based on the planning studies (Technical Reports) completed to date for the MCPC by RLC Engineering (RLC). CMP provides these Technical Reports as **Exhibit 6.7.1** (Transmission Option 1), **Exhibit 6.7.2** (Transmission Option 2), and **Exhibit 6.7.3** (Transmission Option 3). As set forth in the Technical Reports and detailed in Section 6.7 and Section 6.8 below, the MCPC meets the requirements for interconnection under Section I.3.9 of the ISO-NE Tariff because it does not cause any adverse impact to the New England Transmission System with all the transmission upgrades included. In fact, RLC's rigorous steady-state and stability testing demonstrated that the MCPC Transmission Project improves the reliability and performance of the New England Transmission System by increasing the transfer limits at the Surowiec South interface for Transmission Option 3.

RLC also performed these studies in accordance with the CCIS, also known as the overlapping impact analysis, by reflecting the interconnection of the MCPC Transmission Project directly into the Larrabee Road Substation, and by completing the planning studies without dispatching existing generation with a capacity supply obligation offline to allow for this interconnection.[18] Unlike the Minimum Interconnection Standard (MIS) under the ISO-NE OATT, which allows other generation to be displaced off to permit the interconnection of the proposed new resources, under the terms of PP-10, the more stressful overlapping impact analysis requires that new generation be fully deliverable to a

[redacted]

Load Zone (in this case, the State of Maine) without dispatching off existing generation within the same zone of interconnection.

In addition, the MCPC planning studies were done consistent with how ISO-NE is currently performing its MRIS, which is assessing the transmission upgrades needed to inject up to 1,200 MW of Clean Energy Generation in western Maine and northern Maine. Because of the technical similarities and significant stakeholder input into the study parameters used by ISO-NE, CMP used ISO-NE's MRIS as a baseline for comparison for the MCPC Transmission Project. As set forth in **Exhibit 6.7.1, Exhibit 6.7.2,** and **Exhibit 6.7.3**, the MCPC-related studies use similar stresses and dispatch cases to demonstrate the interconnection and capacity qualification for the MCPC Clean Energy Generation.[19]

The MRIS findings confirm the appropriateness of the MCPC-related planning study conclusions and corroborate that the MCPC Transmission Project will permit the interconnection and delivery of the MCPC Clean Energy Generation under the NCIS and CCIS.

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 1:00 - 6:00 pm

ii) Estimated average output for each winter period (October-May) from 5:00 – 7:00 pm

[19] Posted on February 7, 2017, the MRIS is available on the ISO-NE website at: https://smd.iso-ne.com/operations-services/ceii/pac/2017/02/a6_maine_resource_integration_study.pdf. Updated results for MRIS (posted on May 24, 2017) can also be found at: https://smd.iso-ne.com/operations-services/ceii/pac/2017/05/a2_maine_resource_integration_study_results.pdfThese links contain Critical Energy Infrastructure Information (CEII) and are available to parties who are allowed access to CEII by ISO-NE.

Please see the separate submissions of the MCPC Clean Energy Generation Developers.

3.5 Development Stage of all physical aspects of the bid – Describe whether the project is in operation, in construction or in the development phase.

(a) If in operation, when did the project achieve commercial operation

(b) If in construction, when did construction commence and what are the projected dates for initial testing and commercial operation.

(c) If the project is partly in one development stage and partly in another, please explain in detail the status of the project.

If the proposed project is an expansion, repowering, environmental investment or other modification of an existing Facility, please describe the project in detail, the total cost and cost on a $/kW basis specifying the existing project and the proposed expansion, repowering or other modification. Indicate any incremental or decremental capacity.

The MCPC Transmission Project is in the development phase. More detailed information about the status of the Project is provided in the detailed project schedule provided as **Exhibit 10.1** and in Section 7.2. For information about the status of the MCPC Clean Energy Generation, please see the separate submissions of the MCPC Clean Energy Generation Developers.

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

Wind Energy Projects

Provide a summary of all collected wind data for the proposed site. Identify when the data was collected and by whom.

Please see the separate submissions of the MCPC Clean Energy Generation Developers.

Indicate where the data was collected and its proximity to the proposed site. Include an identification of the location and height for the anemometers that were used to arrive at an assessment of the site generation capability.

Please see the separate submissions of the MCPC Clean Energy Generation Developers.

Provide (a) at least one year of hourly wind resource data, and (b) a wind resource assessment report 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 (a 12 x 24 energy projection) at both P50 and P90 levels.

Please see the separate submissions of the MCPC Clean Energy Generation Developers.

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

Please see the separate submissions of the MCPC Clean Energy Generation Developers.

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

Please see the separate submissions of the MCPC Clean Energy Generation Developers.

If your bid includes a delivery forecast which is substantially different than NREL data would suggest, please reconcile the differences.

Landfill Gas

Provide a gas production forecast for each landfill. Provide a table that shows the annual, monthly and hourly projection of gas flow and energy export from each landfill.

Not applicable to the Maine Clean Power Connection Project.

Provide supporting data that illustrates the expected generation from each landfill based on the projected gas production.

Not applicable to the Maine Clean Power Connection Project.

Describe any contingencies or constraints that could affect the availability of fuel or the energy resource for the project and any contingency plans for meeting projected generation levels.

Not applicable to the Maine Clean Power Connection Project.

If the landfill gas is provided by pipeline, provide information related to gas pipeline delivery, including gas pipeline interconnection points of the landfills delivering the gas into the pipeline system.

Not applicable to the Maine Clean Power Connection Project.

Biomass

Describe specifically how the project will conform to the Massachusetts biomass laws and regulations M.G.L. c. 25A, § 11F, and 225 CMR 14.00.

Not applicable to the Maine Clean Power Connection Project.

Provide a resource assessment of available biomass fuel for the proposed project and its proximity to the project site.

Not applicable to the Maine Clean Power Connection Project.

Provide a plan for obtaining the biomass fuel, including a transportation plan.

Not applicable to the Maine Clean Power Connection Project.

Provide any contracts or letters of intent to acquire and transport the biomass fuel.

Not applicable to the Maine Clean Power Connection Project.

Demonstrate that projected energy output for the project over the term of the contract is consistent with the energy supply available.

Not applicable to the Maine Clean Power Connection Project.

Describe any contingencies or constraints that could affect the availability of fuel or the energy resource for the project and any contingency plans for meeting projected generation levels.

Not applicable to the Maine Clean Power Connection Project.

Solar

Provide an assessment of the available solar incidence or resource. Describe any trends in generation capability over time (*i.e.*, annual decline rate of expected output).

Please see the separate submission of NextEra Bidding Affiliates.

Describe the methodology used to generate the projected generation and describe the in-house or consulting expertise used to arrive at the generation estimates.

Please see the separate submission of NextEra Bidding Affiliates.

Hydropower

Describe the project characteristics in terms of water flow (on a monthly basis) and head, and state the assumptions regarding seasonal variations, and a conversion of such flow into megawatts and megawatt-hours.

Not applicable to the Maine Clean Power Connection Project.

Provide monthly flow duration curves based upon daily stream flow records.

Not applicable to the Maine Clean Power Connection Project.

Identify if the project is run-of-river or has storage capability.

Not applicable to the Maine Clean Power Connection Project.

Specify if the project is new, or if the project is an expansion of an existing facility.

Not applicable to the Maine Clean Power Connection Project.

Describe why the generation proposal qualifies as Incremental Hydropower Generation. If the entire project is not new, specify the amount of power provided to or sold into the ISO-NE market during 2014, 2015, and 2016. Provide information which demonstrates that the resources and transmission capacity described in your proposal are capable of providing an increase in the amount of such power compared to the average power deliveries in ISO-NE over those three years.

Not applicable to the Maine Clean Power Connection Project.

The bidder must disclose in its bid how it proposes to certify that the environmental attributes are included with the energy delivered.

Not applicable to the Maine Clean Power Connection Project.

<u>Other information as required to describe the energy resource plan</u>

Identification of fuel supply (if applicable) enter fuel supply

What is the availability of the fuel supply? enter availability of fuel supply

Does the bidder have any firm commitments from fuel suppliers? If so, please provide a copy of any agreements with confidential information redacted if necessary.

Yes:☐ No:☐

Please see the separate submissions of the MCPC Clean Energy Generation Developers.

4.2 Clean Energy Generation Delivery Plan

Please provide documentation that any clean energy plan delivery plan that includes hydroelectric generation meets the definition of "Incremental Hydroelectric Generation" as defined in the body of the RFP.

Not applicable to the Maine Clean Power Connection Project.

Please provide an energy delivery plan and profile for the proposed project, including supporting documentation. The energy delivery profile must provide the expected Clean 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 Bid Categories and 2.2.1.7 Minimum Contract Size of the RFP. 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.

Clean Energy Generation for projects containing new Class I eligible resources only must comply with Section 2.2.2.7 of the RFP. They must submit a delivery profile guaranteeing 70% of the energy in their delivery profile for the Winter Peak Period over the course of every Winter Peak Period on the CPPD form in their bidder response package.

Please see the separate submissions of the MCPC Clean Energy Generation Developers.

Clean Energy Generation for projects containing firm service hydroelectric generation, and Clean Energy from new Class I RPS eligible resources paired with firm service hydroelectric generation must comply with section 2.2.2.7 of the RFP. They will be required to submit a delivery profile with no Winter Peak Period hour less than 60% of their highest annual single hourly delivery claimed in their annual delivery profile as submitted as a part of their CPPD form in their bidder response package. Bidders will be required to guarantee the submitted delivery profile in all hours during the Winter Peak Period. Bidders should supply any studies performed to support this profile. Bidders should respond to all information requests which are relevant to the bid in a timely manner.

Not applicable to the Maine Clean Power Connection Project.

4.3 REC/Environmental Attribute Delivery Plan

Please provide documentation demonstrating that the project will Deliver GIS Certificates representing those RECs or Environmental Attributes. For projects located outside of the ISO-NE control area, describe how the Delivered energy and associated RECs or Environmental Attributes will satisfy NEPOOL-GIS rules for the Delivery of GIS Certificates.

Please see the separate submissions of the MCPC Clean Energy Generation Developers.

Bidders are required to demonstrate the financial viability of their proposed project. Bidders should provide the following information:

5.1 Each bidder is required to submit information and documentation that demonstrates that a long term contract 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.

CMP believes that a FERC-approved TSA, such as the MCPC TSA proposed here, which obligates the Distribution Companies to make fixed annual payments to cover CMP's revenue requirement for the MCPC Transmission Project, will assist CMP to obtain financing for the Project. Such a TSA is analogous to a long-term PPA. PPAs executed with investment-grade counterparties and supported in the regulatory construct are demonstrably financeable as evidenced by numerous transactions in the generation and renewable energy industry. CMP's generation affiliate, Avangrid Renewables, has raised financing from a variety of sources for wind and solar projects in which a PPA with an investment-grade counterparty is a key consideration in arranging the financing.

As discussed in Section 5.2(A) and Section 5.5 below, CMP intends to construct and own the MCPC Transmission Project. CMP has investment-grade credit ratings and significant financing capacity independent of the MCPC Transmission Project. CMP has evaluated the business risks associated with the Project, including those associated with the MCPC TSA, and has structured its bid to avoid degradation of its credit metrics, which the Company expects will result in continued access to sufficient capital at both CMP and AVANGRID to finance the construction and operation of the MCPC Transmission Project. As such, CMP is confident that it will be successful in securing financing for the MCPC

Transmission Project, and having the Distribution Companies' agreement to the MCPC TSA as proposed will help ensure that success.

5.2 (A) 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.[20]

CMP will own all MCPC transmission facilities in Maine and will be responsible for operating and maintaining these facilities when they are in-service in accordance with a standard Transmission Operating Agreement to be entered into with ISO-NE, as called for in the MCPC TSA.

CMP is a regulated electric transmission and distribution utility serving approximately 615,000 customers in central, western, and southern Maine. CMP's transmission services are regulated by FERC, and its distribution services are regulated by the Maine Public Utilities Commission (MPUC).

CMP Group, Inc. owns 100% of the outstanding shares of CMP's common stock. CMP Group, Inc. is a wholly owned subsidiary of Avangrid Networks, Inc., which in turn is a wholly owned subsidiary of AVANGRID, a publicly traded New York corporation (NYSE: AGR). AVANGRID is an energy holding company with more than $30 billion in assets and operations in more than 25 states across the United States. AVANGRID operates regulated utilities and electricity generation through two primary lines:

[20] For ease of reference, CMP refers to this subsection as Section 5.2(A).

(i) Avangrid Networks: Includes eight electric and natural gas utilities, serving 3.1 million customers in New England and New York; and

(ii) Avangrid Renewables: Operates 6.5 gigawatts of electricity capacity, primarily through wind power, in states across the United States, and is among the top three wind operators in the United States.

Iberdrola, S.A., a corporation (*sociedad anónima*) organized under the laws of the Kingdom of Spain (BME: IBE) and a worldwide leader in the energy industry, directly owns 81.5% of outstanding shares of AVANGRID, common stock, with the remaining shares publicly traded in the New York Stock Exchange. With over 170 years of experience, Iberdrola, S.A. is one of the largest electric utilities in the world and a leader in renewable energy development. In addition to the operations of AVANGRID in the United States, the companies of the group headed by Iberdrola, S.A. produce and deliver electricity primarily in Spain, the United Kingdom, Mexico, and Brazil. The shares of Iberdrola, S.A. are listed in the Madrid, Bilbao, Barcelona, and Valencia stock exchanges.

Please see **Exhibit 5.2.1** for an organization chart showing the ownership structure of CMP.

Please see **Exhibit 5.6.1** for a list of CMP's directors and officers and **Exhibits 11.4.1, 11.4.2 and 11.4.3** for lists of the management team responsible for the MCPC Transmission Project and résumés of the management team members.

In addition, please refer to Section 5.2(B) below for CMP's capital structure and financing plan for the MCPC Transmission Project.

Please see the separate submissions of NextEra Bidding Affiliates and EDF RE for a discussion of the ownership of the MCPC Clean Energy Generation.

5.2 (B) For projects that include new facilities or capital investment, 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 and the related financing mechanism or mechanisms that will be used (*i.e.*, convertible debenture, equity or other) including repayment schedules and conversion features

Please see below.

ii. The project's existing initial financial structure and projected financial structure

Please see below.

iii. Expected sources of debt and equity financing

Please see below.

iv. Estimated construction costs

Please see below.

v. The projected capital structure

Please see below.

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.

Please see below.

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.[21]

CMP plans to finance the full cost of the MCPC Transmission Project , as set forth in the revenue requirements models for Transmission Options 1 – 3, provided as **Exhibit**

[21] For ease of reference, CMP refers to this subsection as Section 5.2(B).

14.2.1 – 14.2.3. CMP's sources for capital and its financial wherewithal to successfully complete the MCPC Transmission Project are as set forth below.

CMP owns both distribution and transmission assets and finances them together, without regard to their purpose. CMP's capital structure (excluding the value of goodwill in the common equity balance) as of March 31, 2017 is shown in Figure 5.2.

Figure 5.2 – CMP's Capital Structure ($,000)

Short-term Debt	0	0%
Long-term Debt	1,043,291	42%
Preferred Equity	571	0%
Common Equity	1,444,532	58%
Total Capital	**$2,488,394**	

CMP expects to continue to maintain approximately the same debt and equity capital structure in financing all of its operations, including financing of the MCPC Transmission Project. This requires a balanced approach to the use of short- and long-term debt financing and equity funding sourced through retained earnings and capital contributions from CMP's parent, AVANGRID, Inc., if necessary. Specific sources of financing for CMP are as follows:

Short-term debt financing

CMP funds short-term liquidity needs through an agreement among AVANGRID's regulated utility subsidiaries (the Virtual Money Pool Agreement), a bi-lateral intercompany credit agreement with AVANGRID (the Bi-Lateral Intercompany Facility), and a bank provided credit facility to which CMP and other affiliated entities are parties (the AVANGRID Credit Facility). The Virtual Money Pool Agreement is an agreement among the investment grade-rated, regulated utility subsidiaries of AVANGRID under

which the parties to this agreement may lend to or borrow from each other. This agreement allows AVANGRID to optimize cash resources within the regulated utility companies, which are prohibited by regulation from lending to unregulated affiliates. The Bi-Lateral Intercompany Facility provides for borrowing of up to $500 million from AVANGRID. Both the Virtual Money Pool Agreement and the Bi-Lateral Intercompany Facility allow CMP to borrow at the A2/P2 non-financial 30-day commercial paper rate published by the U.S. Federal Reserve.

On April 5, 2016, AVANGRID and its investment grade-rated utility subsidiaries, including CMP, entered into the AVANGRID Credit Facility, a revolving credit facility with a syndicate of banks that provides for maximum, aggregate borrowings of up to $1.5 billion. Under the terms of the AVANGRID Credit Facility, CMP has a maximum sublimit of $250 million. The maturity date for the facility is April 5, 2021.

Long-term debt financing

CMP borrows long-term debt in the investment grade capital markets. CMP's senior unsecured debt ratings are A- / A2 / A- from Standard & Poor's, Moody's, and Fitch, respectively. Since 2009, CMP has issued $900 million of first mortgage bonds to finance its operations, including construction of the $1.4 billion MPRP project. The first mortgage bonds are rated A / Aa3 / A by Standard and Poor's, Moody's, and Fitch, respectively.

Equity financing

From the commencement of MPRP in 2009 to the present, CMP has received $250 million of equity capital contributions from AVANGRID. This, together with retaining a large portion of earnings, has enabled CMP to maintain a balanced capital structure while funding the $1.4 billion construction of MPRP and other capital projects.

Parent Company Financial Resources

AVANGRID has an equity market capitalization of approximately $14 billion. AVANGRID's senior unsecured debt is rated BBB / Baa1 / BBB+ by Standard & Poor's, Moody's, and Fitch, respectively, giving AVANGRID access to the investment grade debt markets. Under the AVANGRID Credit Facility (described above), AVANGRID has the capacity to borrow up to $1 billion. AVANGRID also has a $1 billion commercial paper facility that is backstopped by the AVANGRID Credit Facility. AVANGRID's commercial paper is rated A-2 / P-2 / F-2 by Standard and Poor's, Moody's, and Fitch, respectively.

As discussed above, AVANGRID is 81.5% owned by Iberdrola, S.A., one of the world's largest energy companies with an equity market capitalization of approximately $45 billion. Iberdrola, S.A. has approximately $33 billion in consolidated debt outstanding and has ratings of BBB+ / Baa1 / BBB+ from Standard & Poor's, Moody's, and Fitch, respectively, giving it access to investment grade debt markets in Europe, the U.S., and Asia.

5.3 Provide documentation illustrating the experience of the project sponsor 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

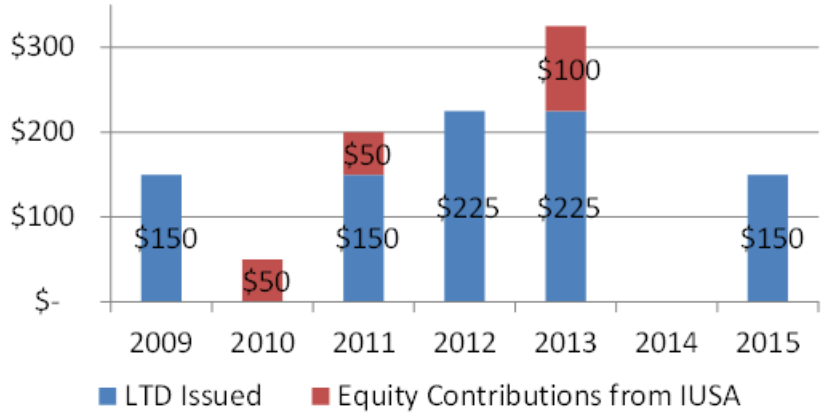
iv. Form of debt and equity financing

v. Current status of the Project

As discussed in Section 2.III.D.1.i and 5.2(B) above, CMP recently completed the $1.4 billion MPRP. During the period from 2009 through 2015, in order to fund the MPRP, as

well as its ongoing transmission[22] and distribution operations while maintaining a stable capital structure, CMP retained 100% of its net income (*i.e.*, it did not pay dividends). In addition, since 2009, CMP has received $250 million of equity contributions from AVANGRID, and issued $900 million of first mortgage bonds as shown in Figure 5.3 below.[23] CMP used its access to revolving credit to finance its variable working capital needs and to provide a source of bridge financing between its long-term debt financing transactions.

Figure 5.3 – 2009-2015 Long-term Debt and Equity Capital Raised by CMP ($MM)



CMP intends to use a similarly balanced approach to finance the MCPC Transmission Project, with the full support of AVANGRID and Iberdrola, S.A., one of the world's largest energy companies.

5.4 For projects that include new facilities or capital investment, provide evidence that the bidder has the financial resources and financial strength to complete and operate the project as planned.

Please see Sections 5.1, 5.2(B), 5.3 and 5.5.

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[22] For a list of other transmission projects that CMP completed during this time that it financed through a combination of retained earnings, equity contributions and short-term and long-term debt, please see **Exhibit 11.5.1**.

[23] References to IUSA in Figure 5.3 refer to Iberdrola USA. In December 2015, IUSA acquired UIL Holdings to form AVANGRID.

5.5 Provide complete copies of the most recent audited financial statement or 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.

Please see **Exhibit 5.5.1** (2014), **Exhibit 5.5.2** (2015) and **Exhibit 5.5.3** (2016) for the audited financial statements for CMP.

Please see **Exhibit 5.5.4** for the audited financial statement of Iberdrola USA, Networks, Inc. (now Avangrid Networks, Inc.) (2014), **Exhibit 5.5.5** (2015) and **Exhibit 5.5.6** (2016) for the audited financial statements for Avangrid Networks, Inc.

Please see **Exhibit 5.5.7** for the audited financial statement of Iberdrola USA, Inc. (now AVANGRID) (2014), and **Exhibit 5.5.8** (2015) and **Exhibit 5.5.9** (2016) for the audited financial statements for AVANGRID.

Please see Section 5.2(B) for the credit ratings from Standard & Poor's and Moody's for CMP and AVANGRID.

5.6 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.

Please see **Exhibit 5.6.1** for a list of members of the board of directors and officers of CMP for the past three years. Please see **Exhibit 5.6.2** and **Exhibit 5.6.3** for lists of members of the board of directors and officers of Avangrid Networks, Inc. and AVANGRID for the past three years. CMP is not aware of any upcoming changes to the board of directors or appointment of new officers at either company.

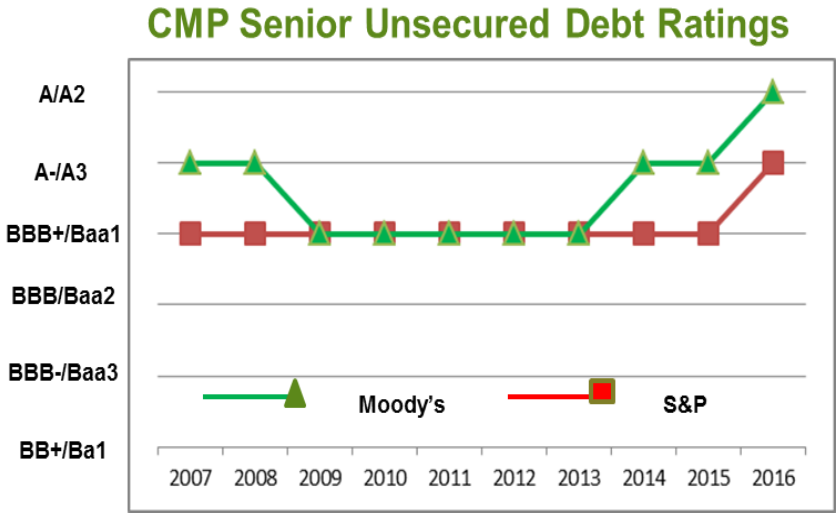
5.7 The bidder should demonstrate its ability (and/or the ability of its credit support provider) to provide the required security, including its plan for doing so.

As an investment grade rated company with access, directly and through its parent companies, to substantial financial resources, CMP has the capacity to provide the security required for the MCPC Transmission Project under the RFP or the MCPC TSA directly in the form of cash or letters of credit. For more information about CMP's financial capabilities, please see Section 5.2(B) and Section 5.5 above.

5.8 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.

As noted above, CMP's senior unsecured debt is rated A- / A2 / A- by Standard & Poor's, Moody's, and Fitch, respectively. Figure 5.8 below shows the Standard & Poor's and Moody's senior unsecured debt ratings since 2007 and shows that CMP was upgraded by Moody's in 2014 and again in 2016, and was upgraded by Standard & Poor's in 2016.

Figure 5.8 – CMP Senior Unsecured Debt Ratings



5.9 Describe the role of the Federal Production Tax Credit or Investment Tax Credit (or other incentives) on the financing of the project.

The Federal Production Tax Credit and the Investment Tax Credit are inapplicable to the MCPC Transmission Project.

5.10 Bidders must disclose any pending (currently or in the past three years) litigation or disputes 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.

There is no pending litigation or any dispute (currently or in the past three years) related to projects developed, owned, or managed by CMP or any of its subsidiaries, or related to any energy product sale agreements to which CMP or any of its subsidiaries is a party. CMP has recently resolved a dispute in relation to a Biomass Generated Energy Agreement as further detailed in **Exhibit 5.10**.

Additionally, to CMP's knowledge, the litigation and disputes described in **Exhibit 5.10** are the only litigation or disputes (currently or in the past three years) related to projects developed, owned, or managed by AVANGRID, Inc. or any of its subsidiaries, or related to energy product sale agreements to which AVANGRID, Inc. or any of its subsidiaries is a party.

5.11 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, transmission lead lines to move power to the grid, transmission proposals, and mandatory and voluntary transmission system upgrades?

The projected operating life of the MCPC Transmission Project is 40 years. The depreciation period for the MCPC transmission facilities is 20 years.

5.12 For projects that include new facilities or capital investment, 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.

Please see Section 5.2(B) for CMP's financing plan for the MCPC Transmission Project. As discussed therein, certain short-term credit facilities will be used to finance the MCPC Transmission Project. CMP has not yet obtained long-term financing for the Project. Please see Section 5.1 for an explanation of why obtaining a long-term TSA for the MCPC Transmission Project will assist CMP to finance the Project.

5.13 State whether the bidder or its affiliates have executed agreements with respect to energy, RECs and/or capacity for the 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.

Neither CMP nor any of its affiliates have executed any agreements with respect to the transmission capacity of the MCPC Transmission Project.

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

As explained in Section 5.2(A), CMP is a subsidiary of AVANGRID, a publicly traded New York corporation (NYSE: AGR). AVANGRID and all its subsidiaries are listed in **Exhibit 5.14.1.**

In addition, **Exhibit 5.14.2** contains a list of Iberdrola, S.A. group companies, jointly controlled companies and associated companies (other than AVANGRID and its subsidiaries which are already listed in **Exhibit 5.14.1**) as of June 2017.

5.15 Has Bidder, or any affiliate of Bidder, in the last five years, (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) was 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?

Neither CMP nor, to CMP's knowledge, AVANGRID, Inc. or any subsidiary of AVANGRID has undertaken any of the actions listed in Section 5.15 of the RFP during the last five years.

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

CMP is not aware of any conflicts of interest between CMP, AVANGRID, or any subsidiary of AVANGRID on the one hand, and the Distribution Companies or any of their affiliates, on the other hand.

5.17 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.

CMP is not aware of any litigation, disputes, claims, or complaints involving CMP, AVANGRID, or any subsidiary of AVANGRID against the Distribution Companies or any affiliate of the Distribution Companies.

CMP is aware of four complaints, past or now pending before FERC, concerning the ROE applicable to transmission facilities in New England in which CMP or a CMP affiliate, and one or more of the Distribution Companies or affiliate thereof is a respondent. A description of such actions is included in **Exhibit 5.17**.

5.18 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.

CMP is not aware of any litigation, disputes, claims, or complaints, or events of default responsive to this Section 5.18 involving CMP or any of its subsidiaries.

Additionally, to CMP's knowledge, the litigation and disputes described in **Exhibit 5.10** and those further described in **Exhibit 5.18** are the only matters involving AVANGRID or any of its subsidiaries that may be responsive to this Section 5.18.

5.19 Confirm that Bidder, and the directors, employees and agents of Bidder and any affiliate of Bidder are not currently under investigation 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 bidding on any contract, or have been the subject of any debarment action (detail any exceptions).

CMP is not aware of any investigations or convictions responsive to this Section 5.19 in relation to CMP or the directors, employees, and agents of CMP, AVANGRID, or any subsidiary of AVANGRID.

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

The MCPC Transmission Project will require the following permits and approvals before commencement of construction:

1. MPUC Certificate of Public Convenience and Necessity;
2. ISO-NE Review of Market Participant's Proposed Plans (under Section I.3.9 of the ISO-NE Tariff);
3. Siting and natural resources protection approvals, and land use and water quality certification, from the MDEP and the Maine Land Use Planning Commission (LUPC).
4. U.S. Army Corps of Engineers Wetland Impact Permits; and
5. Maine Municipality approvals.

These requirements are discussed in more detail in Section 6.3 and Section 7.1 below.

Any binding agreement for the MCPC Transmission Project must be subject to CMP obtaining these approvals and permits prior to construction.

In addition to the above approvals and permits, FERC has jurisdiction over transmission access, transmission service agreements, and transmission service charges, including cost-of-service-based tariffs, use charges, and/or support agreements covering transmission services. As discussed in Section 2(III)(A)(1) and as reflected in **Exhibit 15.1**, the MCPC Transmission Project proposal includes a TSA under which CMP's revenue requirements for the MCPC Transmission Project will be recovered from the Distribution Companies over the PPA terms. As a result, filings at FERC will be required. Obtaining FERC approval will be done in parallel with other federal, state and municipal siting approvals and is not expected to be a critical path item.

5.20 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.

CMP is confident that the MCPC Transmission Project, the MCPC TSA, and the dealings between CMP and the MCPC Clean Energy Generation Developers conform to all applicable FERC regulatory requirements and are consistent with all applicable FERC precedent and ratemaking principles as explained in detail in the memorandum by CMP's FERC counsel provided as **Exhibit 5.20**.

5.21 Describe and document any and all direct and indirect affiliations and affiliate relationships, 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 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;**
- **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**

CMP is not aware of any affiliations or affiliate relationships (in the past three years) between CMP and one or more of the Distribution Companies and their affiliates. To CMP's knowledge, the Distribution Companies do not have a financial or voting interest (direct or indirect) in CMP or the MCPC Transmission Project.

Notwithstanding the above, CMP is a shareholder in the following Yankee Companies: Connecticut Yankee Atomic Power Company, Yankee Atomic Electric Company, and Maine Yankee Atomic Power Company. Western Massachusetts Electric Company, NSTAR Electric Company, and some of their affiliates, as well as some affiliates of Massachusetts Electric Company and Nantucket Electric Company, are also shareholders in the three Yankee companies.

Furthermore, Avangrid Networks, Inc., the parent company of CMP, has an indirect interest of approximately 19.73% in New York TransCo, LLC. Grid NY, LLC, an affiliate of Massachusetts Electric Company and Nantucket Electric Company, also owns an interest in New York TransCo, LLC.[24]

Finally, CMP is a party to certain agreements related to the Phase I and Phase II Québec-United States interconnection project constructed during the 1980s and 1990s that provides high voltage direct current interconnection between the electric systems in New England and the electric system of Hydro-Québec (Phase I/II Project).

The United States portion of the Phase I/II Project facilities 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. Eversource Energy and NSTAR Electric Company also have an interest in New England-Hydro Transmission Electric Company and New England Hydro-Transmission Corporation. Additionally, New England Power Company (an affiliate of Massachusetts Electric Company and Nantucket Electric Company) and NSTAR Electric Company are asset owners of certain AC transmission network facilities that were required as upgrades for the Phase I/II Project.

CMP and certain CMP affiliates along with several other New England utilities, including Fitchburg Gas and Electric Light Company, Western Massachusetts Electric Company, NSTAR Electric Company, and some of their affiliates, provided financial support

[24] SP Transmission, a Scottish Power company, which is part of the Iberdrola, S.A. group, has a joint venture with National Grid (NGET/SPT Upgrades, Ltd.) for the purpose of building a submarine interconnection in the Irish Sea to increase the power transmission capacity between England and Scotland.

in connection to the Phase I/II Project through payment of support charges to the different asset owners. The terms of such financial support are set forth in several support agreements executed by the different asset owners and the financial supporters of the interconnection facilities, including CMP (the Support Agreements).

As provided in the Support Agreements, in exchange for payment of support charges, CMP and the other participating utilities were granted rights to use the capability of the Phase I/II Project facilities in accordance with the terms of a use agreement (Use Agreement). The core Phase I/II Project related agreements, including core Support Agreements and the Use Agreement, are listed in **Exhibit 5.21**.

This section of the proposal addresses project location, siting, real property rights and interconnection issues. Bidders should ensure that the threshold criteria outlined in Section 2.2 of the RFP for generation, transmission proposals, and system upgrades are verified in their responses.

6.1 Provide a site plan including a map of the site that clearly identifies the location of the Eligible Facility site and/or Transmission Project route, the assumed right-of-way width, the total acreage for Eligible Facilities, the anticipated interconnection point (or, if applicable, multiple points for a Transmission Project), and the relationship of the site to other local infrastructure, including transmission facilities, roadways, and water sources. In addition to providing the required map, provide a site layout plan which illustrates the location of all major equipment and facilities on the site.

Site plan included? Yes ☑ No☐ If not, please explain:

Please see **Exhibit 6.1** and **Exhibit 8.1**.

6.2 Identify any real property rights (*e.g.*, fee-owned parcels, rights-of-way, development rights or easements or leases) that provide the right to use the Eligible Facility site and/or Transmission Project route, 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 Transmission Project route for the entire proposed term of the PPA or tariff (*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 Transmission Project route control.

Please see **Exhibit 6.2** for a list of all of the real property interests and related recording information through which CMP controls by fee ownership, easement, or option rights the route and the substation locations for the MCPC Transmission Project.

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.

Please see Section 6.2(ii).

iv. Identify any joint use of existing or proposed real property rights

As discussed in Section 6.4 and Section 7.3, a significant portion of the MCPC Transmission Project will be constructed in existing CMP transmission corridors and, according to the Transmission Option selected, includes upgrades at the existing Larrabee Road, Coopers Mills Road, Surowiec, and Maine Yankee substations. As listed in **Exhibit 6.2**, CMP controls these locations through fee ownership or easement.

6.3 Provide evidence that the Eligible Facility site and/or Transmission Project route is properly zoned or permitted. If the Eligible Facility site and/or Transmission Project route is 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:

CMP has many decades of experience successfully designing, siting, constructing, and commissioning large and complex transmission line and substation projects while complying with all federal, state, regional, and local zoning and permitting requirements. CMP intends to apply this experience and approach to permitting of the MCPC Transmission Project.

CMP is currently pursuing all permits necessary for the MCPC Transmission Project. Permitting actions will include: outreach to all federal, state, and local permit-issuing agencies, bodies, and authorities; surveys and studies of protected and sensitive natural and cultural resources within the MCPC Transmission Project area; comprehensive review of statutes, regulations, local ordinances, and other codified requirements relevant to permitting; identification of all required environmental and land use permits, licenses, and other approvals based on project scope, location, natural resource impacts, and jurisdictional thresholds; research and documentation of all permit application processes

(information requirements, approval standards and criteria, timeline, fees, other); preparation of permit applications; presentation of applications to the appropriate permitting authorities; ongoing consultation with natural resource and permitting agencies and authorities; timely responses to agency requests for information; negotiation of protective and reasonable permit terms and conditions; and procurement of all required approvals.

Planning and zoning at the local level in Maine is administered by municipalities (both cities and towns) in the organized areas of the state, and by the LUPC in the unorganized and deorganized areas of the state (*i.e.*, areas with no local government). CMP will identify all zoning, siting, and operational requirements, and will work with municipalities and the LUPC to efficiently permit the MCPC Transmission Project.

At the municipal level, CMP will review and evaluate local zoning ordinances to determine the specific permitting requirements for the MCPC Project within each municipality.

MDEP Regulations Chapter 1000 (Guidelines for Municipal Shoreland Zoning Ordinances)[25] establishes standards and guidelines for land use activities within Maine's shoreland areas (*i.e.*, areas within 250 feet of ponds, rivers, freshwater and coastal wetlands, and areas within 75 feet of streams). Maine statute requires that municipalities adopt shoreland zoning ordinances consistent with, and no less stringent than, guidelines contained in Chapter 1000.

Chapter 1000 defines "essential services" broadly, to include "electrical . . . facilities . . . electric power . . . transmission or distribution lines, towers and related equipment . . . poles and related equipment . . . towers, poles, wires, . . . pipes, conduits, cables . . ."[26]

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[25] 06-096, C.M.R. ch. 1000 (1996) (amended 2015).

[26] *Id*. at §17.

Recognized in state regulation as an essential service, electric service and associated electric utility infrastructure is regulated and is permittable within Maine municipalities, including within shoreland-zoned areas, which are the most intensively regulated areas of each municipality.

Each municipal approval type has its own jurisdictional threshold and approval criteria. Depending on a particular municipality's land use ordinance, the MCPC Project facilities may require several approvals and permits, including, shoreland zoning; site plan; and conditional use; flood hazard development; building; demolition; variance; driveway/entrance; street opening; utility location; and blasting.

The design, siting, and construction of the MCPC Transmission Project will fulfill all applicable municipal performance standards and approval criteria, as have prior CMP electric infrastructure projects over many years and in numerous Maine municipalities, including many of the municipalities within which the MCPC Transmission Project will be located.

In the unlikely event that a municipal ordinance severely restricts or prohibits construction of the Project, CMP will pursue amendment of the applicable ordinance. In the event that the municipality rejects CMP's ordinance amendment request or enacts an ordinance that severely restricts or prohibits construction of the Project, CMP will petition the MPUC under applicable Maine law for appropriate redress to permit approval and construction of the Project.[27]

In May 2017, CMP initiated consultation with the LUPC regarding approval requirements in the unorganized and deorganized areas along the Project corridor. LUPC

[27] Pursuant to 30-A M.R.S. § 4352(4), real estate to be used for a transmission facility is exempt in whole or in part from zoning ordinances "when on petition, notice and public hearing the [MPUC] determines that the exemption is reasonably necessary for public welfare and convenience." Section 5 of Chapter 885 of the MPUC's rules, enacted to implement Section 4352(4), in turn provides that to grant an exemption from a municipal zoning ordinance, the MPUC must determine that the exemption is necessary or desirable for the public welfare and convenience. *See* 65-407, C.M.R. ch. 885 (2008).

statute (Title 12 Chapter 206-A) requires the creation of land use districts and standards in the unorganized and deorganized areas of the state. CMP has reviewed the land use subdistricts traversed by the Project and has determined that the MCPC Transmission Project is an allowed use in each subdistrict, including those subdistricts requiring special exceptions for utility facilities. Applicable land use standards in LUPC-jurisdictional areas will be considered by the LUPC concurrent with MDEP review of CMP's Site Location of Development Act (SLODA) and Natural Resources Protection Act (NRPA) permit applications.

Permitting plan and timeline:

Please see Sections 7.1 and 7.2 and **Exhibit 10.1** for a detailed listing of anticipated project permitting requirements and associated timelines.

Start Date: **End Date:**
Please see **Exhibit 10.1**.

6.4 Provide a description of the area surrounding the Eligible Facility site and/or Transmission Project route, including a description of the local zoning, flood plain information, existing land use and setting (woodlands, grasslands, agriculture, other).

Below, CMP provides the MCPC Transmission Project route for Transmission Options 1 through 3, noting any portion of the route description that is inapplicable to one or more of the Transmission Options.

345 kV AC transmission line – Gold Brook Substation, Skinner Township, Maine to Larrabee Road Substation, Lewiston, Maine (*applicable to Transmission Options 1 through 3, except as noted below*).

The new 345 kV AC transmission line will extend from the proposed Gold Brook Substation in western Maine to an interconnection point in south central Maine.
The total transmission line length for Transmission Options 1, 2 and 3 is 140.2 miles, with Transmission Options 2 and 3 interconnecting to a new substation along the route in

Moscow, Maine. For all transmission options, the line will be located partially in new corridor and partially in undeveloped width in existing corridors.

The corridor begins in western Maine in Skinner Township (Franklin County) at a point near Gold Brook Road approximately 2¾ miles west of the east line of the township. The corridor extends east for about three miles across Skinner Township and then extends east about 19½ miles across Appleton Township, Raytown Township, Hobbstown Township, Bradstreet Township, and across the southwest corner of Parlin Pond Township (all in Somerset County). Elevations range from 2,400 feet in the west to 1,200 feet in Raytown. From Parlin Pond Township the corridor crosses into Johnson Mountain Township (Somerset County) extending south about 6½ miles over the approach to Coburn Mountain and into the valley between Coburn Mountain and Johnson Mountain before turning east again for about 2½ miles to the U.S. Route 201 crossing at a point about 31½ miles from the Canadian border. Elevations on this segment range from just under 2,700 feet where the corridor crosses the Coburn Ridge to about 1,400 feet at U.S. Route 201.

Between the proposed Gold Brook Substation and U.S. Route 201, the corridor is a 300-foot wide parcel that is fee-owned. The corridor has been surveyed but is not cleared. The surrounding land is generally industrial forest land typified by spruce-fir and northern hardwood forest types that are owned and managed for timber production. The area is undeveloped with only a few seasonal dwellings. Recreation is typically permitted on the industrial forest lands and there are some state-owned lands in the area. The Nature Conservancy has recently acquired a large parcel to the north of the corridor in Appleton and Raytown. There is one utility scale wind farm located in Kibby Township which abuts Skinner Township on the south. There are no public roads or utilities until the corridor

crosses U.S. Route 201, and access to the area is by private roads only. CMP has acquired permanent easement rights over these private roads as part of the corridor acquisition. U.S. Route 201 is a scenic highway and the Project corridor alignment through Johnson Mountain Township was designed to minimize the view from the highway.

The corridor width continues to be 300 feet wide east of U.S. Route 201 but the ownership is easement for about 3½ miles to a point where the corridor turns south and crosses about one mile of state-owned land situated on the town line between Johnson Mountain Township and West Forks Plantation (Somerset County). CMP leases the corridor across the state land under the terms of a 25-year lease that may be renewed indefinitely. The fee ownership resumes at the south line on the state land and the 300-foot wide corridor continues south across West Forks Plantation about 4¾ miles to the Kennebec River and the Moxie Gore town line. Elevation ranges from about 1,400 feet near U.S. Route 201 to about 650 feet at the Kennebec River. Land uses in this segment are similar to the land uses between the Québec border and U.S. Route 201.

From the Kennebec River, the 300-foot wide fee-owned corridor extends about 4 miles southeast across Moxie Gore Township (Somerset County) and The Forks (Somerset County) to the intersection with the Section 222 corridor near Lake Moxie Road, the second public road crossed by the undeveloped corridor. Elevation ranges from about 650 feet at the Kennebec River to about 1,000 feet. Moxie Gore Township was subdivided into 40-acre lots in the 1980s. Some of the lots are developed with seasonal dwellings and some have been acquired by a land trust, so while the land type is similar to the previous segments, the land use has changed.

Section 222 is a fee-owned corridor acquired in the 1950s to connect Harris Dam on the Kennebec River (Indian Pond Project) with the grid at Wyman Dam, also on the Kennebec River. The corridor is improved with one 115 kV line and is 300 feet wide from the intersection with the new corridor to the former Moscow Air Force Radar Station, a distance of about 17½ miles across the towns of The Forks, Bald Mountain, Caratunk, and Moscow (all in Somerset County). Only one-half of the corridor is cleared for Section 222, leaving sufficient width in the remaining corridor for the new line. Elevation ranges from about 1,000 feet to about 1,350 feet near the abandoned Moscow Air Force Radar Station. For Transmission Option 2 and Transmission Option 3 only, the line will connect to a proposed solar farm to be developed at this site.

The new line continues in the Section 222 corridor for about 1½ miles to a new corridor that extends southeast, south and west for about 5½ miles across Moscow and Bingham (both in Somerset County), where the new corridor intersects with the existing 300-foot wide corridor that contains Sections 66, 83 and 241, all 115 kV lines.

The majority of the land abutting Section 222 and the new corridor is private industrial forest land. However, the first seven miles of this segment parallel the west shore of Moxie Pond, which has a number of seasonal recreational dwellings. Section 222 crosses the Appalachian Trail (AT), a National Scenic Trail, at the south end of Moxie Pond, and the new line will cross the AT in the same location. CMP owns in fee the corridor in this area and has granted an easement to the National Park Service for the trail. Residential development increases as Section 222 nears the village of Moscow but remains sparse. Access to the Section 222 corridor is primarily by private roads over which CMP holds

permanent easements. There are several public roads in the town of Moscow, including U.S. Route 201.

The new line follows the Section 66/83/241 corridor west for about 1½ miles through Moscow and Bingham to the Wyman Hydro Project. Sections 66 and 82 will be rebuilt from H-frame structures to single-pole structures to provide space in the corridor for the new line. The abutting land use is primarily rural residential and village residential. This segment of corridor roughly parallels the Kennebec River so elevation change is minimal, ranging from about 500 feet to just under 400 feet.

Between the Wyman Hydro Project and the Larrabee Road Substation, the new line will be located in the fee-owned 400- to 500-foot wide corridor acquired by CMP around 1930 to connect the Wyman Hydro Project with the grid in Lewiston, Maine. From the Wyman Hydro Project south approximately 20 miles, the corridor is 500 feet wide and crosses the towns of Concord, Embden and Anson (all in Somerset County) to the Madison Switch. The corridor is improved with Section 63, a 115 kV transmission line. The western 250 feet of the corridor is not cleared and the corridor contains sufficient width for the new line. The corridor width decreases to 400 feet at the south line of Anson and generally remains this width to Lewiston. The western 150 feet of the corridor is not cleared and the corridor contains sufficient width for the new line. Section 279 begins at the Madison Switch and extends about ½ mile southwest in the town of Starks (Somerset County) to the Starks Substation where the 115 kV line becomes Section 278. Section 278 extends approximately 26½ miles southwest across the towns of Starks (Somerset County), and Industry, Farmington, Chesterville, Wilton, Jay, and Livermore Falls (all in Franklin County) to the Livermore Falls Substation. The corridor contains Sections 251 and 200, both 115

kV transmission lines, beginning at the Livermore Falls Substation and continuing about 23 miles across the towns of Livermore Falls, Franklin County, Leeds, Greene, and Lewiston (all in Androscoggin County) to the existing Larrabee Road Substation. Again, the western 150 feet of the corridor is not cleared and contains sufficient width for the new line. Elevation ranges from about 300 feet to 700 feet along the corridor for this segment.

The corridor roughly parallels the Kennebec River between Concord and Starks, then turns southwest until it begins to roughly parallel the Androscoggin River beginning in Jay and continues to follow the Androscoggin River into Lewiston. Land use along the corridor between Wyman Hydro and Larrabee Road Substation is mixed agriculture and woodlands with some industrial forest land along the northern part and primarily private forest ownership further south. Most of the agricultural activity occurs on the outwash plains along the Kennebec, Sandy, and Androscoggin Rivers. The corridor comes close to the village of North Anson and the towns of Farmington, Jay, and Livermore Falls where there is more residential development but even in these areas the development remains sparse. In the city of Lewiston, the Larrabee Road Substation is located in the northern part of the city in an area of mixed residential and rural use. Access to the corridor between Wyman Hydro and the Larrabee Road Substation is generally from public roads. The corridor passes through state-owned land in the town of Leeds that was acquired by the state long after the corridor was established.

345 kV AC Line - Coopers Mills Road Substation, Windsor, Maine to Maine Yankee Substation, Wiscasset, Maine *(only applicable to Transmission Option 3).*

The new 345 kV AC transmission line will be located in an existing 26½ mile-long primarily fee-owned corridor that includes Section 392, a 345 kV transmission line.

Section 68, a 115 kV transmission line, also occupies the corridor for most of the distance between the two substations. Several other lines enter or exit the corridor at the substation approaches, but these two lines define the majority of the corridor. The corridor contains sufficient width for the new line without additional real estate acquisitions.

The corridor begins at the Coopers Mills Road Substation located about two miles north of Route 17 (Augusta-Rockland Road) in the southeastern part of the town of Windsor (Kennebec County) and extends southwest for 2¼ miles to the town of Whitefield (Lincoln County). The corridor continues southwest and south through Whitefield and the towns of Alna and Wiscasset (Lincoln County) for about 20 miles to the town of Woolwich (Sagadahoc County). Section 68 diverges from Section 392 about ½ mile north of the Woolwich town line. The new line will continue to follow the Section 392 corridor for about 1¼ miles to the intersection with Sections 375 and 377 (345 kV) and Section 207A (115 kV). This combined corridor enters the town of Wiscasset and terminates at the Maine Yankee Substation about three miles south of the Woolwich town line. The corridor width varies from 270 to over 550 feet as other transmission lines converge or diverge from the corridor. However, there is sufficient available width for the new 345 kV transmission line for the entire distance between Coopers Mills Road Substation and Maine Yankee Substation.

Surrounding land uses are primarily woodlots with some agricultural fields and rural residential development, particularly near road crossings. There is strip retail commercial development along U.S. Route 1 in Wiscasset and several commercial

sand/gravel excavation operations near the corridor in Whitefield. Elevations range from about 300 feet to 25 feet at Maine Yankee Substation.

The MCPC Transmission Project corridors cross a number of flood plains, wetlands, streams, and rivers. Maine law requires all municipalities to have a shoreland zoning ordinance that is at least as stringent as the model ordinance developed by the MDEP. Unless a municipality has adopted stricter standards than those required by state law, shoreland zoning regulates land uses within 250 feet of most water bodies, including wetlands, and within 75 feet of streams. CMP will apply for shoreland zoning and flood hazard development permits in those municipalities where these approvals are required.

As described in Section 6.3, CMP will work with the LUPC and municipalities in the Project area to address all applicable zoning and permitting requirements.

6.5 For Eligible Facilities, describe and provide a map of the proposed interconnection that includes the path from the generation site to the ISO New England Inc. ("ISO-NE") Pool Transmission Facilities ("PTF"). Describe how the bidder plans to gain interconnection path site control.

Interconnection map included? Yes:☑ No: ☐ if not, please explain:

Please see **Exhibit 6.1**.

Interconnection site control plan:

Please see Section 6.2 and **Exhibit 6.2**.

6.6 Please describe the status of any planned interconnection to the grid. Has the bidder made a valid interconnection request to ISO-NE, the applicable New England Transmission Owner, or any neighboring control areas, to interconnect at the Capacity Capability Interconnection Standard? Have any studies been completed by ISO-NE or the applicable Transmission or Distribution Owner? 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. Describe how such

studies and information support the costs assumed in preparing your bid and the associated timeline proposed.

On June 1, 2017, ISO-NE accepted CMP's Elective Transmission Upgrade (ETU) request for Transmission Option 1 of the MCPC Transmission Project. On July 17, 2017, ISO-NE accepted CMP's ETU request for Transmission Option 2 of the MCPC Transmission Project, and on July 18, 2017 ISO-NE accepted CMP's ETU request for Transmission Option 3 of the MCPC Transmission Project. CMP provides a copy of each such ETU request as **Exhibit 6.6.1** ([redacted]), **Exhibit 6.6.2** ([redacted]), **and Exhibit 6.6.3** ([redacted]). ISO-NE assigned [redacted], respectively, to these ETU requests.

To date, ISO-NE has not yet completed any studies regarding the Project. However, RLC has performed study work to determine the feasibility of the interconnection of the MCPC Transmission Project, and to assess whether the Project causes any adverse impact with all project components in service. RLC conducted this analysis in accordance with ISO-NE's SIS standards (including steady-state analysis and stability analysis). RLC also conducted an overlapping impact analysis in accordance with the CCIS. CMP provides these analyses at **Exhibit 6.7.1 – Exhibit 6.7.3** (Technical Reports), and **Exhibit 6.8.1 – Exhibit 6.8.3** (Overlapping Impact Studies).

Please see the separate submissions of the MCPC Clean Energy Generation Developers for information on the queue positions for their proposed generation.

6.7 Describe the Project's electrical system performance and its impact to the reliability of the New England Transmission system. For Transmission Projects provide a description of how the project would satisfy ISO-NE's I.3.9 requirements. Provide the status of any interconnection studies already underway with ISO-NE and/or the transmission owner. Provide a copy of any studies completed to date. 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:

As discussed in Section 6.6, ISO-NE has not yet completed a SIS for the MCPC Transmission Project and no interconnection agreement has been executed. [redacted] The SIS for Transmission Options 1 through 3 are now pending before ISO-NE. CMP expects that all system impact studies will be complete in time to permit ISO-NE's issuance of I.3.9 approval for the selected MCPC Transmission Project by the first quarter of 2019, as explained in Section 6.9.

RLC has completed system impact studies of the MCPC Transmission options that approximate the ISO-NE interconnection process, and has prepared Technical Reports for each transmission option, included in this submission as **Exhibit 6.7.1** (Transmission Option 1), **Exhibit 6.7.2** (Transmission Option 2), and **Exhibit 6.7.3** (Transmission Option 3). These reports summarize the studies' methodologies, assumptions, and findings. Based on these studies, CMP is confident that the MCPC Transmission Project will have no adverse impact to the New England Transmission System and thus receive I.3.9 approval from ISO-NE.

In fact, as discussed in Section 3.3, the MCPC Transmission Project and associated upgrades will improve system reliability, principally by increasing the amount of power that can flow through Maine and adding redundancy, resiliency, and increased transmission capacity to the existing transmission system. As found in the system impact analyses provided in **Exhibit 6.7.3**, Transmission Option 3 of the MCPC Transmission

Project and associated upgrades will increase the transfer limits on the existing Surowiec South interface in Maine from 1,600 MW to 2,200 MW, an increase of 600 MW. The stability limits on the Surowiec South interface are increased by the Coopers Mills and Surowiec STATCOM additions along with the new parallel Section 392 345 kV line between Coopers Mills and Maine Yankee. In addition, the transfer limit analysis performed as part of the system impact analyses shows that thermal constraints on the Surowiec South interface are above the 2,200 MW limit proposed by ISO-NE in the MRIS.

In accordance with the requirements in Section 2.2.1.9 of the RFP, RLC also performed an overlapping impact analysis for the MCPC Transmission Project, which is discussed in **Exhibit 6.8.1** (Transmission Option 1), **Exhibit 6.8.2** (Transmission Option 2), and **Exhibit 6.8.3** (Transmission Option 3). This analysis demonstrates that the MCPC Clean Energy Generation can interconnect using the CCIS without any additional upgrades. This interconnection standard provides more confidence that the MCPC Clean Energy Generation will be deliverable without suffering from bottlenecks and constraints in the transmission grid.

Attachments:

Copy of completed studies attached: ☐ If none, please explain:

Please see **Exhibit 6.7.1 – Exhibit 6.7.3** (Technical Reports) and **Exhibit 6.8.1 – Exhibit 6.8.3** (Overlapping Impact Studies).

Copy of Interconnection Agreement attached: ☐If none, please explain:

CMP and ISO-NE have not yet negotiated an Interconnection Agreement. Please see above and Section 6.6.

6.8 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 studies must assume the project will interconnect using the Capacity Capability Interconnection Standard, must use the current ISO-NE interconnection process (including network impact scenarios from multiple projects interconnecting), and must also detail any assumptions with respect to projects ahead of the proposed project in the ISO-NE interconnection queue and any assumptions as to changes to the transmission system that differ from the current ISO-NE Regional System Plan. Please include a scenario analysis that shows how changes in the project interconnection queue could impact interconnection costs.

Please see **Exhibit 6.7.1**, **Exhibit 6.7.2**, and **Exhibit 6.7.3** for the Technical Reports prepared by RLC for the MCPC Transmission Project.

These system impact studies, summarized in **Exhibit 6.7.1**, **Exhibit 6.7.2**, and **Exhibit 6.7.3**, were undertaken consistent with the methodologies and assumptions used in ISO-NE's I.3.9 analyses. An overlapping impact analysis was also performed that replicated the CCIS analysis process to meet the deliverability standard for interconnection. This analysis shows that Transmission Option 3 allows the Surowiec South interface to increase to 2,200 MW (from 1,600 MW) with the proposed system upgrades associated with this Project and listed in Section 2(II)(B). CMP provides RLC's overlapping impact analyses as **Exhibit 6.8.1** (Transmission Option 1); **Exhibit 6.8.2** (Transmission Option 2); and **Exhibit 6.8.3** (Transmission Option 3).

In conducting the stability analysis as part of the SIS, RLC used the latest stability cases (from 2016 ISO-NE TPL analysis) which include the latest generation queue with PPA approval (and stability models). These cases were used to demonstrate that an increase in the Surowiec South interface has acceptable system responses.

RLC used steady-state cases derived from ISO-NE's Model-on-Demand (MOD) system for the steady-state SIS assessments. The overlapping impact assessment used base

cases from the 2022 Area Review recently released through the Planning Advisory Committee in June, 2017. These cases include the latest transmission system and generation queue with PPA approval.[28]

RLC also analyzed several sensitivity cases with various generation dispatches and transfers in the steady-state and stability assessments. All of the ISO-NE study procedures and practices were followed to determine the interconnection requirements for I.3.9 approval under the NCIS and for deliverability under the CCIS. The assumptions conformed with the ISO-NE OATT to assure the appropriate transmission upgrades were identified and included with the proposed Project.

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

ISO-NE is developing a cluster study approach to address the backlog of generation interconnect requests in western and northern Maine. CMP understands that ISO-NE intends to propose very soon the necessary tariff changes to FERC to implement this cluster study process which consists of two phases. ISO-NE is in the process of completing the initial study required under the cluster study process (Phase 1 of the new process) for resources seeking interconnection in western and northern Maine through its ongoing MRIS. In this Phase 1, ISO-NE will develop the transmission upgrades needed to

[28] Other generation projects located in Maine listed in the ISO-NE interconnection queue ahead of the MCPC Transmission Project were not included in this analysis because such projects are not included in the ISO-NE base cases. These other generation projects are instead being evaluated as part of the ISO-NE MRIS in a "clustered" basis. As discussed in Section 6.9, CMP believes that these projects will fall below the MCPC Transmission Project in the queue through the cluster study process that ISO-NE is seeking to implement, thereby leaving the MCPC Transmission Project only behind the three queue projects included in the MCPC system impact study performed by the RLC.

interconnect the resources and will request cost estimates for those upgrades from the interconnecting transmission owners.

Under the terms of cluster study tariff changes that ISO-NE is expected to propose, in Phase 2, ISO-NE will identify all of the generation resources and elective transmission upgrades in the interconnection queue located in western Maine eligible to participate in the cluster study, and solicit from these generators and elective transmission upgrades a binding commitment to fund a significant portion of their share of the costs for the transmission facilities identified in the MRIS as necessary to permit the interconnection of the clustered resources, referred to as the Cluster Enabling Transmission Upgrades (CETU). Based on public statements by several generators and other information shared during the ISO-NE stakeholder process, CMP believes that very few, if any, of the eligible projects will make this commitment and pay the significant deposits required because they do not have binding power purchase agreements or other agreements in place to finance their projects. Should these generators and elective transmission upgrades refuse to make the necessary commitment to fund the transmission facilities, they will have the option to either drop out of the interconnection queue or go to the end of the queue.

Whether CMP will seek to have the MCPC Transmission Project studied as part of ISO-NE's proposed cluster study process will depend on the timing of that process relative to the RFP timeline. Should the Phase 2 study process commence before the MCPC is selected in the RFP, CMP will likely not seek to have the MCPC studied as part of the initial Phase 2 cluster study. Should the Phase 2 cluster study start after the Distribution Companies select the MCPC Transmission and Clean Energy Generation Projects, CMP would work to ensure that ISO-NE includes the projects in the cluster study. In either case,

the cluster study process and ISO-NE's ongoing efforts to implement it for western Maine are beneficial to the successful and timely completion of the MCPC Transmission Project in two important respects.

First, the system planning studies performed for the MCPC Transmission Project by RLC, which are summarized in **Exhibit 6.7.1, Exhibit 6.7.2,** and **Exhibit 6.7.3**, were performed consistent with the ISO-NE MRIS study for western Maine, which study represents the first step in the cluster study process for interconnecting up to 1,200 MW of western Maine generation projects in the ISO-NE interconnection queue at the Larrabee Road Substation. In fact, as set forth in the Technical Reports provided as **Exhibit 6.7.1**, **Exhibit 6.7.2**, and **Exhibit 6.7.3**, the study assumptions used in those studies, and the transmission upgrades required for interconnection of the MCPC Transmission Project, are consistent with the ISO-NE MRIS findings and demonstrate that the MCPC Project transmission upgrades will satisfy both the I.3.9 approval process and the CCIS deliverability standard.

Because the MCPC system impact studies track the methodologies and assumptions of the MRIS, CMP has a high level of confidence that the MCPC Transmission Project includes the appropriate transmission upgrades to permit interconnection under the CCIS and to obtain ISO-NE I.3.9 approval. In fact, based on the RLC system impact study, the MCPC Transmission Project includes the western Maine CETU upgrades as well as additional transmission upgrades that were not identified in the ISO-NE MRIS in order to ensure that the MCPC Transmission Project will both obtain I.3.9 approval and permit the

interconnection of the MCPC Clean Energy Generation in accordance with the CCIS, as required by Section 2.2.1.9.[29]

Second, ISO-NE has preliminarily identified 22 interconnection requests to be eligible to participate in Phase 2 of the cluster study process.[30] [redacted]

Should each of these projects decline to commit to fund the necessary transmission upgrades in order to participate in the cluster study, they will drop down in queue (or drop out entirely), thereby significantly reducing the number of projects holding queue positions before the MCPC Transmission Project and expediting the timeline for ISO-NE to complete the required system impact studies for the MCPC Transmission Project. CMP has accordingly factored the effect of the cluster study process in its timeline for obtaining system impact and ISO-NE I.3.9 approval, as reflected in MCPC Project Schedule provided as **Exhibit 10.1**.

6.10 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:

Please see **Exhibits 6.10.1 – 6.10.3** for the text to the Dynamics information for the three options included within the MCPC Transmission Project. CMP provides the IDEV files for each of the Project's transmission options as **Exhibits 6.13.1 – 6.13.3**, respectively.

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[29] The MRIS is available on the ISO-NE website at https://smd.iso-ne.com/operations-services/ceii/pac/2017/02/a6_maine_resource_integration_study.pdf. The updated results for MRIS (posted 5/24/2017) can be found at https://smd.iso-ne.com/operations-services/ceii/pac/2017/05/a2_maine_resource_integration_study_results.pdf.

[30] QP417, QP458, QP459, QP460, QP461, QP462, QP470, QP471, QP571, QP572, QP573, QP574, QP576, QP577, QP578, QP589, QP590, QP591, QP593, QP594, QP621, QP626.

6.11 Provide a copy of an electrical one-line diagram showing the interconnection facilities and the relevant facilities of the transmission and/or distribution provider.

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

Please see **Exhibit 6.11.1** (Transmission Option 1), **Exhibit 6.11.2** (Transmission Option 2), and **Exhibit 6.11.3** (Transmission Option 3) for an electrical one-line diagram showing each MCPC Transmission Option.

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

Please see Section 2(II)(B) and Section 8.5 for a description of the transmission facilities CMP intends to construct to permit the interconnection of the Project using the CCIS in order to deliver the MCPC Clean Energy Generation to the New England Control Area at the existing Larrabee Road Substation in Lewiston, Maine.

6.13 Incremental data requirements for Projects that include Transmission facilities;

1. **IDV file(s) in PSSE v32 format modeling only the new/modified Transmission components of the project: ☐ If none, please explain:**

Please see **Exhibits 6.13.1 – 6.13.3** for the IDV file(s) in PSSE v32 format modeling the MCPC Transmission Project.

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 to and from bus numbers and names**

Please see **Exhibits 6.13.1 – 6.13.3**.

- **Transformer data: (including Phase shifting transformers if applicable): Terminal Voltages/Thermal Ratings/Impedance To and from bus numbers and names**

Please see **Exhibits 6.13.1 – 6.13.3**.

- **Reactive compensation models as necessary**

Please see **Exhibits 6.13.1 – 6.13.3**.

- **Other changes to the model that would occur due to a Project such as terminal changes for lines/transformer/generator leads/loads etc.**

Please see **Exhibits 6.13.1 – 6.13.3**.

6.14 Please detail with supporting information and studies (as available) that the energy contemplated in your proposal is able to be delivered to the Distribution Companies without material constraint or curtailment.

Please see **Exhibits 6.7.1, Exhibit 6.7.2, Exhibit 6.7.3** (Technical Reports), and

Exhibit 2.1 (Daymark Report).

6.15 Please provide sufficient information and documentation to demonstrate that the proposed point of delivery into ISO-NE, along with their proposed interconnection and transmission upgrades including any transmission upgrades beyond the point of interconnection, is sufficient to ensure full dispatch of the proposal's Clean Energy Generation profile.

Please see **Exhibits 6.7.1, Exhibit 6.7.2, Exhibit 6.7.3** (Technical Reports)[redacted]

[redacted]

SECTION 7 OF APPENDIX B TO THE RFP
ENVIRONMENTAL ASSESSMENT, PERMIT ACQUISITION PLAN AND NEW CLASS I RPS CERTIFICATION

This section addresses environmental and other regulatory issues associated with project siting, development and operations for both generation and transmission projects, as applicable.

7.1 Provide a list of all the permits, licenses, and environmental assessments and/or environmental impact statements required. If a bidder has secured any permit or has applied for a permit, please identify in the response.

i. Provide a list of all Federal, state and local permits, licenses, and environmental assessments and/or environmental impact statements required to construct and operate the project.

ii. Identify the governmental agencies that will issue or approve the required permits, licenses, and environmental assessments and/or environmental impact statements.

The MCPC Transmission Project will or may require the following siting, environmental, and land use permits, licenses and approvals:

1. Maine Public Utilities Commission (MPUC)
    - Certificate of Public Convenience and Necessity (CPCN)
2. Maine Department of Environmental Protection (MDEP)
    - Site Location of Development Act (SLODA) Permit
    - Stormwater Management Permit
    - Natural Resources Protection Act (NRPA) Permit
    - Clean Water Act (CWA) Section 401 Water Quality Certification (these four to be combined into one permit)
    - Maine Construction General Permit
3. Maine Land Use Planning Commission (LUPC)
    - Certificate of Compliance

4. Maine Department of Agriculture, Conservation and Forestry
    - Submerged Lands Lease
    - Public Reserved Land Lease
5. Maine Department of Transportation (DOT)
    - Utility Location/Road Opening Permits
    - Driveway/Entrance Permits
6. U.S. Army Corps of Engineers (USACE)
    - CWA Section 404 - Individual Permit
    - Section 10 Rivers & Harbors Act of 1899
7. Federal Aviation Administration Infrastructure in Vicinity of Airports
    - Determination of No Hazard to Air Navigation
8. Maine municipal approvals (potential):
    - Shoreland zoning permits
    - Building permits
    - Flood hazard development permits
    - Conditional use / rezoning approvals
    - Site plan / subdivision approvals
    - Driveway / Entrance permits
    - Street opening, blasting, and demolition permits
    - Utility location permits

Municipalities that may require permits or approvals of the MCPC Transmission Project are:

Alna	Caratunk	Embden	Industry
Lewiston	New Gloucester	Starks	Windsor
Anson	Chesterville	Farmington	Jay
Livermore Falls	New Sharon	Whitefield	Wiscasset
Auburn	Durham	Greene	Leeds
Moscow	Pownal	Wilton	Woolwich

7.2 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 10.

The detailed projected permitting timeline for the MCPC Transmission Project is provided in the project schedule provided as **Exhibit 10.1**.

As described below, multiple agencies are currently reviewing the MCPC Transmission Project. CMP anticipates that all regulatory approvals will be received by second quarter 2019, as shown in **Exhibit 10.1** and detailed below.

State of Maine and USACE Permits

The SLODA, NRPA, and Section 401 Water Quality Certification applications are within the jurisdiction of the MDEP, which is responsible for determining a developer's compliance with the "no adverse effect on the natural environment" standard of the Maine SLODA, 38 M.R.S. § 484(3). This review includes potential primary, secondary, and cumulative impacts of the Project on the character, quality, and uses of the land, air, and water on the Project site and on the area likely to be affected by the proposed Project, and the potential effects on the protection and preservation of the public's health, safety, and general welfare. In determining whether a developer has made adequate provision for fitting the Project harmoniously into the existing natural environment and that the Project will not adversely affect existing uses, scenic character, or natural resources in the municipality or in neighboring municipalities, the SLODA statute, 38 M.R.S. § 484(3), identifies several potential Project impacts to be evaluated, including:

- Air Quality
- Climate
- Natural Drainage Ways
- Runoff/Infiltration Relationships
- Erosion and Sedimentation Control
- Surface Water Quality
- Ground Water Quality
- Buffer Strips
- Noise
- Historic Sites
- Unusual Natural Areas
- Access to Direct Sunlight
- Scenic Character
- Protection of Wildlife and Fisheries
- Solid Waste Disposal
- Control of Odors; and
- Sufficient and Healthful Water Supplies

Pursuant to 38 M.R.S. § 489-A-1(1), the LUPC must certify that the proposed Project meets the land use standards established by that commission that are not considered in the MDEP's review.

The MDEP's application review processing time frame, within which permits must be issued after applications are deemed complete, is 185 calendar days for SLODA permit applications and 120 calendar days for NRPA permit applications. In practice, however, the

MDEP may request agreement to extend the processing time, or the processing time may be extended if MDEP holds a public hearing on the application. The MCPC Transmission Project, however, is expected to receive a determination of no adverse effect on the natural environment by the MDEP.

The CWA Section 404 and Section 10 Rivers & Harbors Act of 1899 permits are issued by the USACE. Review of these applications occurs concurrently with the MDEP process, as described above. The USACE does not have permit review, processing, and issuance timeframe requirements. In practice, however, Section 404 permits are generally issued in less than one year provided that the applications are complete and acceptable for processing. The MCPC Transmission Project is also expected to receive authorization from the USACE.

MPUC CPCN

The MCPC Transmission Project will also require a CPCN from the MPUC. CMP expects to petition the MPUC for a CPCN by April 2019. To grant a CPCN, the MPUC must find that a public need exists for the transmission facility, taking into account, at a minimum, economics, reliability, public health and safety, scenic, historic and recreational values, state renewable energy generation goals, the proximity of the proposed transmission line to inhabited dwellings, and alternatives to construction of the transmission line, including energy conservation, distributed generation or load management.[31] CMP's petition will address each of these points, and the Company's appropriate subject matter experts will offer testimony under oath addressing these requirements.

[31] 35-A M.R.S. § 3132(6).

The MPUC will permit interested parties, including the Maine Office of the Public Advocate (OPA) and affected landowners, to participate in the CPCN proceeding, which will include discovery and public hearings as necessary and appropriate.

The MPUC is required by Maine law to issue its order on the CPCN petition within six months after the petition is filed unless the petitioner agrees to an extension or the Commission finds that additional time is warranted under the circumstances. Because the MCPC Transmission Project will provide significant benefits to Maine, as discussed in Section 2 above, and will be paid for through the MCPC TSA, as opposed to through the ISO-NE's RNS transmission tariff or CMP's local transmission tariff, CMP expects that the MPUC will grant the CPCN in an expeditious manner.

Municipal Permits

CMP plans to initiate local ordinance reviews to determine permitting requirements for each municipality. If a local ordinance severely restricts or prohibits construction of the Project, CMP will request an amendment of the ordinance. In the event the municipality rejects CMP's request for ordinance amendment or enacts an ordinance that severely restricts or prohibits construction of the Project, CMP will petition the MPUC under applicable Maine law for appropriate redress to permit construction of the Project to commence.[32] In general, the permitting process will include: outreach to the municipal Code Enforcement Officer or Planner to determine permit application requirements, preparation of the permit applications, presentation of applications to the local planning boards or other approval-granting entities, and ultimately, issuance of the required

[32] *See* note 27.

approvals. This process typically takes three to six months to complete. CMP anticipates that all required local approvals will be obtained by mid-2019.

CMP is committed to working collaboratively with all regulatory and permitting entities throughout the duration of the MCPC Transmission Project, from initial planning, design, and construction, to commissioning and energizing of the transmission facilities.

7.3 Provide a preliminary environmental assessment of the site and project, including both construction and operation, as applicable. In addition, the bidder should identify environmental impacts associated with the proposed project, any potential impediments to development, and its plan to mitigate such impacts or impediments. The analysis should address each of the major environmental areas presented below, as applicable to the proposed project:

Surveys of natural resources (*i.e.*, wetlands, water bodies, vernal pools) for all of the transmission line corridor and associated substation sites are complete. In addition, studies assessing the potential impacts resulting from increased noise, visual impacts, cultural resources, stormwater, and groundwater are ongoing and described in detail below. As presented in Section 6.2 and **Exhibit 6.2**, CMP has secured sufficient title, right or interest in all property that is proposed for development.

The MCPC Transmission Project will result in a combination of temporary and permanent environmental impacts associated with transmission line and substation development. The most significant of these impacts will involve placing temporary fill (*e.g.*, equipment mats) in wetlands during construction, and placing permanent fill (substation pads, access roads and transmission pole structures) in wetlands, converting forested wetlands to vegetation cover types dominated by shrub and early successional habitat, and clearing tall woody growth from significant wildlife habitat including vernal pools and deer wintering areas. During the transmission line design process, CMP will continue to collaborate with its environmental consultants and design and siting engineers to avoid and

minimize environmental impacts to the greatest extent practicable, and to mitigate unavoidable impacts.

The proposed MCPC Transmission Project route is the result of extensive analysis of siting alternatives with primary evaluation criterion being avoidance of natural resource impacts. Where unavoidable impacts exist, the Project is designed and located, and will be constructed, to minimize and mitigate those impacts. CMP will minimize, mitigate, and compensate any potential natural resource impacts. The following discussion describes generally how impacts will be avoided, minimized, and mitigated.

i. Impacts during site development

Impacts during site development and construction will generally be avoided and minimized through the advance planning and installation of erosion and sedimentation controls and the use of construction mats for equipment travel in wetlands, over streams, and on soil types that are highly susceptible to rutting. In addition, qualified environmental inspectors will ensure that all permit conditions and compliance requirements are being met. Other mitigation measures include construction timing restrictions in environmentally sensitive areas and habitats. Site development is generally regulated under the SLODA, NRPA, CWA Section 404, the Maine Erosion and Sedimentation Control Law, and occasionally under local municipal ordinances. The MDEP will review the MCPC Transmission Project development proposal, including design, location, and construction plans, to determine their compliance with stormwater management and erosion and sedimentation control law standards. CMP has specifically designed this Project to meet these standards, and anticipates that the MDEP will determine that the proposed activity

will not violate any state water quality standards or laws, including those governing the classifications of the state's waters.

ii. Transportation infrastructure

No major impacts to transportation infrastructure will result from the MCPC Transmission Project. CMP will work with the Maine DOT, Maine Turnpike Authority (MTA), and municipalities to develop construction access and traffic control plans as needed, and will obtain the appropriate permits from these agencies. In general, driveway/entrance permits will be required from the Maine DOT and MTA for construction of permanent and temporary driveways and entrances on state roads and routes. In addition, exemptions or adherence to load limitations on state and municipal roads will be required during the spring thaw. The Project will not have an unreasonable adverse effect on the existing or proposed utilities and roadways in any municipalities or on areas served by those services and roadways.

iii. Air quality impacts

No degradation of air quality will result from construction and operation of the MCPC Transmission Project. Minor, temporary air quality impacts as a result of construction activities may occur. Such impacts may result from construction personnel commuter traffic, exhaust from construction vehicles, and temporary dust generated by construction activities along unpaved roads. Given the limited duration of activities at any one location, the generally rural nature of the Project area, and the existing use of unpaved roads along the transmission line corridors (*e.g.*, logging and associated trucking), any construction related influences on overall air quality will be insignificant. Emissions of fugitive dust will depend on factors such as soil properties (*e.g.*, moisture content, volume of spoils, and soil

fines content), meteorological variables, and construction practices employed. Fugitive dust is only expected at substation construction sites and along unpaved construction access roads. Best construction management practices will be employed to minimize emissions of fugitive dust, including:

- Use of water or other wetting agents on areas of exposed and dry soils before or during windy conditions;
- Use of covered trucks for transport of soils or other dry materials;
- Controlled storage of spoils on the construction site which may include mulching storage piles with hay or covering with tarps in concert with containing the piles with erosion control mix and/or silt fencing; and
- Final grading, landscaping, and revegetation or permanent stabilization with approved materials as soon as practical.

Other than for back-up generation that would operate only for excising and during emergencies, there will be no non-mobile air emissions associated with the MCPC Transmission Project. CMP may deploy one or more temporary, portable (trailer - mounted) 2 MW distributed generation (DG) units during and immediately following construction. These units may be used during construction, maintenance/repair, reconfiguration, or cutover of new facilities to provide local voltage support. Up to four of these units may be installed, as needed, at any substation site. MDEP Air Emission License #A-952-71-B-R (SM), issued to CMP on August 12, 2013, regulates air emissions from these DG units. The license requires the use of ultra-low sulfur diesel fuel (maximum sulfur content 0.0015% = 15 ppm). CMP anticipates that the MDEP will determine that no unreasonable adverse effect on air quality will result from the MCPC Transmission Project.

iv. Access to water resources/water quality impacts

Access to water resources will not be required for the MCPC Transmission Project. Water quality impacts have been minimized and mitigated through the use of proper design and planning, erosion and sedimentation control measures, and the use of equipment mats in sensitive resource areas to protect these resources. Additionally, environmental control requirements (*e.g.*, setbacks) will be implemented to mitigate the potential for water quality impacts that could result from equipment maintenance and refueling, and from herbicide application during periodic vegetation management. CMP expects that the MDEP will determine that the MCPC Transmission Project does not unreasonably interfere with the natural flow of any surface or subsurface waters, violate any state water quality law including those governing the classifications of the state's waters, or unreasonably cause or increase the flooding of the alteration area or adjacent properties.

v. Ecological and natural resources impacts

Impacts to ecological and natural resources will be avoided to the greatest extent practicable. Unavoidable impacts will be minimized through the use of erosion and sedimentation control measures, and equipment mats in wetlands, over streams, and over other sensitive soil types. In addition, environmental inspectors will ensure that all permit conditions and compliance requirements are being met. Other impact mitigation measures may include construction timing restrictions in environmentally sensitive areas and habitats.

Ecological and natural resources are generally protected under the Maine SLODA, the federal and Maine Endangered Species Act, CWA Section 404, and NRPA. CMP anticipates that the MDEP will determine that the proposed activity will not unreasonably harm any

significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic habitat, travel corridors, freshwater, estuarine, or marine fisheries or other aquatic life.

A Project-specific compensation plan will be developed to offset unavoidable impacts to protected natural resources. This plan will be developed in consultation with natural resource agencies including MDEP, USACE, U.S. Fish and Wildlife (USFWS), and the Maine Department of Inland Fisheries and Wildlife, among others. This compensation plan may include: an in-lieu fee contribution to the Maine Natural Resources Conservation Fund (to be made available for grant awards to qualified natural resource conservation projects); preservation, enhancement, or restoration of protected and sensitive natural resources and areas; or a combination of these.

vi. Land use impacts

The MCPC Transmission Project consists of approximately 192.1 miles of overhead transmission line, 142.3 miles of which will be within existing transmission rights-of-way and 49.8 miles will be within newly developed rights-of-way.[33] In addition to transmission lines, new substations will be constructed in Moscow and Skinner Township, Maine and modifications will be made to existing substations in Windsor, Lewiston, Wiscasset, and Pownal, Maine. Existing public and private roads will be used to access the transmission line rights-of-way and associated facilities. Land use impacts are expected to be minimal as the land uses in the vicinity of the Project are generally compatible with the siting, construction, and operation of transmission lines. In fact, a large portion of the MCPC

[33] [redacted]

Transmission Project will be constructed within existing transmission corridors (approximately 74% for Transmission Option 3, the longest of the three MCPC transmission proposals).

Current land uses in the vicinity of the Project generally include forestry, agriculture, residential/commercial/industrial, transportation, recreation, conservation, historical, and natural features such as rivers, lakes, wetlands, and wildlife habitat areas. These uses will be able to continue largely uninterrupted during the construction, operation, and maintenance of the transmission lines and the associated facilities.

Anticipated temporary construction impacts include construction- and traffic-related noise, traffic diversion, clearing of vegetation (primarily tall woody vegetation), use of laydown areas for equipment, excavation, use of heavy equipment, temporary wetland crossings, and other associated construction activities. These activities will comply with Maine Erosion and Sedimentation Control Law as well as with state and federal permitting requirements. The long-term operation of the facility will not interfere with existing or future land use patterns.

Land use impacts are generally considered under SLODA, municipal ordinances, and the compliance certification of the LUPC.

vii. Cultural resources

Impacts to cultural resources will be avoided or minimized through the identification of sensitive cultural resource areas, field surveys, design, and structure location to avoid known cultural resources. If these areas cannot be avoided due to engineering or other constraints, cultural resource artifact recovery, documentation, and preservation, mitigation measures will be employed. These mitigation measures may include the use of exclusion

area fencing and signage to prevent unauthorized entry into cultural resource sites; the use of equipment mats in unavoidable sensitive cultural resources areas; and construction monitoring. Cultural resources are protected under the National Historic Preservation Act, which is generally triggered when a project requires a CWA Section 404 or other federal permit. In addition, visual impacts to historic architectural structures must be considered when a SLODA permit is required. In Maine, the National Historic Preservation Act is administered by the Maine Historic Preservation Commission.

viii. Previous site use (*e.g.*, greenfield, brownfield, industrial, etc.)

Depending on the transmission option selected, approximately 74% of the MCPC Transmission Project components will be constructed within existing transmission corridors. Locating new transmission infrastructure within previously developed rights-of-way minimizes impacts to existing land uses and the environment, and is a sound land use and environmental siting principle. However, the Project will include several miles of new rights-of-way, sited in mostly forested, very remote unorganized townships, and modifications to existing substations in Windsor, Lewiston, Wiscasset and Pownal.

The approximately 44.2 miles of new rights-of-way between Skinner Township and an existing transmission line corridor in The Forks traverses sparsely populated land, which is primarily forested and managed for timber and recreational uses (*e.g.*, hunting, fishing, hiking, and recreational vehicle use). These uses will also continue uninterrupted after construction.

For Transmission Option 2 and Transmission Option 3, the existing Coopers Mills Road, Larrabee Road, Maine Yankee, and Surowiec substations will be upgraded as part of the MCPC Transmission Project. Planned new infrastructure at these substations will all be

within the existing fenced substation footprints. As such, the proposed modifications to these substations will have no effect on surrounding land uses.

ix. Noise level impacts

Operating transmission lines generally produces some, albeit limited, noise, particularly during certain weather conditions including light rain and snow events. In addition, substations (including STATCOM equipment) and the converter station produce noise when operating. Temporary noise will also be produced by construction equipment travel and use during construction, and temporary blasting to remove bedrock for structure foundations, if deemed necessary. Noise levels are generally regulated under SLODA and local ordinances.

The most conservative decibel limits as regulated under SLODA include 55 decibels during the daytime and 45 decibels at night, generally measured at the property line surrounding each project component. These limits are commonly adopted by individual municipalities and incorporated into their ordinances. Impacts are expected to be limited because of the rural nature of the overall Project area, and the siting process for the transmission lines includes avoiding occupied dwellings to the maximum extent practicable.

Noise modeling will be conducted to help determine compliance with state law and local ordinances. As the design progresses, mitigation measures such as sound barriers may be required, particularly at substations, or abutting property may be purchased to comply with noise limits. CMP is committed to full compliance with state and local noise ordinances to ensure that the MCPC Transmission Project will fit harmoniously into the existing natural environment and the development will not adversely affect existing uses or other

natural resources in the municipality or in neighboring municipalities, including with respect to noise.

x. Aesthetic/visual impacts

The MCPC project team is preparing a Visual Impact Assessment (VIA) following the requirements of the Maine SLODA (Chapter 375.14, Scenic Character) and the Maine NRPA (Chapter 315, Assessing and Mitigating Impacts to Existing Scenic and Aesthetic Uses). NRPA Chapter 315 requires demonstration that the MCPC Transmission Project will not unreasonably interfere with existing scenic and aesthetic uses of scenic resources within the Area of Potential Effect (APE). The APE has been defined as three miles on either side of the transmission corridor, and areas where the corridor would be visible from elevated landforms within five miles. Elevated viewpoints on the AT within 10 miles were included within the APE. All aesthetic and scenic resources within five miles on either side of the transmission line have been inventoried.

Known points of visual sensitivity and scenic resources as defined by each municipality and the MDEP in NRPA Chapter 315 have been inventoried within the APE. Other publicly accessible conservation land holdings and historic and cultural resources were also identified and assessed with respect to Section 106 National Historic Preservation Act standards. A summary of historic resources currently included on, or potentially eligible for listing on, the National Register of Historic Places will be produced in coordination with the Maine Historic Preservation Commission and State Historic Preservation Officer.

The VIA includes: a project overview; a description of data collection methodology; description of the project study area; site context and distance zones; an inventory of

Scenic Resources (using the MDEP Visual Evaluation Field Survey Checklist); viewshed analysis and mapping; photo-simulations from Key Observation Points (KOPs); description of the affected population (motorists, residents, recreational users, and working population); a visual impact assessment describing landscape compatibility (color, line, form, and texture), scale contrast, and spatial dominance; mitigation strategies; conclusion; and appendices including a photo log showing representative views of the Project area.

The scenic resources inventoried and assessed include: National Natural Landmarks (Number Five Bog in T5 R7, BKP WKR and Bradstreet Township); state wildlife refuges, sanctuaries, and preserves; state or federal trails (AT, including Bald Mountain in Township T2 R3 and Pleasant Pond Mountain in The Forks Plantation); public sites or structures listed on, or potentially eligible for listing on, the National Register of Historic Places (Arnold Trail, historic districts, various structures); national scenic byways; national or state parks (Bradbury Mountain State Park, Androscoggin River Lands State Park) and Maine public reserved lands; municipal parks and open space; publicly owned land, visited, in part, for the use, observation, enjoyment and appreciation of natural or man-made visual qualities; and public resources, such as great ponds and navigable rivers (great ponds include: Attean Pond in Attean Township; Fish Pond in Hobbstown Township; Moxie Pond in East Moxie Township; Parlin Pond in Parlin Pond Township; Rock Pond in T5,R6 BKP WKR; Spencer Lake in Hobbstown Township; and Whipple Pond in T5R7 BKP WKR); remote ponds including Tobey Pond in T5 R7 BKP WKR; major river crossings including the Androscoggin River; and scenic rivers such as the Kennebec River and Moxie Stream in Moxie Gore.

The majority of the proposed transmission line route and rebuilt transmission line sections (approximately 132 of 192 total miles for Transmission Option 3, the longest proposed MCPC transmission solution) are located within existing transmission corridors which minimizes overall visual impacts. In the northern- and western-most portion of the proposed route (approximately 44.2 miles from the Gold Brook Substation to Moxie Gore) where there is no existing developed transmission corridor, other mitigation measures are being considered to reduce visual impacts.

The majority of the proposed undeveloped transmission line corridor has been sited in working forestlands, avoiding higher elevation and publicly accessible conservation lands. The crossings of the Kennebec River and Moxie Stream have been located, and will be designed, to minimize the duration and magnitude of their impacts on views by recreational boaters and other users to the extent practicable.

The crossing of the AT is located within an existing transmission corridor in Bald Mountain Township owned by CMP in fee. Two elevated viewpoints on the AT within the APE may have limited views of the MCPC transmission line to be located within the existing corridor. However, due to the existing transmission corridor location within a valley, and a generally parallel orientation to the viewer, its overall visibility will be minimal.

In addition to the above design considerations, CMP will assess the need for roadside vegetated buffers and mitigation potential for all road crossings, if the proposed transmission line crossing could result in a significant visual impact.

xi. Transmission infrastructure impacts

The MCPC Transmission Project is not expected to cause any significant or ongoing impacts to existing transmission infrastructure. Energizing the MCPC Transmission Project facilities will require certain transmission outages of short duration. Such outages will be scheduled with ISO-NE in accordance with applicable rules. CMP will work closely with its design engineers to identify and mitigate any such potential impacts.

xii. Fuel supply access, where applicable

Long-term fuel supply access will not be required for the MCPC Transmission Project,[34] and short-term fuel supply will only be required during construction. Potential impacts associated with construction equipment fueling activities will be mitigated through the implementation of CMP's "Environmental Control Requirements" dated February 2017. These requirements address management, storage, transport, and use of oil and hazardous materials, and the proper management of waste. Spill reporting and cleanup requirements are also defined in this document, which was developed to assure compliance with all applicable local, state, and federal laws and regulations, and is provided to all contractors and subcontractors working on CMP projects.

CMP's "Vegetation Management Practices" document, prepared to demonstrate compliance with the no adverse effect standard of the SLODA, establishes required setbacks for refueling activities from protected natural resources and private and public water supplies. Additionally, CMP requires spill kits on all construction equipment and vehicles servicing the Project. CMP requires construction personnel to report all spills to the MDEP

[34] While there may be minimal fuel requirements relating to vehicles involved in the inspection and maintenance of the MCPC facilities after those facilities have been put into service, CMP expects no additional associated supply or environmental concerns.

within two hours of occurrence or first visual observation, and tracks spill occurrence and reporting from initial discovery through proper containment and cleanup, to disposal of spill impacted materials. The U.S. Environmental Protection Agency's National Response Center, staffed by the U.S. Coast Guard, is also notified within 24 hours of a spill resulting in oil sheens or larger oil releases to surface waters and spills of other hazardous materials in reportable quantities. Environmental training conducted by CMP provides worker education on safety and the prevention, reporting, and proper cleanup protocols for spills. Environmental inspectors provide regular oversight and will ensure compliance with all environmental and permit requirements throughout construction.

CMP implemented these protective practices throughout construction of its recent MPRP project, in accordance with the applicable environmental permit requirements and CMP best practices, without any significant environmental incidents. CMP is confident that it will achieve similar environmental excellence and compliance on the MCPC Transmission Project.

7.4 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, and a plan for community outreach activities, and discuss the status of that plan.

CMP recognizes the importance of public involvement and is committed to transparent and responsive stakeholder engagement. CMP's recent experience with the multi-year MPRP project, which impacted over 80 municipalities and approximately 3,000 abutting landowners, demonstrates that on-going communication, early information, access to project details, and regular updates about project specifics are instrumental in achieving "public permission" and ensuring timely completion of a major infrastructure

project. CMP used these and other best practices on MPRP and intends to put that same level of effort into public outreach for the MCPC Transmission Project at the time of selection.

Communications Plan

With these principles in mind, CMP prepared the MCPC Communications Plan, a copy of which is provided in **Exhibit 7.4.1**. The MCPC Communications Plan is presented in two phases:

Phase 1: Build a small foundation of project awareness prior to selection

Phase 2: Conduct a western Maine and statewide communication initiative upon selection

Outreach Approach

Consistent with CMP's commitment to communicate early, to understand issues, and to try to reasonably mitigate impacts, CMP began quiet conversations in July 2017 with a small number of municipal leaders, county officials, and economic and tourism interests. The purpose was to convey accurate Project information so that such individuals and entities could address questions from constituents upon public announcement of the Project on July 27, 2017.

Upon selection of the Maine Clean Power Connection Project as a winning bid in the current solicitation, CMP will mount a major effort to engage all interested parties through personal meetings, traditional and social media, presentations, and community forums. Key stakeholders include state and local officials, town and environmental leaders, residents, landowners, business owners, and local vendors who could benefit directly or indirectly from the Project. The goals of the post-selection communications effort are to provide stakeholders with accurate and timely information about the Project; to offer

multiple channels for the public to learn about the Project; to provide transparent and complete access to Project information; and, whenever possible, to integrate stakeholder input consistent with the obligation to build the Project in a timely, environmentally-sensitive, and cost-effective manner.

In spring 2018, after the Project has been selected and permitting has begun, public open house meetings will be held in Moscow, Maine (northern region of the Project) and Lewiston, Maine (southern region). The meetings will be well-publicized through newspapers, bulletins, and direct calls to interested individuals or groups. The meetings will feature stations staffed by subject matter experts available to answer questions. The communications team also intends to support public hearings later that year, with exhibits, displays, collateral material, and project experts.

During construction, regular construction updates will be posted on the Project's website, as well as sent to town offices and shared through social media. A complete Construction Communication Plan with a full program of direct outreach to municipal officials, abutting landowners, and the media will be implemented.

Stakeholders

Stakeholder categories include:

- Elected officials – state, county, and municipal
- Economic and energy-related associations
- Conservation and environmental groups
- Sportsmen (hunting and fishing)
- Outdoor recreation interests including rafting companies, hiking, and biking
- Vendors

Outreach Methods

Communications methods include:

- Direct one-on-one conversations and follow-up meetings
- Events with clean energy and business leaders in Maine and Massachusetts
- Community outreach and publicized local meetings along the Project route and in Massachusetts
- Meetings with user groups and landowners
- Public information sessions in three communities centrally located in the Project area
- Presentations at town and county offices, association meetings, and service clubs
- A targeted media effort and scheduled interviews with key reporters to facilitate accurate and timely coverage

The MCPC public-facing communication tools described in its communications plan are as follows:

- Website- www.CleanPowerConnect.com
- Project brochure/Fact Sheet
- Project maps
- Q&A
- Presentation
- Telephone hotline
- E-newsletter
- Presentations
- Information packets
- Media statement

- Public and legal notices

The project team will also participate in multiple events to share information about the Project once it is selected. These include:

- Open House meetings
- Public speaking opportunities
- Public hearings

The initial (week-long) MCPC outreach effort has resulted in several letters of endorsement from key stakeholders. CMP provides these initial letters as **Exhibit 7.4.3**. The project team anticipates additional testimonials during the public hearing phase when stakeholders become familiar with this innovative project and its benefits to the New England region. Most notably, supporters have said:

> *The Maine Clean Power Connection represents the culmination of multiple efforts to appropriately site wind in western Maine. This time, the developers have found sites tucked up against the border with Quebec, and paired them with the new corridor CMP has acquired, making for a winning project. I am pleased to see that MCPC contains multiple options, to enable your committee to choose the combination – wind, solar, storage or all – which best suits your needs. This appears to be a highly competitive response to your RFP and I urge you to give it every favorable consideration.*
>
> – Maine State Chamber of Commerce, July 20, 2017
>
> *Reed & Reed recognizes that in order for the wind energy to be tapped, there must be new transmission infrastructure built. The path that CMP has put together to bring this wind energy to the market has advantages over similar projects. It follows along a route that is part of Maine's industrial forest – long home to businesses and development. It then connects into an existing transmission corridor, which is an efficient use of land and will result in a lower cost option when considering the competitive projects.*
>
> – Jack Parker, President and CEO, Reed & Reed, July 21, 2017

7.5 For bids that include New Class I Renewable Portfolio Standard Eligible Resources, provide documentation demonstrating that the project was or will

be qualified as such. If the facility is already in operation, please indicate when the facility received such qualification.

Please see the separate submissions of the MCPC Clean Energy Generation Developers.

7.6 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 Clean 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 and environmental attributes associated with Clean Energy Generation must be delivered into the Distribution Companies' NEPOOL GIS accounts.

Please see the separate submissions of the MCPC Clean Energy Generation Developers.

7.7 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 of the project or the ability to obtain or retain the required permits for the project.

CMP is not aware of 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 of the MCPC Transmission Project or the ability to obtain or retain the required permits for the MCPC Transmission Project.

This section includes questions pertinent to the engineering design and project technology. This section must be completed for a project that includes new facilities or capital investments for both generation and transmission components if applicable. Bidders should provide information about the specific technology or equipment including the track record of the technology and equipment and other information as necessary to demonstrate that the technology is viable.

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

i. Type of generation and transmission technology, if applicable

Please see **Exhibit 8.1** for detailed drawings and cross sections for the MCPC Transmission Project. More information about the project design is provided below.

ii. Major equipment to be used

The MCPC Transmission Project will require procurement and installation of high voltage and extra-high voltage overhead transmission and substation equipment. Noted below in further detail are the major material components that will comprise the proposed MCPC Transmission Project infrastructure.

a. Overhead Transmission Line

CMP will complete detailed engineering analysis in accordance with the proposed project schedule and at that time further refine the preliminary structure design information provided below. For structure types, the general structure assumptions and intent are provided, but CMP reserves the right to use round wood, laminated wood, and steel pole structures in H-frame and monopole configurations. Structures may be guyed based on the specific application. In addition, existing steel lattice towers will be used for segments of the proposed line as shown on the Project cross section drawings, and new

lattice towers may be erected for longer spans such as river crossings. This will be determined in the final transmission design.

Preliminary structure design information is as follows:

- **<u>345 kV HVAC Line Sections</u>**
  - **AC Phase Conductors**: Bundled (2) 1590kCM Falcon ACSR
  - **Shield Wires**: One (1) 36 Fiber Optic Ground Wire 0.602" diameter and one (1) NO. 7 Alumoweld wire[35]
  - **Tangent Structure Design**: Direct embed H-frame round wood pole structures will be used
  - **Dead End/Hard Angle Structures**: In general, tubular steel structures will be used with foundations
- **<u>115 kV HVAC Line Section 62 and 64</u>**
  - **AC Phase Conductors**: One (1) 1590kCM Falcon ACSR
  - **Shield Wires**: One (1) 36 Fiber Optic Ground Wire 0.602" diameter
  - **Tangent Structure Design**: Direct embed monopole laminated wood structures will be used
  - **Dead End/Hard Angle Structures**: In general, tubular steel structures will be used with foundations

All overhead transmission hardware, equipment, and structures will be provided and installed consistent with the applicable guidelines and recommendations, as appropriate, of the National Electric Safety Code (NESC), Institute of Electronics and Electronics Engineers (IEEE), American National Standards Institute (ANSI), and the American Society of Civil Engineers (ASCE).

[35] Radial 345 kV segments between Larrabee Road, Moscow, and Gold Brook substations will require two OPGN for relay protection and communication path diversity.

- **Substation**

  - **Circuit Breakers**: A variety of high voltage circuit breakers will be used to support transmission line and equipment protection in the 345 kV and 115 kV substations. Circuit breakers are used primarily to prevent damage caused during a fault situation. Substation configurations will generally be designed in accordance with ISO-NE Planning Procedure 9. The MCPC Transmission Project will expand existing "breaker-and-a-half, with a series tie provision" schemes and in some cases for sites with limited major substation elements, a ring bus design with expandability provisions will be used.

  - **Disconnect Switches**: A variety of disconnect switches will be used in conjunction with circuit breakers to facilitate maintenance and construction in 345 kV and 115 kV substations. Disconnect switches are used primarily as means to isolate electrical equipment and create a visual opening to aid in work being done in the station.

  - **Coupling Capacitor Voltage Transformers**: Coupling capacitor voltage transformers (CCVTs) will be used to supply line and bus potential to standard protective relaying and metering in 345kV and 115 kV substations.

  - **Overhead Shield Wires**: A variety of typical overhead shield wires will be used to provide lightning protection for improved reliability.

  - **Insulators**: A variety of high strength and extra-high strength station post insulators will be used as required by design.

  - **Distribution Transformers**: Distribution transformers will be used to provide useable supply to local substation loads.

  - **Emergency Generators**: Emergency generators will be used to provide secondary source of station service during maintenance activities and failures.

  - **Shunt Capacitor Banks**: Shunt capacitor banks will be utilized to help maintain system voltage within the proper ranges.

  - **Shunt Reactor Banks**: Shunt reactor banks will be used to help maintain system voltage within appropriate ranges.

  - **STATCOM**: STATCOMs (Static Compensators) will be used to provide variable reactive power in the grid to help stabilize the system during

voltage fluctuations. These STATCOMs will also improve power quality and transfer ability in the system

iii. Manufacturer of the equipment

CMP's approved vendors of major materials for high voltage and extra-high voltage overhead transmission and substation projects include a diverse range of reputable domestic and global material manufacturers. CMP will source all equipment required for the MCPC Transmission Project through existing alliances and competitive bid processes and will require that such equipment meet all applicable industry standards.

During the first half of 2017, the MCPC project team conducted a preliminary procurement process to support the development of the capital cost estimate (see Section 14.1 for further detail) and to pre-select the main equipment manufacturers and providers of major services for the MCPC Transmission Project. While the pre-selection process was performed for the equipment/material with a larger impact on the capital cost of the Project (*e.g.*, transmission poles), the project team used AVANGRID's existing procurement framework agreements to define the potential manufacturers for the rest of the needed equipment with lesser impact on the total cost and which AVANGRID periodically sources for other capital projects under development (*e.g.*, circuit breakers and switches).

The list below summarizes the major vendors pre-selected or defined for the key components of the MCPC Transmission Project:

STATCOM: Pre-selected manufacturers:

[redacted]

[redacted]

Capacitor Banks: Pre-selected manufacturers:

[redacted]

Transmission Poles (Steel): Pre-selected manufacturers:

[redacted]

Transmission Poles (Round and Laminated Wood): Pre-defined (framework) suppliers:

[redacted]

Overhead Electric Conductor: Pre-defined (framework) suppliers:

[redacted]

Circuit Breakers: Pre-defined (framework) supplier:

[redacted]

Disconnect Switches: Typical Vendors:

[redacted]

Shunt Reactors: Typical Vendors:

[redacted]

iv. Status of acquisition of the equipment

During the first half of 2017, the MCPC project team deployed a team made up of engineers, estimators and procurement specialists, who defined the pricing strategy for the MCPC Transmission Project. As part of this strategy, the team developed the procurement plan, which was initiated before the submission of this RFP response.

The MCPC procurement plan established both the contractual strategy for the Project, as well as the timing and steps to secure all the equipment and services needed for the development and construction of the MCPC. The procurement cycles for needed equipment and services are depicted in the MCPC Project Schedule provided as **Exhibit 10.1**.

Prior to the submission of this RFP response, the MCPC project team completed a pre-procurement phase for the project components and services with a larger impact in the overall capital cost or those with longer lead times, and pre-selected the key vendors identified in the previous section. In addition, the project team established the purchasing

sources for the rest of the equipment and services. Figure 8.1 below provides a summary of this effort as well as the status of the Project equipment:

[redacted]

[36] Other transmission equipment includes, but is not limited to, insulators, cross arms, clamps/fittings, guy wire, grounding wire and materials, miscellaneous hardware, signs, fiber-optic wires, splice enclosures and termination materials.

[37] Other substation equipment includes, but is not limited to, control and AC panels, relays, HMIs, ethernet switches, batteries, control and power cable, fence and grounding material, substation steel, tubular buswork, insulators, tap and bus wire, connectors, instrument/station service transformers, lightning arrestors, cable trench, cable tray, conduits and fittings, junction boxes, and yard lighting materials.

For large capital projects like the MCPC Transmission Project, CMP uses the material and equipment procurement processes of AVANGRID. Those processes include both direct-award vendor alliances and competitively bid events. Given the size of high voltage and extra-high voltage operating territories of all of Avangrid Networks' affiliates, CMP is able to capitalize on large, bulk orders for major materials and equipment under pre-negotiated contract alliances. This approach leverages the cost-effectiveness of bulk orders while also improving material lead times by expedited contract award processes. Where appropriate, CMP may also choose to solicit major and minor material and equipment procurement events where material lead times allow, further optimizing the Project's costs through a competitive bid process.

Selection of preferred material vendors will be based upon a variety of factors, including the following:

- Material Lead times
- Price
- Acceptance of Terms and Conditions
- Industry Experience
- Quality Control Procedures
- Any Exceptions taken to Technical and Contractual Requirements
- Experience with Proposed Vendor

Noted below are typical lead times, from the award of contract, for the delivery of the proposed major materials to be used on the MCPC Transmission Project:

a. Overhead Transmission

- Round and Laminated Wood Poles – 16 Weeks

- Overhead Electrical Conductors – 30 Weeks
- Overhead Shield Wires – 30 Weeks
- Optical Ground Wires (OPGW) – 30 Weeks
- Cross Arms & Hardware – 16 Weeks
- All Dielectric Self Supporting (ADSS) Communication Cables – 12 Weeks
- Insulators – 16 Weeks

b. Substation

- Circuit Breakers – 30 Weeks
- Disconnect Switches – 24 Weeks
- Coupling Capacitor Voltage Transformers – 36 Weeks
- Shunt Capacitor Banks – 21 Weeks
- Overhead Shield Wires – 4 Weeks
- Insulators – 16 Weeks
- Arresters – 16 Weeks
- Distribution Transformers – 12 Weeks
- Emergency Generators – 12 weeks
- STATCOMs – 104 Weeks
- Shunt Reactors – 30 weeks

The lead times included in the MCPC Transmission Project schedule provided in **Exhibit 10.1** are generally longer than those listed above, allowing the opportunity for early delivery and schedule acceleration in various cases.

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

Please see Section 8.1.iv above.

vi. Equipment vendors selected/considered

Please see Section 8.1.iii above.

vii. History of equipment operations

Please see Section 8.3 below.

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

Please see Section 8.1.iv above.

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

Please see Section 8.1 above for a discussion of the status of CMP's procurement of the equipment needed for the MCPC Transmission Project and the equipment suppliers under consideration.

Please see the separate submissions of NextEra Bidding Affiliates and EDF RE for a discussion of the generation equipment that they have selected for the MCPC Clean Energy Generation.

8.3 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.

The equipment planned for the MCPC Transmission Project is industry standard and used throughout the AVANGRID network and across the U.S. CMP regularly sources and installs equipment with similar characteristics from several manufacturers. For example, for the MPRP, CMP installed the following components supplied by various vendors, all of which are very similar to those proposed for the Project:

- 8,000 wood poles
- 220 steel structures
- 2,150 miles of conductor
- 230,000 insulators
- 100 115kV and 345kV breakers

CMP plans to use similar equipment from various, reputable manufacturers to complete the MCPC Transmission Project, as discussed in Section 8.1.

8.4 For less mature technologies, provide evidence (including identifying specific applications) that the technology to be employed for energy production is ready for transfer to the design and construction phases. Also, address how the status of the technology is being considered in the financial plan for the project.

The proposed high voltage and extra-high voltage overhead transmission and substation installations and upgrades included in the MCPC Transmission Project proposal will implement mature, state of the art technologies used within the U.S. power delivery system, including existing facilities and technologies currently owned, operated, and maintained by CMP in Maine.

The less mature technologies included in the MCPC Transmission Project are the STATCOMs. [redacted]

8.5 Please indicate if the bidder has a full and complete list of equipment needed for all physical aspects of the bid, including generation facilities, transmission

lead lines, transmission proposals, 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.

Please see Figures 2.2 through 2.5 at Section 2.II.B above for a complete list of equipment needed for the three options for the MCPC Transmission Project, including all needed transmission system upgrades. CMP provides additional detailed information regarding necessary equipment for the MCPC Transmission Project at **Exhibit 8.1.**

[redacted]

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

Please see Section 8.1.iv above.

Projects that can demonstrate that the operation and maintenance ("O&M") plan, level of funding, and mechanism for funding will ensure reliable operations during the term of the contract or the tariff are preferred.

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

Prior to being put in service, the MCPC transmission and substation facilities and equipment will be tested in accordance with best utility practice and the standards of the InterNational Electrical Testing Association (NETA). All equipment and circuitry for protection, control, Supervisory Control and Data Acquisition (SCADA)/Remote Terminal Units (RTU), metering, Digital Fault Recording (DFR) will be fully tested to ensure compliance with system design prior to energizing the facility. Communications-assisted tripping schemes will also be fully tested and verified to comply with system design prior to energizing. ISO-NE and the local control/operations center will be made aware of and approve any new equipment being connected to the system per their scheduling requirements. CMP will make available personnel to facilitate proper compliance with energizing sequencing and planning. Equipment will be checked dielectrically safe (soaked) with primary rated voltage prior to passing system load. After confirming that all instrument transformers are within specified accuracy tolerances, the equipment will be fully tested with load to validate all metering, signaling, and protective relaying with primary voltage/current contributions to and from each applicable device.

Upon being put in service, CMP will operate (under ISO-NE's direction and control) and maintain the MCPC Transmission Project transmission facilities as integral parts of its existing transmission system and in accordance with the O&M practices CMP currently uses for its transmission systems. As Maine's largest transmission and distribution utility, CMP has operations and maintenance personnel on staff and will use those crews for the MCPC Transmission Project. CMP employs approximately 235 lineworkers and 50 substation technicians throughout its service territory. Contractors are primarily employed for replacement of equipment. In addition, as needs arise, CMP periodically retains outside contractor crews to supplement its in-house crews. In the case of the less mature technologies proposed in the Project, *i.e.*, STATCOM, CMP will work with the awarded vendor and follow the recommended maintenance practices for the equipment. CMP plans to use its own crews to do most of the work on this equipment, initially under the direction of the vendor's experts in order to obtain training, and eventually completely on its own. CMP will have ongoing contracts with the vendors to support emergent O&M requests to ensure that outage durations are minimized. Planned maintenance of the MCPC transmission and substation facilities will be conducted and scheduled pursuant to the applicable ISO-NE requirements and best utility practices and generally will be performed without any planned long-term transmission or electrical outages. Consistent with current practices, CMP expects most, if not all, of such maintenance to be performed during the shoulder periods in the spring and fall, in coordination with ISO-NE and any affected generators.

CMP's general practice for maintenance/inspection of major substation equipment is as follows:

- **Circuit Breakers** – Trip checks every two years, out of service inspection every six years for SF6 breakers;

- **STATCOM Power Transformers** – STATCOM Power Transformers will be maintained in accordance with the manufacturer's recommendations;

- **Relay Testing** – All relays and associated protective equipment will be tested every two years;

- **Thermal Inspections** – Substation thermal inspections are completed every summer and winter each year;

- **Batteries** – All substation batteries are tested annually; and

- **General Station Inspections** – Visual inspections of all substations bi-monthly.

CMP's general practices for maintenance and inspection of transmission lines are as follows:

- **Groundline Inspection** - Transmission poles 18 inches below ground to approximately six feet above ground, all transmission voltages; inspect and treat 10-year cycle; poles identified as a fair rating are inspected every five years under the mid-cycle inspection cycle. This inspection determines a rating of good, fair, reject, or danger for the pole.

- **Crossarm Inspection** - A detailed inspection of the poles from six feet above ground to the top of the structure including probing the crossarm to determine depth of rot. This documents woodpecker damage for follow-up repair. Inspections performed on a 10-year cycle for all transmission voltages. The sections inspected in a calendar year match the groundline sections. Arms and structures identified as a fair rating are inspected every five years under the mid-cycle inspection cycle. This inspection determines a rating of good, fair, reject, or danger for the arm(s) or structure.

- **345 kV Foot Patrol** - This is a visual inspection completed annually on the 345 kV system in Maine. The documentation of woodpecker damage, large cracks in poles or arms, insulator damage, repair of down grounds that are broken or any other issue identified that needs to be corrected.

- **Helicopter Inspection** - The complete transmission system (all voltages) in the CMP service area is visually inspected by helicopter in a spring patrol and again in a fall patrol. The radial sections are also patrolled in a summer helicopter inspection.

- **Transmission Infrared** - Transmission infrared inspections are conducted on a four-year cycle for all transmission voltages. This is completed with the summer inspection of the radial transmission lines.

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

O&M funding will be provided by CMP's transmission revenues from the MCPC Transmission Project through the proposed MCPC TSA **Exhibit 15.1**, discussed in Sections 2, 14.1, and 14.2. CMP includes the expected ongoing O&M expenses for each transmission option of the MCPC in the revenue requirements model, respectively, provided as **Exhibits 14.2.1 – 14.2.3**.

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

High voltage and extra-high voltage overhead transmission and substation projects require the procurement of an array of major equipment and material items. Using existing alliance contracts and competitive bid processes, CMP will procure these major materials and secure warranties or guarantees consistent with current industry practice. These warranty periods vary by commodity, application, and the specific negotiated terms with a given supplier. [redacted]

9.4 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.

CMP does not anticipate entering into any new agreements regarding necessary O&M for AC transmission line and substation components of the MCPC Transmission Project. For the STATCOM, CMP intends to enter into maintenance agreements with the equipment vendors for oversight, with CMP's crews to perform the work. The expected date for such agreements is reflected in the MCPC Transmission Project Schedule provided in **Exhibit 10.1**.

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

CMP is Maine's largest transmission and distribution utility and operates (under ISO-NE's direction and control) and maintains its existing transmission and distribution system. This entails operating and maintaining over 569 miles of 345 kV transmission lines, 1,258 miles of 115 kV transmission lines, and 254 substations. Within its General Office in Augusta, Maine, CMP operates the control center for the Maine transmission grid administered by ISO-NE. This control center is staffed by a minimum of two employees on an around-the-clock basis. In addition, CMP employs approximately 235 line workers and 50 substation technicians throughout its service territory and, as needed, retains contractors for replacement of equipment as indicated in the transmission inspection program. CMP plans to use these crews to operate and maintain the MCPC transmission facilities.

SECTION 10 OF APPENDIX B TO THE RFP
PROJECT SCHEDULE

A bidder must demonstrate that its proposal can be developed, financed, and constructed and be technically viable within a commercially reasonable timeframe. The bidder is required to provide sufficient information and documentation that shows that the bidder's resources, process and schedule are adequate for the acquisition of all rights, permits and approvals for the project and for the financing of the project consistent with the proposed project milestone dates.

For Eligible Generation Facilities or Transmission Projects that are not yet in-service, bidders are required to provide a complete critical path schedule for the project from the notice of selection of the project for contract consideration to the start of commercial operations. For each project element, list the start and end date.

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

Please see **Exhibit 10.1** for the complete critical path schedule for the MCPC Transmission Project.

The MCPC schedule has been built from the bottom up and is based on AVANGRID's standard Work Breakdown Structures. The schedule activities have been determined by dividing and subdividing the project scope and project deliverables, establishing the effort needed to complete the work packages (decomposition technique). Sequencing and dependencies between activities were determined, and their durations have been established, with different techniques including expert judgment, analogous estimating, and group decision-making sessions.

As reflected in **Exhibit 10.1**, the MCPC Transmission Project schedule is structured by sections:

- The first set of sections is common to the overall MCPC program, and includes the Project Management effort and the Program Approvals (regulatory, communications, permitting and environmental).

- The second set of sections refers to the main project components (substations and transmission lines) and includes all the work packages needed for their execution (engineering, real estate, procurement, construction and in-service dates).

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

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

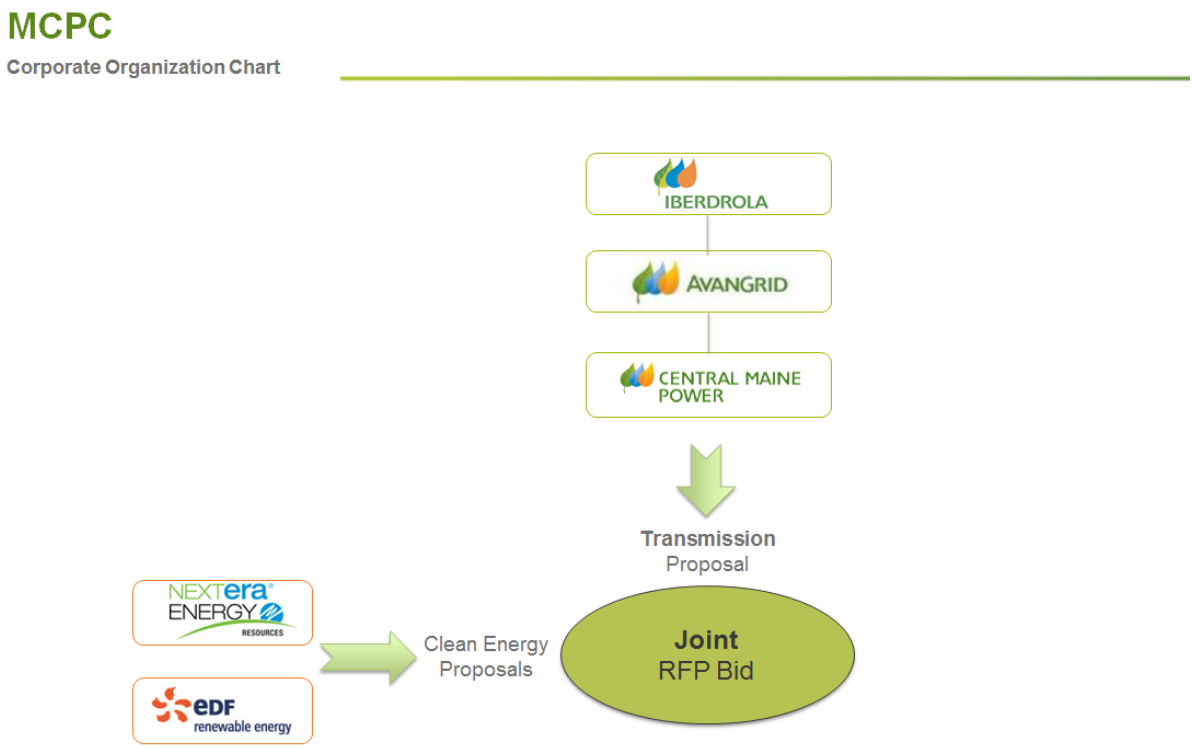
Bidders are required to demonstrate project experience and management capability to successfully develop (for a project that includes new facilities or capital investment) and operate the project proposed. The Distribution Companies are particularly interested in project teams that have demonstrated success in projects of similar type, size and technology and, for projects that include new facilities or capital investment, can demonstrate an ability to work together effectively to bring the project to commercial operation in a timely fashion.

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

Figure 11.1 below provides the organizational chart for the MCPC Transmission

Project and the MCPC Clean Energy Generation.

Figure 11.1 – Organizational Chart, MCPC Transmission Project and the MCPC Clean Energy Generation



For more detailed information about the corporate structure of CMP and a more detailed organizational chart for CMP, please see Section 5.2(A) and **Exhibit 5.2.1**.

For more detailed information about the corporate structures of the MCPC Clean Energy Generation projects, please see the separate submissions of NextEra Bidding Affiliates and EDF RE.

11.2 For a project that includes new facilities or capital investment, provide statements that list the specific experience of the bidder and each of the project participants (including, when applicable, the bidder, partners, EPC contractor and proposed contractors), in developing, financing, owning, and operating generating or transmission facilities (as applicable), other projects of similar type, size and technology, and any evidence that the project participants have worked jointly on other projects.

CMP has been a transmission and distribution utility in Maine for more than 117 years and has significant experience developing, operating, and maintaining bulk transmission facilities within its service territory.

As one of the leading transmission utilities in New England, CMP has a deep understanding of New England's transmission system and additional transmission facilities needed to fulfill the energy policy goals of the region. CMP is committed to investing in New England's transmission grid in order to ensure that the energy needs of Maine and New England are satisfied reliably and in a cost effective manner.

CMP is Maine's largest transmission and distribution utility. Founded in 1899, CMP currently serves more than 615,000 customers in southern, western, and central Maine. CMP currently operates and maintains more than 2,536 miles of transmission lines and 254 substations, 63 of which are administered by ISO-NE. Over the last 10 years, CMP has constructed approximately 500 miles of new transmission facilities in Maine, including most notably the very successful completion of the MPRP, CMP's $1.4 billion investment to

reinforce Maine's transmission grid for reliability purposes through upgrades to the existing system and the construction of new high voltage and extra-high voltage transmission lines and substations from Eliot to Orrington, Maine.

CMP initiated the MPRP in 2006 to study the strength of Maine's bulk power transmission system and to implement the upgrades needed to improve the electric system's reliability and meet federal reliability standards. After nearly four years of intensive studies, planning, regulatory processes and public outreach, in 2010 CMP obtained all necessary permits and approvals to construct the MPRP, and CMP and its contractors began construction of the project in August 2010. Requiring the construction of a total of 440 miles of transmission lines, including 184 miles of new 345 kV transmission lines, 184 miles of new 345 kV transmission lines, 100 miles of new 115 kV transmission lines, and 156 miles of rebuilt transmission lines, and the construction of six new substations and major expansions to six existing substations, the MPRP was the largest construction project in Maine's history and required five years to complete.

Under the leadership of a strong management team, with careful and diligent attention to managing all facets of the project, CMP was able to complete the MPRP on time and under budget, delivering the reliability benefits promised by the project to Maine and New England's transmission customers in a timely and cost-effective manner. This same CMP and Avangrid Networks, Inc. management team will lead its participation in the implementation of the MCPC Transmission Project.

In addition to the MPRP, CMP and its transmission affiliates have successfully completed several additional transmission development projects since 2006. A summary of these projects is provided in **Exhibit 11.5.1**.

In completing the MPRP and these other transmission projects, CMP benefitted from the strong support of its ultimate corporate parent, Iberdrola, S.A. Iberdrola, S.A. affiliates provide transmission services in Spain, the United Kingdom, and the United States, among other countries. Iberdrola, S.A. affiliates have vast experience developing major transmission projects around the world and a demonstrated commitment to investing in the energy infrastructure needed in Maine. AVANGRID and Iberdrola, S.A. fully support CMP's participation in the MCPC and stand ready to provide the technical, project management, and financial support needed to ensure the successful completion of the Project.

Please see Section 11.6 for a discussion of the experience of the contractors that CMP expects to use for the MCPC Transmission Project.

11.3 For a bid that includes existing facilities, provide statements that list the specific experience of the bidder and each of the project participants (including, when applicable, the bidder, partners, EPC contractor and proposed contractors), in owning and operating generating or transmission facilities (as applicable), other projects of similar type, size and technology, and any evidence that the project participants have worked jointly on other projects.

Please see Section 11.2 for a description of CMP's long-standing experience owning and operating transmission facilities in Maine.

For a discussion of the experience of the MCPC Clean Energy Generation Developers in operating generation facilities, please see the separate submissions of NextEra Bidding Affiliates and EDF RE.

11.4 Provide a management chart that lists the key personnel dedicated to this project and provide resumes of the key personnel. For Eligible Facilities or Transmission Projects that are not yet in-service, 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; <u>and</u>

ii. For a project that includes new facilities or capital investment, experience in financing power generation projects (or have the financial means to finance the project on the bidder's balance sheet)

Please see **Exhibit 11.4.1** for the management chart for the team responsible for developing the MCPC Transmission Project, **Exhibit 11.4.2** for the management chart for the team that is expected to construct the MCPC Transmission Project, and **Exhibit 11.4.3** for résumés of the key personnel responsible for the development and construction of the Project.

The personnel who make up the MCPC Transmission Project development team all have substantial project management experience constructing similar transmission projects. The Project Manager for the MCPC Transmission Project will be Angel Aparicio. Mr. Aparicio recently served as the Project Manager for the successful Ginna Retirement Transmission Alternative Project at Rochester Gas & Electric and has many years of experience developing transmission projects at Avangrid Networks. The MCPC Transmission Project team will be overseen by the Project's steering committee, which includes, among others, Robert Kump, Avangrid Networks' President and CEO; Sara Burns, CMP's President and CEO; and Douglas Herling, Avangrid Networks' Vice President – Electric Operations. Previously, Mr. Herling was the executive responsible for CMP's successful completion of the MPRP.

11.5 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. Commercial operation date

v. Estimated and actual capacity factor of the project for the past three years

vi. Availability factor of the project for the past three years

vii. References, including the names and current addresses and telephone numbers of individuals to contact for each reference

Please see **Exhibit 11.5.1** for a listing of transmission projects that CMP and certain of its AVANGRID and Iberdrola affiliates have developed during the last 10 years.

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

i. Construction Period Lender, if any

Please see Section 5.2(B) for CMP's financing plan for the MCPC Transmission Project.

ii. Operating Period Lender and/or Tax Equity Provider, as applicable

Please see Section 5.2(B) for CMP's financing plan for the MCPC Transmission Project.

iii. Financial Advisor

Not applicable to the MCPC Transmission Project.

iv. Environmental Consultant

The lead environmental consultant responsible for siting and environmental permitting matters for the MCPC Transmission Project is Burns & McDonnell. Burns & McDonnell is a full service engineering, architecture, construction, and environmental

consulting firm based in Kansas City, Missouri with offices around the country including in Portland, Maine. Burns & McDonnell has significant experience permitting and managing the development and construction of transmission projects in New England, including CMP's recent MPRP project. Burns & McDonnell is being assisted on siting and environmental permitting matters relevant to the MCPC Transmission Project by Power Engineers of Freeport, Maine and Boyle Associates of Gorham, Maine (a subsidiary of Corporate Environmental Advisors (CEA) of West Boylston, Massachusetts), SEARCH, Inc., with offices in Boston, Massachusetts, and Terrence J. DeWan & Associates of Yarmouth, Maine. These environmental sub-consultants have significant experience permitting transmission projects in Maine.

v. Facility Operator and Manager

CMP intends to operate and maintain the MCPC Transmission Project facilities using internal personnel, as discussed in Section 9.

vi. Owner's Engineer

For the design, siting, permitting and construction of the MCPC Transmission Project, CMP intends to use a combination of internal and external engineers. No selection has been made at this time for the external engineers.

vii. EPC Contractor (if selected)

As described in Section 8.1, CMP has defined the procurement plan for the MCPC Transmission Project, determining the contracts that will be necessary for equipment and services for the Project. The general approach to the execution of the MCPC Transmission Project follows the use of the design-bid-build principle, where a program manager, acting on behalf of the owner, contracts engineering services, leads the procurement of the

project equipment, and assists on contracting several contractors for the actual execution of the works on site. As such, while there may be one or more EPC contractors on the Project, CMP expects to use several contractors and vendors to support the execution of the MCPC Transmission Project.

Some of these vendors and suppliers have already been pre-selected, as described in Section 8.1, or will participate in a competitive procurement process as dictated by the Project Schedule included in Section 10.1. Particular to the construction services, CMP has pre-selected both the transmission and substation contractors, as listed below:

Transmission Construction. Pre-selected suppliers:

[redacted]

Substation Construction. Pre-selected suppliers:

[redacted]

Each of these pre-selected suppliers has significant, relevant experience constructing transmission facilities in the U.S.

viii. Transmission Consultant

For the transmission planning matters related to the MCPC Transmission Project, CMP intends to use a combination of internal and external engineers. RLC performed the planning studies. CMP has identified the need to retain engineering assistance for substation engineering, transmission engineering, and program management services

shortly after an award in this RFP. As reflected in the MCPC Project Schedule provided in **Exhibit 10.1**, CMP plans to address this procurement need expeditiously after an award.

ix. Legal Counsel

The legal counsel for the MCPC Transmission Project is Pierce Atwood, LLP, based in Portland, Maine. One of Maine's premier law firms for more than 100 years, Pierce Atwood is a New England regional firm with a strong energy and public utilities practice, with particular experience in transmission development, siting and permitting. Led by Jared des Rosiers, who served as lead counsel on CMP's MPRP project, Pierce Atwood will be responsible for obtaining the Maine PUC CPCN and other necessary regulatory and environmental approvals and permits. Pierce Atwood will also be responsible for negotiating all agreements for the MCPC Transmission Project including the MCPC TSA.

In addition to Pierce Atwood, CMP expects to use Bracewell LLP, AVANGRID's external FERC counsel, under the leadership of Catherine McCarthy, to assist with respect to the MCPC TSA and to obtain all necessary FERC approvals related to the MCPC Transmission Project.

11.7 Provide details of the bidder's experience in ISO-NE other Markets affected by the bid. With regard to bidder's experience with ISO-NE markets, please indicate the entity that will assume the duties of Lead Market Participant for your Project. Please provide a summary of the proposed Lead Market Participant's experience with each of the ISO-NE markets.

As a Transmission Owner within ISO-NE and a participant on the various ISO-NE stakeholder committees within ISO-NE, including the Planning Advisory Committee, Reliability Committee, Transmission Committee, and Markets Committee, CMP has significant experience with the ISO-NE Transmission, Markets, and Services Tariff, OATT, and energy and capacity markets. The MCPC Transmission Project will not require a Lead

Market Participant in the ISO-NE markets. For information about the Lead Market Participant for each of the MCPC Clean Energy Generation projects, please see the separate submissions of NextEra Bidding Affiliates and EDF RE.

12.1 For existing generation facilities, provide emissions estimates based on available continuous emissions monitoring data. Where continuous emissions monitoring data is not available, provide emissions estimates based on the most recent stack emissions test conducted using an EPA reference method approved by the applicable permitting and enforcement authority. Where continuous emissions data or actual stack emissions test data are not available, provide emissions estimates based on emissions factors from the latest edition of EPA's AP-42, Compilation of Air Pollutant Emissions Factors.

For new generation facilities, provide emissions estimates based on available data from the unit manufacturer. Alternatively, provide actual emissions data determined in accordance with the paragraph above for a similar facility built within the past 3 years. Include copies of supporting documentation for all emissions estimates.

Project Anticipated Emissions, expressed in pounds/megawatt-hour (lbs/MWh)

Source of Information	Date of Test (if applicable)	Greenhouse Gases (all except methane) Expressed as Carbon Dioxide equivalent (CO_2e)	Nitrogen Oxides (NOx)	Sulfur Oxides (SOx)	Carbon Monoxide (CO)	Particulate Matter (PM 2.5)	Methane (CH4)

Please see the separate submissions of the MCPC Clean Energy Generation

Developers for a discussion of generation-related emissions.

12.2 Describe any past investments that will, or have been made to your facility to improve its emissions profile or any planned future investments made to your facility in order to improve its emissions profile. Pollutant specific emissions improving technologies include, but are not limited to:

- **NOx – Selective/Non-Selective Catalytic Reduction**

- **SOx – wet/dry scrubbers**
- **PM – fabric filter/bag house, electrostatic precipitator, cyclone separator**
- **CO – oxidation catalyst**

Investments that improve overall emissions include, but are not limited to:

- **equipment tune-ups (improves combustion efficiency and emissions)**
- **boiler tube replacements (improves heat transfer efficiency and reduces fuel use)**
- **other efficiency improvements (*e.g.*, installing a heat exchanger to use waste heat to pre-heat feed water to the boiler)**

Include control equipment specifications, date(s) of installation, expected life of equipment, benefits gained from the addition of such equipment, etc.

Please see the separate submissions of the MCPC Clean Energy Generation Developers for a discussion of generation-related emissions and investments.

Regarding the MCPC Transmission Project, CMP has made previous commitments and investments to reduce the emission of sulfur hexafluoride (SF_6) from its transmission facilities and commits to employ its SF_6 emission-reduction program and expertise to the MCPC Transmission Project.

SF_6 is the most potent greenhouse gas known, with a CO_2 global warming equivalency (CO_2e) of 22,000, meaning that SF_6 is 22,000 times more effective at trapping infrared radiation than an equivalent amount of CO_2 over a 100-year period. Electric utilities including CMP have used SF_6 for more than 35 years as the electric arc quenching medium in large substation circuit breakers (these were formerly filled with mineral oil). SF_6 is superior to oil or air for this purpose because of its stability, insulation properties, and dielectric strength. However, SF_6 sometimes escapes from these breakers due to small

gasket gaps or weld seam failures, and during equipment installation, servicing, or decommissioning.

In 1999, CMP voluntarily joined the EPA's SF_6 Emission Reduction Partnership for Electric Power Systems (the Partnership) as a charter member. As a charter member, CMP committed to tracking its SF_6 emissions, establishing annual emission-reduction goals, identifying and implementing emission-reduction measures, and reporting emission reduction initiatives and progress to the EPA and, through the Partnership clearinghouse, to other electric utilities.

In 2012, SF_6 emissions reporting under the utility Partnership was replaced by mandatory emissions reporting to the EPA as a result of Federal regulatory changes. After three years of mandatory SF_6 emissions reporting (2012 – 2014), CMP was exempted from future EPA reporting due to three consecutive years below the federal emissions reporting threshold. CMP SF_6 emissions have remained well below this reporting threshold since 2014.

Notwithstanding this exemption from federal reporting, CMP has continued its SF_6 emission-reduction program to improve its management processes to further reduce or eliminate SF_6 emissions. This ongoing program includes: accurate SF_6 inventory and emissions tracking; improved leak detection (*e.g.*, forward-looking infrared (FLIR) cameras, SF_6 gas cart gasket inspection procedures); SF_6 management protocols and training; and prioritization and budgeting for repair, retrofit or replacement of SF_6-containing equipment based on which circuit breakers are emitting the most SF_6.

CMP SF_6 emissions reductions since 1998 have been substantial. In 1999, CMP SF_6-containing equipment emitted 18.3% of its installed capacity, meaning 18.3% of SF_6 in CMP

equipment was inadvertently emitted that year. By 2008, CMP had reduced its SF_6 emissions to 1.32% of installed capacity, and by 2016, SF_6 emissions were 0.13% of installed capacity. During this period, total installed SF_6 capacity grew from 16,463 pounds (1998) to 63,847 pounds (2016), an increase of more than 280%, while annual emissions dropped from 3,020 pounds (1998) to 85.3 pounds (2016). Put another way, CMP has cut its annual SF_6 emissions from 30,406 metric tons CO_2e in 1998, to 859 metric tons CO_2e in 2016 – an emissions decrease of more than 97%.

12.3 Describe how your project will contribute to the Massachusetts 2008 Global Warming Solutions Act (GWSA) and the 2010 Clean Energy and Climate Plan for 2020. Describe how your project will contribute both to the short term 2020 goal, and longer term 2050 goal found in these laws.

The MCPC Clean Energy Generation delivered by the MCPC Transmission Project will make significant contributions to Massachusetts achieving the GHG reduction targets called for in the GWSA.

[redacted]

[redacted]

[redacted]

13.1 Please provide an estimate of the number of jobs to be created directly during project development and construction (for a project that includes new facilities or capital investment), and during operations, and a general description of the types of jobs created, estimated annual compensation, the employer(s) for such jobs, and the location. Please treat the development, construction, and operation periods separately in your response.

To assess the number of jobs and other economic development benefits that will be supported by the Maine Clean Power Connection Project, CMP retained the MCBER at the University of Southern Maine.

As set forth in its report entitled "The Economic and Employment Contributions of the Maine Clean Power Connection" dated July 24, 2017, a copy of which is provided as **Exhibit 13.1**, MCBER finds, based on its modeling using the economic models of the Massachusetts and New England state economies developed by Regional Economic Models Inc. (REMI), of Amherst, Massachusetts, that the MCPC will create or support the jobs identified in Figure 13.1 below during Project development and construction.

Figure 13.1 – Employment Impacts from MCPC Transmission Project during Development and Construction.

Category	[redacted]						otal	Annual Average
Construction	-	4	166	2,561	952	-	**3,682**	614
Professional & Technical Svcs	28	49	81	40	6	-	**204**	34
Management	-	79	140	119	105	8	**450**	75
Direct Total	28	132	387	2,720	1,062	8	**4,337**	723
Indirect & Induced	39	186	477	2,184	1,185	267	**4,337**	723
Total Employment	**66**	**318**	**864**	**4,904**	**2,247**	**276**	**8,674**	**1,446**
Average Annual Compensation	$51,209	$53,599	$49,770	$38,803	$44,067	$70,856	-	-

Note: Jobs are reported as the average annual supported each year and include full-time and part-time jobs. Average annual compensation includes wages and benefits and is reported in current (nominal dollars).

As set forth in the MCPC Project Schedule, **Exhibit 10.1**, the development and permitting period is planned to run through mid-2019 and [redacted]. During the construction period the vast majority of supported jobs will be construction laborers and specialists, together with additional professional and technical service and managerial jobs that will oversee various aspects of construction.

Direct spending is estimated to support 4,337 jobs over the development and construction period. The number of jobs supported is not spread evenly across all years and is [redacted].

During operations, the MCPC Transmission Project is expected to support a total of nine jobs, five of which will directly support the maintenance and operations of the Project in Maine. The remaining four jobs will be indirectly supported and induced on average per years.

13.2 Please provide the same information as provided in response to question 13.1 above but with respect to jobs that would be indirectly created as a result of the proposed project.

As set forth in Figure 13.1 above, the development and construction spending on the MCPC Transmission Project is also expected to result in an additional 4,337 indirect and induced jobs during the development and construction periods ([redacted]).

On top of these jobs, the MCBER's analysis using the REMI model forecasts that the savings that Massachusetts ratepayers are expected to realize from the LMP savings arising

from the Maine Clean Power Connection Project will support approximately 734 jobs each year over the 20-year term of the PPAs, as summarized in Figure 13. 2.1 below.[38]

Figure 13.2.1 – Massachusetts Employment Impacts from Ratepayer Savings

		Annual average for each period				
State	**Category**	[redacted]				
Massachusetts	Direct	349	189	121	129	190
	Indirect and Induced	750	520	487	465	544
	Total Employment	1,100	710	608	594	734
New England Total	Direct	711	403	264	265	396
	Indirect and Induced	1,230	855	790	737	882
	Total Employment	1,941	1,259	1,054	1,002	1,278

Employment impacts are expected to have different effects across industry sectors depending on production inputs and other differences in business operations. Figure 13.2.2 below illustrates the total employment impacts by major industry in Massachusetts. The largest share of employment impacts is expected in healthcare and retail trade. The utilities sector shows an average loss of jobs across the simulation period, although small.

[redacted]

Figure 13.2.2 – Massachusetts Private Sector Industry Employment, Average per Period

Category	Annual average for each period				
	[redacted]				
Health Care and Social Assistance	160	110	111	109	120
Retail Trade	138	95	88	84	99
Construction	183	51	8	19	61
Accommodation and Food Services	76	58	50	44	56
Manufacturing	61	54	47	45	51
Other Services, except Public Administration	75	46	44	41	50
Professional, Scientific, and Technical Services	57	41	38	40	43
Administrative and Waste Management Services	47	32	28	27	33
Finance and Insurance	41	26	26	26	29
Real Estate and Rental and Leasing	46	26	20	17	26
Arts, Entertainment, and Recreation	33	21	20	18	22
Wholesale Trade	30	22	20	20	22
Transportation and Warehousing	25	17	16	17	19
Educational Services; private	37	19	13	7	18
Information	19	13	13	12	14
Management of Companies and Enterprises	13	11	10	10	11
Forestry, Fishing, and Related Activities	2	2	2	2	2
Mining	1	1	1	1	1
Utilities	(11)	(7)	(8)	(7)	(8)
All Industries	**1,033**	**638**	**547**	**532**	**669**

Note: Employment reported in job years. Includes only private sector employment and does not include state and local government employment, which averaged about 210 jobs over the 20-year period.

The forecast employment impacts of LMP savings across the rest of the New England states are summarized in Figures 13.2.3 and 13.2.4 below.

Figure 13.2.3 – Employment Impacts from Ratepayer Savings for New England States

State	Category	Annual average for each period				
		[redacted]				
Massachusetts	Direct	349	189	121	129	190
	Indirect and Induced	750	520	487	465	544
	Total Employment	1,100	710	608	594	734
Connecticut	Direct	117	65	43	43	65
	Indirect and Induced	182	116	106	93	121
	Total Employment	298	181	149	136	186
Maine	Direct	58	37	25	21	34
	Indirect and Induced	84	70	64	57	67
	Total Employment	142	107	89	77	101
New Hampshire	Direct	93	54	36	36	53
	Indirect and Induced	96	68	59	54	67
	Total Employment	188	121	95	90	120
Rhode Island	Direct	61	35	26	26	36
	Indirect and Induced	80	52	49	46	55
	Total Employment	141	87	74	72	91
Vermont	Direct	34	23	13	10	19
	Indirect and Induced	38	30	25	21	28
	Total Employment	71	52	38	31	47
New England Total	Direct	711	403	264	265	396
	Indirect and Induced	1,230	855	790	737	882
	Total Employment	1,941	1,259	1,054	1,002	1,278

Figure 13.2.4 – Summary of New England Industry Employment, Average per Period

Category	Annual average for each period				
Health Care and Social Assistance	274	190	190	181	204
Retail Trade	267	182	165	154	187
Accommodation and Food Services	143	110	94	81	104
Construction	326	86	2	17	100
Manufacturing	116	102	89	85	96
Other Services, except Public Administration	142	89	84	77	96
Professional, Scientific, and Technical Services	89	65	59	60	67
Administrative and Waste Management Services	82	56	49	45	56
Finance and Insurance	69	43	43	44	49
Real Estate and Rental and Leasing	81	45	32	25	44
Arts, Entertainment, and Recreation	58	39	36	32	40
Wholesale Trade	52	37	34	33	38
Transportation and Warehousing	40	29	27	28	31
Educational Services; private	53	26	15	4	23
Information	28	19	18	17	20
Management of Companies and Enterprises	22	18	17	18	19
Forestry, Fishing, and Related Activities	6	5	5	4	5
Mining	2	1	1	1	1
Utilities	(27)	(17)	(18)	(16)	(19)
All Industries	**1,820**	**1,127**	**943**	**890**	**1,161**

13.3 Please describe any other economic development impacts (either positive or negative) that could result from the proposed project, such as creating property tax revenues or purchasing capital equipment, materials or services for New England businesses. Please provide the location(s) where these economic development benefits are expected to occur.

In addition to the employment impacts discussed in Sections 13.1 and 13.2 above, the MCBER analysis finds that the Maine Clean Power Connection Project is expected to support significant overall economic activity in the Commonwealth and New England during the development and construction phase and over the life of the transmission and

generation projects, as measured by gross domestic product (GDP)[39] and total compensation.[40] As summarized in Figure 13.3.1 below, infrastructure investments are expected to support approximately [redacted] million in GDP over the development and construction periods. Likewise, total compensation is estimated to total [redacted] million over these periods.

Figure 13.3.1 – Other Economic Contributions of Infrastructure Investments

Category	[redacted]						Total
GDP (Millions $)	$5.0	$23.4	$57.4	$257.2	$124.4	$18.1	$485.6
Total Compensation (Millions $)	$3.4	$17.0	$43.0	$190.3	$99.0	$19.5	$372.2

Ratepayer savings resulting from the LMP reductions over the life of the projects are expected to support annually over [redacted] million in GDP and [redacted] million in total compensation, as summarized in Figure 13.3.2 below.

Figure 13.3.2 – Other Economic Development Impacts in Massachusetts and New England from Ratepayer Savings

		Annual average for each period				
State	Category	[redacted]				
Massachusetts	GDP (M$)	$101.6	$83.6	$85.0	$96.9	$91.1
	Total Compensation (M$)	$88.9	$71.5	$70.1	$82.6	$77.2
New England Total	GDP (M$)	$169.5	$141.4	$142.6	$161.4	$152.5
	Total Compensation (M$)	$140.4	$113.3	$109.2	$125.8	$120.4

Municipalities in Maine are expected to realize increases in annual tax revenues of $12 million as a result of the MCPC Transmission Project investments.

[39] GDP is a standard economic measure used to indicate the size of an economy of economic activity. GDP measures the market value of all final goods and services in the economy. MCBER measured the change or addition to GDP to the Massachusetts and New England economies.

[40] Total compensation includes wages and salaries and worker benefits.

13.4 To the extent not already specified elsewhere in your response, please address the factors listed in Section 2.2.2.9 and describe any benefits or impacts associated with the proposed project.

Please see Section 2 and the remainder of Section 13 for information on all of the benefits provided by the Maine Clean Power Connection Project.

13.5 Describe how your project will (a) contribute to reducing winter electricity price spikes in Massachusetts, and (b) guarantee energy delivery in winter months. Class I RPS eligible projects must guarantee that 70% of energy in their delivery profile of the Winter Peak Period will be delivered over the course of every Winter Peak Period (see Section 2.2.2.7). Clean Energy Generation for projects containing firm service hydroelectric generation, and Clean Energy from new Class I RPS eligible resources paired with firm service hydroelectric generation, will be required to submit a delivery profile with no Winter Peak Period hour less than 60 percent (60%) of their highest annual single hourly delivery claimed in their annual delivery profile.

a) contribute to reducing winter electricity price spikes in Massachusetts

Please see Section 2(III)(D)(4) and the submissions of the MCPC Clean Energy Generation Developers.

b) guarantee energy delivery in the winter months

Please see Section 2(III)(D)(4) and the submissions of the MCPC Clean Energy Generation Developers.

13.6 If applicable, please demonstrate any benefits to low-income ratepayers in the Commonwealth, and the impact, if any, those benefits will have on the cost to the project.

As part of the MCPC Transmission Project, CMP proposes to implement a long-term, flexible and collaborative program in connection with its successful bid that will provide demonstrated and material benefits to the Commonwealth's low-income electricity customers and promote innovative investments in applied energy storage technology. This proposal will provide substantial funding over a 20-year commitment period (all without affecting the MCPC proposal price) for the advancement of programs that benefit low-

income customers, while incorporating flexibility to modify or adapt supported programs to secure meaningful benefits for low-income customers. In addition, the proposed enhanced funding for these programs will help to advance important goals of the Massachusetts Clean Energy and Climate Plan (Clean Energy Plan) and Energy Storage Initiative by providing complementary resources addressing market barriers and similar challenges facing implementation of programs to serve low-income customers. The terms of the proposal are summarized below.

A. Funding and Term

CMP shall contribute $750,000 per year for a term of 20 years to fund the programs described below. This funding level equates to a net benefit to low-income customers of approximately $8.0 million in [redacted] (assuming a 6.99% discount rate). Subject to the process described below, funding would be implemented by the combination of: (1) an annual contribution to fund enhanced investment in energy efficiency measures for low-income customers; and (2) a grant paid by CMP to complement Commonwealth programs facilitating the investment in emerging customer-facing energy technologies, such as advanced storage and Zero Emissions Vehicles (ZEV), for the benefit of low-income customers. To the extent practical, funding for these programs shall be allocated to the Distribution Companies consistent with the original TSA obligations for each Massachusetts Distribution Company's load-share.[41]

[41] The original TSA obligations for each Massachusetts Distribution Company's load-share: National Grid = 45.72%; NSTAR = 45.44%; WMECO = 7.71%; Unitil = 1.13%.

B. Low-Income Customer Programs

1. Enhanced Energy Efficiency Program Funding

CMP proposes to fund the aggregate amount of $550,000 per year (allocated to each of the Distribution Companies by load share) to provide enhanced and complementary funding for each of the Distribution Companies' then-effective low-income energy efficiency programs. Such funding could be employed by the Distribution Companies to expand the scope of approved low-income energy efficiency programs or to address complementary measures or "barriers" to more effective implementation of these programs. The Distribution Companies alternatively, may apply all or any portion of the annual "credit" not applied to particular energy efficiency program enhancement measures to increase available funding for the Low-Income Home Energy Assistance Program (LIHEAP), including aspects of LIHEAP that facilitate the funding of replacement heating equipment. Programs funded by this provision shall be implemented by the Low-Income Energy Affordability Network (LEAN) in the same manner as programs pursuant to G.L. 25, §19(c), including joint decision-making by LEAN and the Distribution Companies, and LEAN supports CMP's proposal as reflected in **Exhibit 13.6**.

The Distribution Companies are currently implementing a wide range of energy efficiency programs pursuant to three-year plans developed pursuant to a comprehensive and collaborative process. Low-income programs constitute an important component of such plans. CMP understands that LEAN, along with local utilities, administers certain of these programs to qualifying households. Typical energy efficiency measures installed through the low-income programs include insulating and weatherizing homes, installing more efficient lighting, heating equipment, and controls, and replacing appliances. Some

renewable thermal technologies, such as air source heat pumps, may also qualify for subsidization through LEAN. Added funding will secure not only greater electric system savings, but enhanced benefits for low-income customers.

2. Leadership in Emerging Customer-Facing Energy Technologies

In addition, CMP proposes to supplement funding for one or more existing emerging customer-facing energy technologies in an aggregate amount of $200,000 per year, targeted at low-income households. Selection of projects will be done with the guidance of LEAN.

One example is residential application of advanced energy storage, such as advanced batteries, to enhance grid and customer resiliency and to address peak demand. Another example includes the Massachusetts Plug-in Electric Vehicle (PEV) initiatives (including those referenced in the Clean Energy Plan) implementing a PEV ownership/grant program, complementing low-income grant programs administered by the Commonwealth's ZEV Commission. Electric vehicles can provide considerable transportation cost savings and emissions reduction for low-income residents but typically require high "upfront" costs that can limit market uptake.[42] Low-income residents often do not have the "upfront" capital to adopt new clean energy technologies early in market development. Therefore, a program that directly promotes low-income electric vehicle ownership in low-income communities could increase uptake and assist with addressing the barriers of low-income PEV ownership, including access to PEV infrastructure. This program might also effectively complement certain of the Distribution Companies efforts to

[42] In 2011, home energy and utility expenditures made up 6% of average household annual income and 23% of average low-income household income. In contrast, transportation costs averaged 16% of overall household income and 33% of annual income in low-income households. Figure 2, NASEO and VEIC. Transportation Technical Reference Manual, June, 2014.

expand charging station availability. CMP proposes that after approval of the MCPC TSAs, discussions will be held with stakeholders, including the ZEV Commission, to establish the specific terms and conditions of any PEV grant program for an initial five-year period.

C. Benefits of Programs

CMP's low-income program commitment would deliver solutions that empower low-income customers, improve the economic situation of Massachusetts' low-income households and communities, advance the Commonwealth's overall commitment to energy efficiency and clean energy, and advance applied energy storage technology to fuel job creation in the innovation economy. Project funding would directly and materially benefit low-income customers and small businesses in low-income communities. CMP representatives consulted with and considered a range of recommendations from LEAN, an important low-income customer advocate. CMP will consult further with LEAN to refine program parameters during the Distribution Companies' 20-year commitment under the MCPC TSAs, as described below.

Massachusetts has been ranked the number one state for energy efficiency policy by the American Council for an Energy Efficient Economy (ACEEE) from 2012-2016. The MCPC-related energy efficiency funding would be 100% dedicated to low-income customers using the income eligibility guidelines currently in place. An enhanced low-income component would secure even greater benefits from this important resource. The funding could also be applied to removing technical or market barriers or addressing complementary needs.

Massachusetts is already taking steps to increase its energy storage resources as part of a balanced energy portfolio and to establish greater leadership through innovative

applications of energy storage technology. The Project's emerging customer-facing energy technologies program will support these goals and provide substantial low-income benefits through wider integration of energy storage technology. Advanced energy storage, such as advanced batteries, can enhance grid and customer resiliency and moderate the economic and environmental costs of system peak demand. Through programs coordinated to benefit low-income communities, larger-scale energy storage applications can capture the economic benefits where they are most needed and increase the state's energy storage resources.

A PEV program not only will help to address a substantial barrier for low-income customers in terms of the transportation sector, it will advance an important objective of the Clean Energy Plan. As noted in the Clean Energy Plan, the transportation sector accounted for "42% of total GHG emissions in Massachusetts in 2012" and the Commonwealth has recognized that in order to achieve the GWSA's 2050 limit, "electrification of the transportation sector is necessary."[43] A decrease in the amount of carbon fuels was found to be "critical" in meeting GWSA goals.[44] The Plan also noted that "low-income households tend to buy used cars," while noting that pilot programs were being designed to provide assistance to lower-income households beyond existing rebates.[45] The Plan noted that the ability to secure PEV access will result in substantial fuel savings over time. The Commonwealth has established a ZEV Commission and, in turn, "ambitious" programs and also recognized that "new complementary policies are necessary." CMP expects that its funding of low-income access to ZEVs, preferably in

[43] Clean Energy Plan at 81.

[44] *Id.* at 25.

[45] *Id.* at 82.

connection with Commission programs, will provide important economic and social benefits for low-income customers while also advancing the Commonwealth's overall clean energy goals.

D. Next Steps and Periodic Review

Upon the MCPC selection as the winning project and CMP executing the necessary agreements, CMP would recommend that a collaborative effort with key Massachusetts stakeholders be completed in order to obtain additional, broader stakeholder feedback on alternative funding scenarios, on the finalization or refining of targeted low-income programs, and on funding processes prior to the delivery of energy pursuant to the MCPC TSAs.

In addition, CMP would recommend that after years five, ten, and fifteen of the term of the low-income commitment, a collaborative process be completed to re-evaluate and re-assess funded programs with key Massachusetts stakeholders (DOER, contracting Distribution Companies, LEAN) so as to consider alternative applications to the committed low-income funding and to ensure low-income customer interests are advanced in the most effective manner. For example, future funding could be applied to additional emerging customer-facing energy technologies (*e.g.*, advanced storage), which was encouraged by LEAN in the course of informal discussions. Importantly, beyond providing informal comments and suggestions in terms of the design of this proposal, LEAN has agreed to provide further consultation, advice, and assistance during final program design and period enhancements should the MCPC Project be selected in the RFP. Significantly, CMP is part of the AVANGRID family of operating companies and, therefore, has the ability to bring a knowledge base of "best practices" for energy programs or solutions

implemented in other states (New York, Maine, and Connecticut) that could be helpful to inform and complement a stakeholder process in order to maximize low-income customer benefits and assist in advancing the Commonwealth's energy initiatives.

Bids that include Transmission Projects (and all System Upgrades) must also provide the following information:

14.1 Transmission Project Information:

i. Overall project description

Please see Section 2 for an overall description of the MCPC Transmission Project.

ii. The operating voltage of the proposed project: kV:

The MCPC Transmission Project facilities will generally operate at 345 kV AC and 115 kV AC. In addition to the voltages listed above, the STATCOM low voltage bus voltage will be determined by the successful vendor, but is expected to be somewhere in the range of 20-38 kV AC.

iii. The type of structures (such as steel towers or poles) that would be used for the proposed project

Please see Section 8.1 for a detailed description of the types of structures proposed for the MCPC Transmission Project. The 345kV transmission project components will rely primarily on standard wood H-frame construction, and the 115 kV and 34.5 kV transmission existing network upgrade project components will use primarily single-pole, round wood construction.

iv. The length of the proposed transmission line and the type(s) of terrain and land ownership of the proposed ROW
Overhead miles: Underwater/underground miles: Terrain:

Please see Section 2.II.B and Section 8.5 for the transmission line lengths and additional details, and Section 6.4 for a description of the terrain of the contemplated transmission rights-of-way to be used.

v. The Substation facilities (number of breakers, transformers, etc.) required at each terminal of the proposed project and information as to how the new facilities would interconnect to any existing facilities.

Please see **Exhibits 6.11.1, Exhibit 6.11.2,** and **Exhibit 6.11.3** for one-line diagrams for each MCPC Transmission Option, and **Exhibit 8.1** and preliminary engineering drawings of the Project.

vi. The estimated costs of the proposed project broken out into separate categories as described below for transmission facilities and Substation facilities in nominal year dollars.

a. For cost of service or modified cost of service proposals:

1. Provide the capital cost estimate presented as a buildup of costs by category, such as environmental, engineering, civil works, materials, equipment, construction, construction management, physical and price contingencies, allowance for funds used during construction (AFUDC), and all other categories for which recovery under FERC would be sought. These categories are illustrative; aggregate costs into the categories most relevant to the development of the proposed project. All costs should be provided in nominal dollars.

CMP is proposing fixed-rate pricing for the MCPC Transmission Project under the terms of the proposed MCPC TSA. CMP calculated both the fixed, levelized MCPC Rate and the fixed, Alternative MCPC Rate ([redacted]) on a cost-of-service basis.

2. For projects with transmission and Substation components, separate the costs into two rows (*e.g.*, use one row for Substation construction and a second for transmission construction). Describe the detailed financial plan on a monthly basis during the construction period, *e.g.*, for 3 years or as long as necessary. The plan should present the costs and financial outlays in each month of the construction period, and the corresponding sources of financing (equity contribution and debt drawdown), as in the following illustrative table. Data

should include an estimate of the cost of both physical and price contingencies during the construction period. The financing plan should indicate the ability to finance the construction of the proposed project under base case and contingency scenarios.

For the capital cost estimate for each option of the MCPC Transmission Project, please see **Exhibits 14.1.1.1 – 14.1.1.3**. This cost estimate reflects the contingency values CMP has included for purposes of forecasting the Project cost and calculating the MCPC Rate. For the cash flows needed during the construction period for each transmission option, please see **Exhibits 14.1.1.1 – 14.1.1.3**. CMP's financing plan for the MCPC Transmission Project is discussed in Section 5.2(B). That plan will apply under base case and contingency scenarios.

3. Describe the proposed financing sources and instruments.

Please see Section 5.2(B).

4. Sources of funds for construction and working capital - include name of entity providing debt financing, loan amounts, interest rates, repayment period, grace period during construction; and equity provided by project sponsor.

Please see Section 5.2(B).

5. Sources of funds for unexpected repairs or replacement construction during the operating period, *e.g.*, replacement of tower. Note: the operating period is the applicant's estimate of the useful life or accounting life of the transmission project element(s).

Please see Section 5.2(B).

b. If the bidder is proposing fixed-rate pricing rather than cost-of-service or modified cost-of-service pricing, provide sufficient information and assessment to show that the proposed project, including any necessary transmission network upgrades, is

financially viable. In this regard, provide capital cost estimates and operation and maintenance cost estimates and the basis for your estimates, including the extent to which estimates are based on vendor contracts or vendor quotes, your experience in the development, construction and/or operation of similar projects, your approach regarding contingency and risk management, and your proposed financing plan. All costs should be provided in nominal dollars, although inflation and cost escalation estimates should be provided. Please describe in detail the due diligence you have conducted in developing your pricing and tariff proposal.

For Transmission Options 1 – 3 of the MCPC Transmission Project, please see: **Exhibits 14.1.1.1 – 14.1.1.3** (CMP's capital cost estimates for construction of each option); **Exhibits 14.1.2.1 – 14.1.2.3** (CMP's O&M cost estimate to operate and maintain each option over its useful life; and **Exhibits 14.2.1 – 14.2.3** (CMP's cost-of-service model supporting the MCPC Rate for each option). CMP's approach in developing, and bases for, these estimates are discussed below.

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

vii. Provide a proposed schedule for project development through release for operation that includes key critical path items, such as:

a. Develop contracts for project work

Please see **Exhibit 10.1**.

b. Completion of studies and receipt of approvals needed for the interconnection

Please see **Exhibit 10.1**.

c. Permitting; R/W and land acquisition

Please see **Exhibit 10.1**.

d. Engineering and design

Please see **Exhibit 10.1**.

e. Material and equipment procurement, including identification of long lead time equipment

Please see **Exhibit 10.1**.

f. Facility construction

Please see **Exhibit 10.1**.

g. Agreements (interconnection, operating, scheduling, etc.) with other entities

Please see **Exhibit 10.1**.

h. Pre-operations testing

Please see **Exhibit 10.1**.

i. Project in-service date

Please see **Exhibit 10.1**.

j. Other items identified by the bidder

Please see **Exhibit 10.1**.

viii. Bidder must indicate whether it proposes to recover abandonment costs for its transmission project from the Distribution Companies, as described in Section 2.2.2.6.2 of this RFP. If so, Bidder must acknowledge that recovery of any such abandonment costs shall be in accordance with FERC rules and policies, and also acknowledge that in no event will a Bidder seek to recover abandonment costs if the abandonment was caused directly or indirectly by some act or failure to act of the Bidder. Bidder must further affirmatively commit not to seek

from FERC or any other agency or authority any treatment of abandonment costs inconsistent with the provisions of Section 2.2.2.6.2 of the RFP. To the extent the Bidder proposes to recover abandonment costs, such proposal should be further described as set forth in Appendix C-2 of this RFP.

[redacted]

14.2 The proposed payment required for the transmission project and all system upgrades.

i. All proposals must include significant cost containment as stated in the RFP.

[redacted]

[redacted]

ii. List all situations which may change the proposed payments by consumers during the contract term.

Please see Sections 2(III)(A)(2) and 14.2(i).

iii. Identify any limits placed upon the bidder's post-contract term rates according to current FERC rules.

[redacted]

[redacted]

iv. **Identify all other project revenues which may be received by the bidder during the contract term which would not reduce rates paid by consumers.**

[redacted]

v. **If the proposed payments may change during the contract term or the proposal is based on cost of service, the bidder must provide the method that transmission owner shall use to determine the payment for the Transmission Project under the transmission Rate Schedule or Tariff and Service Agreement to be filed with FERC. If the proposed payment is a formula rate, the Eligible Bidder must also provide the formula and its proposed inputs that the transmission owner will file with FERC**.

Please see Sections 2(III)(A)(2) and 14.2(i).

vi. **If the proposed payment is based on the Transmission Project's cost of service and may change during the contract term based on changes in the cost of service, a full revenue requirements model must be included and submitted as a working Excel spreadsheet with the formulas intact.**

a. **Provide the annual revenue requirement forecasts for the project – including assumptions. Provide a draft version of the revenue requirement calculation in a format that is similar to what would be included in the Rate Schedule or Tariff and Service Agreement application to FERC, indicating the forecast revenue requirement**

amounts and all assumptions used in the calculations. This should include but not be limited to the assumptions regarding rate of return, depreciation life, split between debt and capital, AFUDC and weighted cost of capital, and a detailed estimate of the anticipated average annual operating and maintenance cost. Provide the information requested in Section 14.1.a of the Bidder Response Package.

Please see **Exhibits 14.2.1 – 14.2.3**.

vii. If the pricing proposed is based on cost of service, detail all cost containment commitments. Examples of such commitments include fixed price components, cost overrun restrictions, or other cost bandwidth provisions that are proposed to limit ratepayer risk must be clearly defined.

Please see Sections 2(III)(A)(2) and 14.2(i).

viii. Please include full and complete descriptions of all cost containment measures that you propose to be included in your pricing. Additionally provide any supporting documentation for any savings or methods of savings including cost caps on any portion of your project. Please include working Excel spreadsheets to more fully explain how your cost containment measures should work. Please provide details and notes that describe the nexus between the cost containment provisions in your proposal and those supporting documents and spreadsheets. Please provide examples about how any cost containment measures you are proposing would work.

Please see Sections 2(III)(A)(2) and 14.2(i).

ix. To the extent that you are proposing different interconnection scenarios that affect cost please include full and complete cost information on each scenario. Please describe all interconnection and transmission upgrade costs required to interconnect at the Capacity Capability Interconnection Standard and to ensure full dispatch, including transmission upgrades that may need to occur beyond the point of interconnection.

The MCPC Transmission Project will interconnect at the existing Larrabee Road Substation. As discussed in Sections 6.7, 6.8, and 6.9, and **Exhibit 6.7.1**, **Exhibit 6.7.2**, and **Exhibit 6.7.3**, the MCPC Transmission Project Transmission Options 2 and 3 have been designed to include all transmission upgrades needed to obtain Section I.3.9 approval from

ISO-NE and permit the interconnection of [redacted] and [redacted], respectively, of generation at the Larrabee Road Substation in accordance with the CCIS.

Please see above at Section 2.II.B, Figure 2.2 through Figure 2.5, for a listing of all transmission and substation facilities of the MCPC's core project elements and network upgrades that are necessary to meet both I.3.9 and CCIS requirements. The justification for inclusion of these facilities is provided in the Technical Reports for Transmission Options 1, 2, and 3, respectively, in **Exhibit 6.7.1**, **Exhibit 6.7.2**, and **Exhibit 6.7.3** of this submission. The costs for these facilities are included in the capital cost estimate for the MCPC Transmission Project and the MCPC Rate, as set forth in **Exhibits 14.1.1 – 14.1.3** and **Exhibits 14.2.1 – 14.2.3**, respectively.

x. Please describe the coordination of the availability of the Clean Energy Generation and any associated transmission or distribution facilities. All proposals must include a project schedule, and proposals including a combination of transmission and Clean Energy Generation should propose complete critical path schedules, for both elements of the project, from the notice of selection for contract consideration to the start of commercial operations (the "Baseline Schedule"). Please describe all aspects of your proposal that protect ratepayers from risks associated with payments for transmission costs when any associated expected Clean Energy Generation, as proposed by the bidder, is absent, reduced, or curtailed as compared to the Baseline Schedule.

Please see **Exhibit 10.1** for the complete project schedule for the MCPC Transmission Project. [redacted]

[redacted]

[redacted]

[redacted]

[redacted]

xi. Please describe your approach to avoid line losses.

[redacted]

14.3 The schedule of the payments defined in 14.2 above including when the payments will commence, how often payments will be required and the length of time over which payments will be required. In no event may payments commence before the Transmission Project is placed in service.

Please see **Exhibits 14.2.1 – 14.2.3**.

14.4 The design life of the project

The design life of the MCPC Transmission Project is 40 years.

14.5 A description of the reliability benefits of the proposed Transmission Project and its impact on existing transmission constraints

Please see Section 3.3.

SECTION 15 OF APPENDIX B TO THE RFP
EXCEPTIONS TO FORM PPA AND OR VARIATIONS FROM THE PROPOSED TARIFF REQUIREMENTS

Please attach an explanation of any exceptions to the Form PPAs set forth in Appendix C-1 or Appendix C-2 to this Notice, including any specific alternative provisions in a redline format to the Form PPA.

Transmission bids must contain a proposed tariff, rate schedule or transmission service agreement ("Transmission Agreement") that the Bidder proposes as the vehicle for recovery of its transmission costs from the Distribution Companies. In addition, all transmission bids must separately contain a detailed summary of the material provisions of the proposed Transmission Agreement. Such a summary should include, but not be limited to, a discussion of the key provisions set forth in Appendix C-3, as well as a cross-reference to the corresponding sections of the proposed Transmission Agreement where such provisions may be found.

Bidders are discouraged from proposing changes to the Form PPA and or variations from the Proposed Tariff requirements.

Please see **Exhibit 15.1** for the proposed MCPC TSA and **Exhibit 15.2** for a summary of the key terms of the MCPC TSA.