ATTACHMENT D: CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

STATE OF MAINE
PUBLIC UTILITIES COMMISSION

Docket No. 2017-00232

May 3, 2019

CENTRAL MAINE POWER COMPANY
Request for Approval of CPCN for the New England Clean Energy Connect Consisting of the Construction of a 1,200 MW HVDC Transmission Line from the Québec-Maine Border to Lewiston (NECEC) and Related Network Upgrades

ORDER GRANTING CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY AND APPROVING STIPULATION

VANNOY, Chairman; WILLIAMSON and DAVIS, Commissioners

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I. SUMMARY

The Commission finds that the construction and operation of the New England Clean Energy Connect (NECEC or Project) is in the public interest and, therefore, there is a public need for the Project. Accordingly, the Commission issues a certificate of public convenience and necessity (CPCN) for the NECEC. In addition, the Commission approves the Stipulation filed in this proceeding on February 21, 2019.

The Commission's finding that the NECEC meets the public interest and public need standards is based on a careful weighing of the benefits and costs of the NECEC to the ratepayers and residents of the State of Maine. As required by Maine statute, these include the effects of the NECEC on economics, reliability, public health and safety, scenic, historic and recreational values, and state renewable energy goals. 35-A M.R.S. § 3132(6). Based on its consideration of these factors, the Commission finds that the NECEC is in the public interest.

The Commission concludes that the NECEC meets the applicable statutory standards for a CPCN independent of the additional benefits that will be conveyed by the February 21, 2019 Stipulation. However, the provisions of the Stipulation augment the benefits of the Project.

The NECEC will allow for up to 1,200 MW of hydropower to be delivered to New England from Québec, Canada. The cost of constructing and operating the NECEC will be borne by customers of Electric Distribution Companies in Massachusetts (MA EDCs) and Hydro Québec (HQ). Because the NECEC-enabled power will be delivered into Maine, however, significant benefits will accrue to Maine electricity consumers through operation of the regional wholesale market. These benefits are expected to accrue for a period of at least 20 years. In addition to the wholesale electricity price reductions that will result from the NECEC, the Project will also enhance system reliability and fuel security within Maine and the ISO-New England (ISO-NE) region. In addition, the NECEC will provide environmental benefits by displacing fossil fuel generation in the region, and associated greenhouse gas (GHG) production, and will provide substantial benefits to the Maine economy through the more than 1,600 jobs expected to be created during the NECEC construction phase, and on an ongoing basis through property taxes.

The provisions of the NECEC Stipulation augment the benefits that will be realized by Maine ratepayers, communities and the environment by funding mechanisms and programs to provide rate relief to Maine ratepayers, benefits for low-income customers, and support for a variety of other programs intended to benefit Maine communities and the environment.

With respect to the effects of the Project on scenic and recreational values, and the associated impacts on tourism and the economies of communities in proximity to the Project, the Commission finds that these effects will be adverse. However, when these adverse impacts are balanced against the ratepayer, economic, and environmental benefits of the NECEC, the Commission finds that these adverse effects are

outweighed by the benefits. Moreover, the Commission expects that the scenic and recreational impacts of the NECEC will be reviewed and, to the extent appropriate and feasible, mitigated, through the processes at the Maine Department of Environmental Protection (DEP) and Land Use Planning Commission (LUPC).

Figure I.1 provides a summary of the impacts to Maine of the NECEC and the Stipulation provisions:

Figure I.1

Summary of NECEC Impacts			
Wholesale Market Effects	**Description**	**Value to Maine**	
		Nominal	**Present Value**
Energy Market Prices	Energy price suppression effect	$14-$44 million annually	$122-$384 million
Capacity Market Effect	Estimated capacity market price reduction	$19 million annually for first 10 years	$101 million
Reliability and Fuel Security	Enhancements to transmission reliability and supply reliablity and diversity	Not quantified*	Not quantified*
Macroeconomic Effects	**Description**	**Value to Maine**	
		GDP is reported in chained 2009 dollars	
During Construction Period	Positive impact on Maine GDP	Annual average, 2017-2022: $94-$98 million	
During Operations	Positive impact on Maine GDP. Includes effect of wholesale energy and capacity market savings.	Annual average, 2023-2027: $25-$29 million	
Regional Environmental and Local Community Impacts	**Description**	**Value**	
Effects on Host Communities	Detrimental impact on scenic, historic and recreational values, associated tourism and local economy	Not quantified	
GHG Emmissions Reductions	Reduction in regional carbon emissions	3.0 to 3.6 million metric tons/year	
Stipulation Conditions	**Description**	**Value to Maine**	
		Nominal	**Present Value**
Stipulation provisions	Benefits package included in Stipulation	Total $250 million over 40 years	$72-$85 million
*As discussed in the Concurring Opinion of Commissioner Williamson, ISO-NE has provided estimates that suggest that fuel security and reliability benefits could provide value to Maine of approximately $9.8 million annually for the years 2023-2024 and 2024-2025.			

II. PROJECT BACKGROUND

A. NECEC Facilities

The NECEC will enable the delivery of up to 1,200 MW of hydroelectric power from Québec, Canada to New England for a period of at least 20 years. The expected commercial operation date of the NECEC is December 2022. The core elements of the Project are: (1) a new 320 kV overhead high voltage direct current (HVDC) transmission line, approximately 145 miles in length, from the Québec/Maine border to a new converter station in Lewiston, Maine and a new 1.6 mile 345 kV AC transmission line from the new converter station to Central Maine Power Company's (CMP) existing Larrabee Road Substation in Lewiston and (2) a new converter station at Merrill Road in

Lewiston (Merrill Road Converter Station) and certain required upgrades to the Larrabee Road Substation. The NECEC also includes several other upgrades to CMP's existing transmission lines and substations. As set forth in Appendix 1 of CMP's initial post-hearing brief, a complete list of the components that comprise the NECEC is listed in Sections II. B and II. C below.[1]

B. Core Project Elements

1. Transmission Line Equipment

- New 145.3-mile +/-320 kV HVDC Transmission Line from the Canadian border to a new converter station located on Merrill Road in Lewiston (Section 3006) and

- New 1.6-mile 345 kV AC Transmission Line from the new Merrill Road Converter Station to the existing Larrabee Road Substation (Section 3007).

2. Substation Equipment

- New 345 kV AC to +/-320 kV HVDC 1200MW Merrill Road Converter Station and

- Additional 345 kV AC Transmission Line Terminal at the existing Larrabee Road Substation.

C. Network Upgrades

1. Transmission Line Equipment

- New 26.5-mile 345 kV AC Transmission Line from the existing Coopers Mills Road Substation in Windsor to the existing Maine Yankee Substation in Wiscasset (Section 3027);

- New 0.3-mile 345 kV AC Transmission Line from the existing Surowiec Substation in Pownal to a new substation on Fickett Road in Pownal (Section 3005);

- Rebuild of 9.3-mile 115 kV Section 62 AC Transmission Line from the existing Crowley's Substation in Lewiston to the existing Surowiec Substation;

[1] As noted in Ordering Paragraph 1 to this Order, the CPCN shall include and permit construction of any additional transmission facilities that ISO-NE determines are necessary to meet the requirements of Section I.3.9 of the ISO-NE Transmission Markets and Services Tariff or ISO-NE's Capacity Capability Interconnection Standard without further Commission review.

- Rebuild of 16.1-mile 115 kV Section 64 AC Transmission Line from the existing Larrabee Road Substation to the existing Surowiec Substation;

- Partial rebuild of 0.8 miles each of 115 kV Sections 60 and 88 AC Transmission Lines outside of the Coopers Mills Road Substation;

- Partial rebuild of 0.3 miles of 345 kV Section 392 AC Transmission Line between the Coopers Mills Road Substation and the Maine Yankee Substation and approximately 3.5 miles of reconductor work on existing double circuit lattice steel towers outside of the Maine Yankee Substation;

- Partial rebuild of 0.3 miles of 345 kV Section 3025 AC Transmission Line between the Coopers Mills Road Substation and the Larrabee Road Substation; and

- Partial Rebuild of 0.8 miles of 34.5 kV Section 72 AC Transmission Line outside of the Larrabee Road Substation.

2. Substation Equipment

- Replace existing Larrabee Road 345/115 kV 448MVA autotransformer with a 600MVA autotransformer;

- Additional 345 kV AC Transmission Line Terminal at the existing Maine Yankee Substation;

- Additional 345 kV AC Transmission Line Terminal and 115 kV switch replacements at the existing Surowiec Substation;

- 115 kV switch and bus wire replacements at Crowley's Substation;

- New 345 kV Fickett Road Substation with 345 kV +/-200MVAR Static Compensator (STATCOM);

- Additional 345 kV AC Transmission Line Terminal and additional 345 kV +/-200MVAR STATCOM (+/-400MVAR total with the +/-200MVAR existing) at the existing Coopers Mills Road Substation; and

- Additional 345/115 kV 448MVA Autotransformer, associated 115kV buswork and terminate existing 115 kV Sections 164, 164A, and 165 into 3 new breaker-and-a-half bays at the existing Raven Farm Substation.

The NECEC's proposed route is on private land that CMP owns or controls, including existing corridors for more than half its length. The proposed corridor for the new HVDC transmission line portion of the NECEC extends approximately 145.3 miles

from the Québec-Maine border at Beattie Township, in northern Franklin County, to the Larrabee Road Substation in Lewiston. Additionally, the Project includes upgrades to existing AC network facilities in various locations on CMP's existing transmission system.

The northern portion of the HVDC line is proposed to be built in currently undeveloped corridor primarily traversing commercial forest land, and the remainder of the corridor will be built within the undeveloped width of existing transmission corridors. The corridor begins in western Maine in Beattie Township (Franklin County) and extends southeast for about 4½ miles across Beattie Township, touches the southwest corner of Lowelltown Township (Franklin County) and then extends easterly about 27 miles across Skinner Township (Franklin County), then across Appleton Township, Raytown Township, Hobbstown Township, Bradstreet Township, and across the southwest corner of Parlin Pond Township (all in Somerset County). From that point, the corridor crosses onto Johnson Mountain Township extending southerly about 6½ miles over the approach to Coburn Mountain and into the valley between Coburn Mountain and Johnson Mountain and then turning east for about 2½ miles to the U.S. Route 201. Between the border and U.S. Route 201, the corridor is a 300-foot wide parcel.

The 300-foot wide corridor continues south across West Forks Plantation about 4¾ miles to the Kennebec River and the West Forks Plantation/Moxie Gore line (all in Somerset County). From the Kennebec River, the 300-foot wide corridor extends about 49 miles southeast across Moxie Gore and the Forks Plantation to the intersection with an existing transmission corridor near the Lake Moxie Road. The remaining section of the NECEC will be constructed on the existing corridor.

The estimated cost of the NECEC is approximately $1 billion. As noted above, these costs will be paid for entirely by H.Q. Energy Services (U.S.) INC. (HQUS) and the MA EDCs.

D. Massachusetts RFP Process and Results

The NECEC is a component of a bid prepared jointly by CMP and Hydro Renewable Energy Inc. (HRE), an affiliate of Hydro- Québec, that was submitted in response to a Request for Proposals (RFP) issued by the MA EDCs pursuant to Section 83D of the 2008 Massachusetts Green Communities Act (Green Communities Act). Pursuant to the Green Communities Act, on March 31, 2017, NSTAR Electric Company d/b/a Eversource Energy (Eversource), Massachusetts Electric Company and Nantucket Electric Company d/b/a National Grid (National Grid) and Fitchburg Gas and Electric Light Company d/b/a Unitil (Unitil), in coordination with the Massachusetts Department of Energy Resources (DOER), issued an RFP seeking bids to provide incremental clean energy and associated environmental attributes for approximately 9.45 TWh annually under long-term contracts of 15-20 years. The RFP set a proposal due date of July 27, 2017.

Forty-six bid packages[2] were received on or by the due date, including joint bids submitted by CMP and HRE[3] offering two different NECEC configurations. Following an evaluation process by the MA EDCs and DOER, on January 25, 2018, an all-hydroelectric bid submitted by HRE and Northern Pass Transmission LLC (Northern Pass) was selected for contract negotiations. On February 1, 2018, the New Hampshire Site Evaluation Committee (NHSEC) denied the Northern Pass siting permit. On February 17, 2018, CMP was notified that the NECEC had been selected as the alternate winning bid.

The contractual arrangements underlying the NECEC include power purchase agreements (PPA) between HQUS (the successor to HRE) and each of the purchasing utilities in Massachusetts and transmission services agreements (TSA) between CMP and the MA EDCs and between CMP and HQUS. The PPAs and the TSAs were filed for approval with the Massachusetts Department of Public Utilities (DPU) on July 23, 2018.[4] The Massachusetts DPU proceedings are on-going. In addition, CMP filed the TSAs for approval by the Federal Energy Regulatory Commission (FERC) and, on October 19, 2018, the TSAs were accepted by FERC to become effective October 20, 2018.[5]

As shown in Figure II.1, the PPAs are for different amounts of capacity, totaling 1,090 MW of the 1,200 MW capacity of the NECEC, and all extend for a 20-year term.

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[2] The 83D bids can be viewed at https://macleanenergy.com/83d/83d-bids/.

[3] HRE was proposed as a new U.S. affiliate of Canadian-based Hydro-Québec created for purposes of the Section 83D RFP. Ultimately, Hydro-Québec decided to have its existing U.S. affiliate, HQUS, serve as the counterparty for the NECEC PPAs and TSAs.

[4] *Commonwealth of Massachusetts, Department of Public Utilities*, Petition of NSTAR Electric Company d/b/a Eversource Energy for Approval of Proposed Long Term Contracts for Clean Energy Projects Pursuant to Section 83D of An Act Relative to Green Communities, St. 2008, c. 169, as amended by St. 2016, c. 188, § 12, Docket No. D.P.U. 18-64; Petition of Massachusetts Electric Company and Nantucket Electric Company d/b/a National Grid for Approval of Proposed Long Term Contracts for Clean Energy Projects Pursuant to Section 83D of An Act Relative to Green Communities, St. 2008, c. 169, as amended by St. 2016, c. 188, § 12, Docket No. D.P.U. 18-65; and Petition of Fitchburg Gas and Electric Light Company d/b/a Unitil for Approval of Proposed Long-Term Contracts for Clean Energy Projects pursuant to Section 83D of An Act Relative to Green Communities, St. 2008, c. 169, as amended by St. 2016, c. 188, § 12, Docket No. D.P.U. 18-66. (MA EDC Petitions).

[5] *Central Maine Power Company, 165 FERC ¶ 61, 034 (2018).*

Figure II.1

Power Purchase Agreements				
Counterparties		**MW**	**Years**	**Reference**
HQUS	Eversource	579.3	1-20	NEXRE-002-006, Attachment 1
HQUS	National Grid	498.3	1-20	Exhibit NECEC-16
HQUS	Unitil	12.3	1-20	NEXRE-002-006, Attachment 2

As shown in Figure II.2, there are seven different TSAs with CMP, three corresponding to the capacity and term of the PPAs with the MA EDCs. Three additional TSAs correspond to the capacity of the PPAs with the MA EDCs, but are between CMP and HQUS for years 21-40 of the expected life of the NECEC line. The final TSA is a 40-year agreement between CMP and HQUS for the remaining 110 MW of the line.

Figure II.2

Transmission Services Agreements				
Counterparties		**MW**	**Years**	**Reference**
CMP	Eversource	579.3	1-20	Exhibit NECEC-17
CMP	National Grid	498.3	1-20	Exhibit NECEC-18
CMP	Unitil	12.3	1-20	Exhibit NECEC-19
CMP	HQUS	579.3	21-40	Exhibit NECEC-20
CMP	HQUS	498.3	21-40	Exhibit NECEC-21
CMP	HQUS	12.3	21-40	Exhibit NECEC-22
CMP	HQUS	110.0	1-40	Exhibit NECEC-23

The PPAs and TSAs contain customary commercial terms and conditions and include provisions specific to the Green Communities Act and Section 83D solicitation. Generally, the PPAs provide for the delivery of an aggregate of 9,554,940 MWh annually of incremental hydroelectric generation and related Environmental Attributes from HQUS delivered through the NECEC Transmission Line to the delivery point in Lewiston, Maine. Each PPA also includes a methodology by which baseline and incremental energy deliveries are calculated.[6] The PPAs also include provisions for reimbursement from HQUS for failure to meet delivery obligations. The PPAs do not

[6] Specifically, the baseline hydroelectric delivery volume in the National Grid PPA is based on an initial 9.45 TWh volume subject to certain potential adjustments, while the Eversource and Unitil initial annual volume is 3 TWh, adjusted only for *force majeure* events.

include an obligation on the part of HQUS to obtain a Capacity Supply Obligation (CSO) in the ISO-NE Forward Capacity Market (FCM). The TSAs provide the terms by which the MA EDCs will purchase firm transmission service from CMP for the delivery of energy into New England over the NECEC line. Commercial operations under both the PPAs and the TSAs is expected to be no later than December 2022.[7]

III. PROCEDURAL BACKGROUND

A. Petition

On September 27, 2017, CMP filed its Petition for a CPCN, pursuant to 35-A M.R.S. § 3132(6) and Chapter 330 of the Commission Rules, to construct the NECEC, an HVDC transmission line from the Maine-Québec border at Beattie Township to Lewiston, Maine that would be capable of delivering 1,200 MW of electricity from Québec to the ISO-NE grid (CMP Petition).

On October 3, 2017, the Hearing Examiners issued a Notice of Proceeding that provided all interested persons with the opportunity to file a petition to intervene in this matter on or before October 13, 2017.

B. Intervention

The Commission received the following timely-filed petitions to intervene that were granted by the Hearing Examiners: The Office of the Public Advocate (OPA), the Industrial Energy Consumer Group (IECG), the Conservation Law Foundation (CLF), Ms. Dorothy Kelly, the Maine Renewable Energy Association (MREA), the Natural Resources Counsel of Maine (NRCM), and Western Mountains and Rivers Corporation (WM&RC).

Throughout the proceeding, the Commission also received numerous late-filed petitions to intervene. The Hearing Examiners granted all such requests for intervention on either a mandatory or discretionary basis by procedural orders dated November 27, 2017; March 28, 2018; April 27, 2018; August 28, 2018; September 6, 2018; October 2, 2018; October 11, 2018; October 15, 2018; and October 29, 2018. The intervenors in this proceeding that submitted late-filed petitions to intervene are the Governor's Energy Office (GEO), NextEra Energy Resources, LLC (NextEra), RENEW Northeast, Inc. (RENEW); Calpine Corporation, Vistra Energy Corporation (formerly known as Dynegy Inc.), and Bucksport Generation LLC (Calpine, Vistra, and Bucksport hereinafter collectively referred to as "GINT"; the Acadia Center; Friends of Maine Mountains (FMM); ReEnergy Biomass Operations LLC (ReEnergy); International Brotherhood of Electrical Workers Local Union 104 (IBEW); City of Lewiston (Lewiston); Town of Caratunk (Caratunk); Maine Chamber of Commerce (Chamber); Town of Farmington; Greater Franklin Development Council (GFDC); Trout Unlimited; Former Senator

[7] MA EDC Petitions, Joint Direct Testimony of Jeffery S. Waltman, Timothy J. Brennan and Robert S. Furino, July 23, 2018 at 15, 36-37.

Thomas Saviello; Darryl Wood; Town of Alna; Town of Wilton; Town of New Sharon; Old Canada Road National Scenic Byway, Inc. (Old Canada Road); Town of Jackman; and Terry Brann.

C. Testimony, Discovery, Hearings

A variety of witnesses testified on behalf of CMP and intervenors in this proceeding. Written discovery was conducted and technical conferences were held after every phase of testimony.

The following prefiled testimony was submitted:

On January 26, 2018, Ms. Kelly submitted intervenor testimony.

On April 1, 2018, Ms. Kelly submitted additional intervenor testimony.

On April 30, 2018, GINT submitted direct intervenor testimony from Tanya L. Bodell, William S. Fowler, and James M. Speyer; NextEra submitted intervenor testimony from Christopher Russo and Stephen Whitley; and RENEW submitted intervenor testimony from Francis Pullaro.

On May 21, 2018, the Commission Staff filed a London Economics International (LEI) Report (LEI Report) on electricity market and macroeconomic benefits of the NECEC.

On July 13, 2018, CMP filed Rebuttal Testimony from Thorn Dickinson, Eric Stinneford, and Bernardo Escudero (Business and Policy Panel) (2) Chris Malone, Scott Hodgdon, and Justin Tribbet (Transmission Planning and Engineering Panel); and (3) Daniel Peaco, Douglas Smith, and Jeffrey Bower of Daymark Energy Advisors (Daymark).

On August 18, 2018, GINT submitted Surrebuttal Testimony of Tanya L. Bodell and William S. Fowler; and NextEra submitted Surrebuttal Testimony of: (1) Christopher Russo; (2) Robert Stoddard; and (3) Stephen Whitley, Dan Mayers, and Francis Wang.

On September 10, 2018, the Commission Staff submitted a memo prepared by LEI (LEI MOPR Memo) in response to the NextEra Surrebuttal Testimony regarding the Minimum Offer Price Rule (MOPR).

The Commission held evidentiary hearings in this matter on October 19, 2018 (LEI) and on October 22, 2018 (CMP Transmission Planning and Engineering Panel and NextEra witnesses Whitley, Wang and Mayer).

On October 26, 2018, at the request of the intervenors, the Hearing Examiners suspended the remaining evidentiary hearings until January 2019 to allow the Commission Staff and parties additional time to review and analyze the documents that CMP produced in response to ODR-014-004.

On December 10, 2018, GINT filed Supplemental Testimony from Tanya Bodell and William Fowler regarding the MOPR analysis. NextEra also filed Supplemental Testimony from Christopher Russo and LEI filed a Supplemental MOPR Memo.

The Commission held the remaining evidentiary hearings on January 8, 2019 (GINT witnesses Tanya Bodell and James Speyer); January 9, 2019 (CMP Business and Policy Panel witnesses Thorn Dickinson, Eric Stinneford and Bernardo Escudero); January 10, 2019 (CMP Transmission Planning and Engineering witnesses Christopher Malone, Scott Hodgdon and Justin Tribbet, and Daymark witnesses Daniel Peaco, Douglas Smith, and Jeffrey Bower); and January 11, 2019 (NextEra witnesses Christopher Russo and Robert Stoddard; and GINT witness Tanya Bodell).

The Commission convened three public witness hearings, each of which were noticed in advance by procedural order. The Commission held the first two public witness hearings on September 14, 2018 in Farmington and The Forks Plantation. The Commission held the third public witness hearing on October 17, 2018 at the Commission's offices in Hallowell. A total of 116 witnesses testified at these three public witness hearings. Twenty witnesses testified in support of the NECEC, 93 spoke in opposition to the Project, and three witnesses testified neither for nor against the Project.

D. Briefs and Public Comments

On February 1, 2019, CMP, OPA, IECG, GINT, NextEra, CLF, NRCM, Acadia Center, Caratunk, Lewiston, IBEW, Chamber, Ms. Kelly, RENEW, and WM&RC filed initial briefs and on February 13, 2019, CMP, OPA, IECG, GINT, NextEra, Caratunk, and Ms. Kelly filed reply briefs.

In their initial briefs, CMP, IECG, OPA, Chamber, Lewiston, IBEW, and WM&RC argue that the Commission should find a public need for the NECEC and issue a CPCN. These parties argue that the NECEC will lower regional energy and capacity costs, provide needed infrastructure to enhance the resilience of the grid, result in the export of clean hydropower generation from Québec into New England, and provide economic benefits through increased tax revenue and employment. The IECG and OPA's support for the Project is conditioned on CMP transferring the NECEC into an affiliate, or special purpose entity (SPE) to construct, own and operate the NECEC line and that Maine ratepayers be held harmless from the prior inclusion of costs arising from NECEC in regional or local transmission rates.

GINT, NRCM, NextEra, Caratunk, RENEW, and Ms. Kelly oppose the approval of the Project, arguing that CMP has not satisfied its burden to demonstrate that there is a public need for the NECEC. These intervenors argue that the NECEC is about an environmental policy initiated by another state (Massachusetts); it will not result in significantly lower electricity rates; it will not reduce GHG emissions, and could even result in increased emissions; its design will discourage the development of Maine-based wind and solar renewable generation; and it will permanently damage scenic,

historical, and recreational values in western Maine and result in a substantial loss of tourism. RENEW states that any approval of the Project should be conditioned on CMP increasing the transfer capability on the Surowiec-South interface.

CLF and Acadia Center argue that the Commission should require CMP to commit to a significantly more robust Project benefits package that includes substantial financial, resource and planning commitments that will, among other things, advance Maine's renewable energy goals, Maine's economy, and Maine's public health. Specifically, the Commission should require the Project to mitigate potential impacts on existing and future Maine-based renewables and to do more to advance the public health in Maine, including substantial financial contributions toward the decarbonization and electrification of Maine's transportation and heating sectors, including toward the expansion of electric vehicle and electric heat pumps.

In addition to the party arguments presented in the briefs, the Commission received over 1,350 public comments. Most of the public comments oppose the NECEC, primarily on the grounds the Project will result in irreparable harm to the environment and scenic values of western Maine, harm to wildlife, and negative impacts on regional tourism.

E. Stipulation

On February 21, 2019, CMP filed a Stipulation and supporting memorandum in this case. The Stipulation is supported by OPA, GEO, IECG, CLF, Acadia Center, WM&RC, Lewiston, the Chamber, IBEW, and FMM. The following parties oppose the Stipulation: NextEra; Ms. Kelly; GINT; NRCM; RENEW; MREA; ReEnergy; Caratunk; Former Senator Thomas Saviello, the Town of Wilton, and Old Canada Road.

On a February 21, 2019, a Procedural Order was issued that provided parties an opportunity to provide written comment on the Stipulation. Written comments were filed by GFDC, FMM, Caratunk, IBEW, NRCM, the Chamber, RENEW/MREA, Ms. Kelly, ReEnergy, CLF/Acadia Center, IECG/OPA, GEO, GINT, and Old Canada Road. A hearing was held on the Stipulation on March 7, 2019.

F. Examiners' Report

On March 29, 2019, an Examiners' Report was issued which contained Staff's recommendations on the issues in this proceeding. Exceptions or comments on the Examiners' Report were filed on April 8, 2019 by the following parties: ReEnergy, IECG, GINT, NRCM, WM&RC, Caratunk, CMP, NextEra, and Ms. Kelly.

IV. STATUTORY REQUIREMENTS

The governing statute in this proceeding is Title 35-A, Section 3132. This Section states that "a person may not construct any transmission line … unless the commission has issued a certificate of public convenience and necessity approving construction." Section 3132(6) requires that, in its Order, the Commission "shall make

specific findings with regard to the public need for the proposed transmission line." The Section also states that the Commission "shall make specific findings with regard to the likelihood that nontransmission alternatives can sufficiently address the identified public need over the effective life of the transmission line at lower total cost."

Specifically, Section 3132(6) requires that:

> In determining public need, the commission shall, at a minimum, take into account 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.

Chapter 330 of the Commission's Rules, Section 9(B), specifies that a "public need" is established upon a determination that "ratepayers will benefit by the proposed line" taking into account the statutory criteria cited above.

In recognition of the unique nature of this proceeding, the Hearing Examiners, on January 14, 2019, issued a Procedural Order identifying several specific legal issues for the parties to address in post-hearing briefs. The Commission discusses these legal issues and various requirements of Section 3132(6) below. [8]

A. Public Need

As stated above, Section 3132(6) provides, in part, that the Commission shall make specific findings with regard to the public need for the proposed transmission line and, if the Commission finds that a public need does exist, it must issue a CPCN. In determining public need, the Commission is directed to consider a number of factors. However, the terms "public need" and "public convenience and necessity" are not expressly defined in the statute.

In a typical CPCN proceeding, a Transmission and Distribution (T&D) utility identifies a reliability need and proposes a transmission project to address that need. The Commission then examines the extent of the reliability need and whether the proposed project is the lowest-cost means to address what is a "public need." In contrast, the NECEC is not proposed to address an identified reliability need, but rather to import power from Québec through Maine to meet a public policy of Massachusetts.

The January 14, 2019 Procedural Order asked the parties to address:

[8] The issues identified in the January 14, 2019 Procedural Order included the applicability of Title 35-A, Section 707 and Chapter 820 of the Commission's Rules with respect to housing the project in a separate corporate affiliate and good will payments. Provisions included in the Stipulation address these matters; accordingly, the Commission does not address these legal issues in this Order.

How should the "public need" standard pursuant to section 3132(6) be considered and evaluated in the context of the NECEC as opposed to the more typical reliability transmission project?

1. Positions of the Parties

CMP, IECG, and WM&RC argue that, in determining whether the public need has been met, the statute does not preclude the Commission from considering the impact of these various factors on the broader region, including other New England states or needs specified by the Massachusetts solicitation. CMP Initial Br. at 8-15; IECG Initial Br. at 11-12; WM&R Initial Br. at 4-5. CMP, IECG and IBEW argue that "public need" is analogous to a "public benefit" or "public welfare," which is a flexible concept that requires a balancing of the benefits of the Project against its costs and risks. CMP Initial Br. at 5-8; IECG Initial Br. at 11-14; IBEW Initial Br. at 2-3. The OPA takes the position that the term "public need" is broad enough to encompass funds provided to Maine communities and citizens to mitigate any harms that could flow from the construction and operation of the NECEC. OPA Initial Br. at 19-22.

GINT and Caratunk argue that the Commission should only focus on whether the NECEC meets a Maine public need in that it must be assumed that the Maine law governing the approval of electric transmission projects in Maine was not designed to accommodate a public need in another state. GINT Initial Br. at 73-76; Caratunk Initial Br. at 7-9. NextEra argues, that, in interpreting public need, the Commission should not approve the NECEC if it conflicts with one or more of the statutory criteria. NextEra Initial Br. at 2-4.

2. Discussion

Section 3132 does not define what constitutes a "public need." However, the meaning of public need in the context of a public convenience and necessity proceeding is established in case law. The Law Court has recently construed "public convenience and necessity" as being synonymous with "public benefit" or "public interest." *Enhanced Communications of Northern New England, Inc. v. Public Utilities Commission*, 2017 ME 178, at fn. 4; *See also Zachs v. Department of Public Utilities*, 547 N.E.2d 28, 32 (Mass. 1989) (holding that the phrase "public convenience and necessity" is a term of art that stands for the general notion of public interest).

Thus, the "public need" standard in this case is essentially a general standard of meeting the public interest. A determination of "public interest" generally requires a careful weighing of the benefits and costs of the Project, including those that are quantifiable and those that are not. With respect to whether the "public" includes regions beyond Maine, the Commission interprets the statutory public interest standard to pertain to Maine. In this case, the standard involves consideration of the benefits and costs of the NECEC to Maine's ratepayers and residents, rather than its role in meeting energy policies in another state. Finally, the Commission disagrees that every factor identified in the statute for consideration by the Commission must be satisfied or

promoted for a "public need" determination to be made, as long as, on balance, the overall benefits of the Project outweigh the costs.

B. Nontransmission Alternatives (NTA)

Title 35-A, Section 3132(2-D) requires that the Commission "consider the results of an investigation by an independent 3rd party… of nontransmission alternatives to construction of the proposed transmission line." In addition, Section 3132(6) states that the Commission "shall make specific findings with regard to the likelihood that nontransmission alternatives can sufficiently address the identified public need over the effective life of the transmission line at lower total cost."

In the January 14, 2019 Procedural Order, the Hearing Examiners asked parties to address:

> *How should section 3132(2-D), which states that the Commission shall consider the results of an independent third-party investigation of nontransmission alternatives to the proposed transmission project, be considered in the context of the NECEC as opposed to a reliability transmission project?*

1. Positions of the Parties

CMP, IECG, OPA, Acadia Center, CLF, and WM&RC argue that the statutory provisions were drafted under an expectation that a proposed transmission line is being constructed either for reliability purposes or to provide Maine with energy, as historically has been the case. CMP Initial Br. at 166-169; IECG Initial Br. at 17-18; OPA Initial Br. at 23-24; Acadia Center Initial Br. at 4; Kelly Initial Br. at 8-9, NextEra Initial Br. at 6-8. In this case, the public need is to deliver hydroelectric energy from Québec to Massachusetts. In addition, these parties note that, because the NECEC will not be paid for by Maine ratepayers, there cannot be a lower-cost NTA alternative.

NRCM, NextEra, GINT, and Ms. Kelly argue that nothing in the statute exempts a project with no reliability component, like the NECEC, from the requirement of a CPCN applicant to conduct an NTA investigation. NRCM Initial Br. at 5-7; NextEra Initial Br. at 6-8; GINT Initial Br. at 76-78; Kelly Initial Br. at 8-9. Therefore, an investigation must be conducted in this proceeding to determine whether an NTA can economically and reliably address the public need identified for the NECEC.

2. Discussion

The Commission concludes that, because there is no NTA that can feasibly substitute for the NECEC, the statute does not require that an independent analysis of the costs of potential NTAs be conducted. The purpose of the NECEC is to transmit hydroelectric generation from Québec to New England to meet the requirements of the MA EDCs. Thus, no NTA, whether large-scale generation, distributed generation, demand response resource, or conservation alternative, can replace the NECEC. A

contrary interpretation of the statute that would require an NTA analysis would lead to absurd results and cannot be the intent of the Legislature. *Town of Madison, Dep't. of Elec. Works v. Pub. Utils. Comm'n*, 682 A.2d 231, 234 (Me. 1996) (plain meaning will be applied so long as it does not lead to an absurd, illogical, or inconsistent result).[9]

This conclusion is consistent with the Commission's decision in Docket No. 2010-00180 that approved a stipulation and issued a CPCN allowing CMP to construct a transmission line reinforcement, despite the absence of an NTA analysis. In that proceeding, the Commission held that an NTA was "not feasible," because it required adding load behind an identified export constraint, and CMP could not "force the location of customers." *Central Maine Power Company and Public Service Company of New Hampshire, Request for Certificate of Public Convenience and Necessity for the Somerset County Reinforcement Project Consisting of the Construction of Approximately 39 miles of 115 kV Transmission Lines ("Section 241"),* Docket No. 2010-00180, Order Approving Stipulation at 10-11 (Aug. 15, 2011).

C. Public Health and Safety, Scenic, Historic and Recreational Values

The January 14, 2019 Procedural Order asked parties to address the following issue:

> *Based upon the assumption that the Legislature did not intend that the Commission duplicate the functions of the Department of Environmental Protection (DEP), how should the requirement in section 3132(6) that the Commission consider "public health and safety, scenic, historic and recreational values" be interpreted and applied? Is the interpretation and application of this requirement different in the context of the NECEC as opposed to a reliability transmission project?*

1. Positions of the Parties

CMP, IECG, WM&RC, and IBEW argue that the Commission should defer to the DEP and the LUPC, with respect to issues relating to public health and safety, scenic, historic and recreational values, and that approval may be conditioned on future receipt of all necessary permits and approvals from such agencies. CMP Initial Br. at 16-25; IECG Initial Br. at 14-15; WM&R Initial Br. at 14-15; IBEW Initial Br. at 3-4. Sections 3132(6), (7), and (8) provide the Commission an opportunity to consider the findings of the DEP with respect to any modifications ordered by the DEP and contemplates an iterative process, if necessary, in which the Commission would review the DEP's findings if it imposes additional costs on the project. In this manner, redundant and potentially inconsistent project reviews by State agencies can be avoided.

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[9] The Commission notes that, even if an NTA could meet the identified public need, such an alternative could not do so at a lower total cost to Maine customers because Maine customers will not pay for the NECEC.

NRCM, CLF, Acadia Center, NextEra, GINT, and Caratunk argue that the Commission does not have to duplicate the specific responsibilities of DEP and LUPC and is the only regulatory agency that can adequately consider the overall impacts to Maine's "public health and safety, scenic, historic and recreational values" in the context of a broader cost-benefit analysis. NRCM Initial Br. at 4-5; CLF Initial Br. at 10-13; Arcadia Center Initial Br. at 3; NextEra Initial Br. at 4; GINT Initial Br. at 74-76; Caratunk Initial Br. at 9-11. DEP and LUPC only focus on their specific statutory criteria, which do not include energy market issues and ratepayer impacts. Moreover, there is no language in the CPCN statute that authorizes the Commission to delegate its consideration of these statutory criteria to DEP. Finally, the Commission, the DEP and LUPC are charged with administering different statutes, and each agency is equipped to administer its duties with different standards of review.

2. Discussion

In the typical reliability project, the Commission would first consider whether there is a public need for the proposed transmission line. Upon such a finding, the Commission would then review the other statutory considerations, including the need to mitigate impacts on such things as public health and safety, scenic, historic, and recreation value.

To interpret the statutory language in the context of the current proceeding, and upon the assumption that the Legislature did not intend duplication among State agencies, the Commission examines the statutory authority and functions of Maine's DEP and LUPC. This examination reveals different types of reviews undertaken by the various agencies. While the Commission's review of these statutory criteria is in the context of whether the utility has met its burden of showing there is a public need for the project, DEP's review of similar criteria is different in that it considers whether the utility has shown that its project (1) does not unreasonably interfere with existing scenic, aesthetic, and recreational uses, among others and (2) whether the utility has shown that it "has made adequate provision for fitting the development harmoniously into the existing natural environment and that the development will not adversely affect existing uses, scenic character . . . ." 38 M.R.S §§ 480-D, 484. The LUPC's role is to determine, among other things, whether there is no alternative site which is both suitable to the proposed use and reasonably available to the applicant and that the use can be buffered from those other uses and resources for which it is incompatible.

In addition, the statutory scheme generally contemplates that the Commission's decision would occur prior to that of the DEP or LUPC. Thus, the overall statutory scheme can be read to contemplate that if the Commission does not grant the CPCN, such a determination eliminates the need for the DEP or LUPC to conduct their reviews. Accordingly, upon reviewing the applicable statutes together, the Commission finds that the evaluation of the NECEC by the Commission, the DEP, and LUPC are complementary and the evaluation of impacts, such as scenic and recreational values, can be accomplished without significant duplicating or overlapping reviews.

Thus, the Commission concludes that it is not appropriate for the Commission to defer to other agencies. Accordingly, the Commission must consider the impact of the NECEC on public health and safety, scenic, historic, and recreation values as part of its overall assessment of whether the NECEC is in Maine's public interest.

D. State Renewable Energy Generation Goals

The January 14, 2019 Procedural Order asked parties to comment on the following:

How should the requirement in section 3132(6) that the Commission consider "state renewable energy goals" be considered in the context of the NECEC?

- *Referring to the definitions of "renewable capacity resource" in section 3210(2)(B-3) and of "renewable resource" in section 3210(2)(C), should the hydroelectric generation to be transmitted over the NECEC be considered "renewable" for purposes of promoting "state renewable energy goals" under Maine law?*

- *Referring to the "State's goals for reduction of greenhouse gas emissions within the State" contained in Title 38, section 576, is this provision relevant to the consideration of the NECEC proposal and the associated hydroelectric power located in Canada?*

- *Are there other Maine statutory provisions that are relevant to the Commission's consideration of "state renewable energy goals" in this proceeding?*

1. Positions of the Parties

CMP argues that, although the NECEC-enabled generation does not fall within the definition of a renewable resource or a new renewable capacity resource under Title 35-A, because the NECEC energy will come primarily from dams with more than 100 MW of production capacity, the Project will provide many of the same benefits as hydroelectric power that satisfies Maine's definition of a renewable resource. CMP Initial Br. at 115-125. CMP asserts that the NECEC is a substantial source of clean, reliable baseload hydroelectric generation that diversifies the sources of electricity production for all of New England, including Maine, and reduces the region's and Maine's dependence on natural gas-fired generation. CMP argues, further, that the Commission may consider the extent to which the proposed Project will facilitate Maine's achievement of GHG emissions reduction targets set forth in 38 M.R.S., Section 576 (Climate Change Act). CMP Initial Br. at 163-165.

NRCM, GINT, Caratunk, and Ms. Kelly argue that the Commission should not consider hydroelectric generation transmitted over the NECEC from Québec to

Massachusetts as a renewable resource for the purposes of promoting "state renewable energy goals," because it would not qualify as a "renewable capacity resource" under Section 3210(2)(B-3) or as a "renewable resource" under Section 3210(2)(C). NRCM Initial Br. at 4-7; GINT Initial Br. at 78-80; Caratunk Initial Br. at 17-19; Kelly Initial Br. at 9-12. In both instances qualifying generation is limited to capacity below 100 MW for hydroelectric generators, while most of Hydro Québec's generation portfolio exceeds 100 MW. In addition, these parties argue that consideration of "state renewable energy goals" requires that the Commission take into account the goals as expressed in the Maine Wind Energy Act and the Maine Solar Energy Act, arguing that the NECEC would make it more difficult for the goals of these Acts to be achieved.

2. Discussion

Title 35-A, Section 3210 governs Maine's renewable portfolio standards (RPS). Section 3210(1) states:

> In order to ensure an adequate and reliable supply of electricity for Maine residents and to encourage the use of renewable, efficient and indigenous resources, it is the policy of this State to encourage the generation of electricity from renewable and efficient sources and to diversify electricity production on which residents of this State rely in a manner consistent with this section.

The statute specifies "hydroelectric generators" as a "renewable resource," but limits the size of any RPS qualifying resource[10] (except for wind power) to 100 MW or less. Title 35-A M.R.S. § 3210(2)(C)(f). Chapters 3-A (Climate Change) and 3-B (Regional Greenhouse Gas Initiative) of Title 38 address State policies and programs specifically related to GHG emissions. Chapter 3-A establishes GHG reduction targets for the State, and Chapter 3-B authorizes Maine's participation in the Regional Greenhouse Gas Initiative (RGGI), which is a multi-state cooperative effort to cap and reduce CO_2 emissions from electric generators. Taken together, these statutory provisions include various renewable energy related goals, including supply diversity and reliability, and GHG emission reductions.

In addition, the Legislature has found that in-state hydropower makes a "significant contribution to the general welfare of the citizens of the State" in that it is a "large-scale energy resource which does not rely on combustion of a fuel, thereby avoiding air pollution, solid waste disposal problems and hazards to human health from emissions, wastes and by-products." 38 M.R.S. § 631(1). For these reasons, the Commission finds that the promotion of incremental hydroelectric generation for import into the New England market supports the "state renewable energy generation goals" as set forth in Section 3132(6). As enumerated in the statutory provisions discussed above, these goals include promoting adequate, reliable, and diverse sources of electricity supply and GHG emission reductions.

[10] The fact that hydropower facilities larger than 100 MW do not qualify for Maine's RPS does not mean that they are not producing energy that is renewable.

The Commission also concludes that both the Maine Solar Energy Act, 35-A M.R.S. § 3472 *et. seq*. and the Maine Wind Energy Act, 35-A M.R.S. § 3402 *et. seq*., are relevant to the Commission's consideration of "state renewable energy goals" in this proceeding. The Maine Solar Energy Act advances the goals of "[e]nsuring that solar electricity generation, along with electricity generation from other renewable energy technologies, meaningfully contributes to the generation capacity of the State through increasing private investment in solar capacity in the State." In furtherance of these and other goals, the Act creates a State policy of "encourag[ing] the attraction of appropriately-sited development related to solar energy generation, including any additional transmission, distribution and other energy infrastructure needed to transport additional solar energy to market . . . for the benefit of all ratepayers." Similarly, the Maine Wind Energy Act creates a state policy of "encourag[ing] the attraction of appropriately sited development related to wind energy" and establishes Maine's in-state wind goals of at least 3,000 MW of installed wind by 2020, and 8,000 MW of installed wind by 2030.

Thus, the question of whether the NECEC facilitates or hinders solar or wind resource development in Maine is an issue when considering whether the NECEC is in the overall public interest.

V. ANALYSIS OF NECEC IMPACTS

A. Electricity Market Price and Ratepayer Impacts

1. Overview

Based on the record in this proceeding, the Commission finds that the NECEC will result in substantial benefits to Maine electricity customers because of the effect it will have on reducing energy and capacity prices in the wholesale market. These market price benefits accrue to Maine customers due to the reductions in wholesale prices that will result from the delivery over the NECEC from Hydro Québec of a substantial amount of energy and capacity into the Maine Zone at the Larrabee Road Substation in Lewiston. As a contractual matter, the NECEC will deliver energy to the MA EDCs. As a *physical* matter, however, the beneficial effects of that energy will be realized directly by Maine consumers through lower electricity supply prices.

As discussed below, the record demonstrates that market price reduction benefits will result from the NECEC, notwithstanding the divergence among the experts and the parties with respect to their magnitude. Moreover, the record demonstrates that benefits will flow to Maine for a period of at least 20 years.

In addition, the Commission finds that the NECEC will enhance transmission reliability, and supply reliability and diversity in the region, and serve as a hedge against high and volatile natural gas prices.

2. Energy Market Impacts

a. Overview

The evidence in the record in this proceeding demonstrates that the NECEC will result in a reduction to wholesale energy prices in Maine and across the New England region. The wholesale energy benefits in Maine, as estimated by the Commission's expert, LEI, and CMP's expert, Daymark,[11] range from $14 million to $44 million dollars per year in nominal dollars, and the estimated net present value (NPV) benefits over the first 15 years of NECEC operations range from $122 million to $384 million (2023$). LEI Report Figure 4.

b. Description of the Wholesale Energy Market

Maine is part of a regional electricity system and market operated and administered by ISO-NE. The rules of the energy market are set forth in ISO-NE Market Rule 1.[12] Energy prices in the ISO-NE market, referred to as "locational marginal prices" or "LMP", are comprised of three components: an energy component, a loss component, and a congestion component. Suppliers of energy to the market are paid the LMP applicable to their location, or "node", and entities that serve customer loads are charged the LMP applicable to the locational "zone" within which the load is located.

As described by the ISO-NE:

> Locational marginal pricing is a way for wholesale electric energy prices to reflect the value of electric energy at different locations, accounting for the patterns of load, generation, and the physical limits of the transmission system….
>
> An LMP is the price for electric energy at each load zone, external interface with neighboring regions, and the Hub that reflects (1) the operating characteristics of, and (2) the major constraints on, the New England transmission system at each area, as well as (3) the losses resulting from physical limits of the transmission system. The energy component of all LMPs is the price for electric energy at the "reference point," which is the load-weighted average of the system node prices…

[11] GINT provided an analysis of the energy market benefits of the NECEC using Calpine's UPLAN model during, but only for a single year of operation, 2023. Bodell Dir. Test. at 22.

[12] Information relating to ISO-NE's Market Rule 1 can be found at https://www.iso-ne.com/participate/rules-procedures/tariff/market-rule-1

> The congestion component of a nodal LMP reflects the marginal cost of congestion at a given node or external node relative to the load-weighted average of the system node prices. The congestion component of a zonal price is the weighted average of the congestion components of the nodal prices that comprise the zonal price. The congestion component of the Hub price is the average of the congestion components of the nodes that comprise the Hub.
>
> The loss component of an LMP at a given node or external node reflects the cost of losses at that location relative to the load-weighted average of the system node prices. The loss component of a zonal price is the weighted average of the loss components of the nodal prices that comprise the zonal price. The loss component of the Hub price is the average of the loss components of the nodes that comprise the Hub.[13]

Because prices paid to a generator/supplier for energy reflect the LMP at the generator's physical point of delivery, or node, they convey to the generator the value of its energy taking into account the effects of energy delivered at that node on losses and congestion. In particular, if delivery of energy at a given node would increase congestion and losses, the LMP paid to the supplier for that energy would be reduced to reflect those effects. The intent of the three-part LMP, at least in part, is to send a price signal to incentivize generators to locate where it is efficient to do so.

As noted by GINT witness Ms. Bodell:

> …The point of these prices as calculated by ISO New England is to send a price signal. And the price signal, if it's lower, says don't build here because we don't need you as much, and if it's higher, it says we'd like you to build here, with respect to generation. And it can send the same type of signal with respect to load if you're passing through the price. So, the price signal that ISO New England calculates is meant to send the signal to create economic buildout where it's needed.
>
> …
>
> Generally, the highest prices occur at load centers. So, I would expect Boston would have among the highest because it's hard to get energy in there….

Hearing Tr. at 125-6 (Jan. 8, 2019).

Thus, if there were no barriers to locating new sources of supply anywhere in New England, nor any practical considerations such as proximity to fuel sources (such as natural gas pipelines or, in the case of hydropower, water sources) then presumably

[13] Information relating to ISO-NE's Locational Marginal Pricing can be found at https://www.iso-ne.com/participate/support/faq/lmp

new power plants and other sources of supply would choose to locate at the nodes where LMPs are the highest and with the least negative congestion and loss effects. However, there are such barriers and practical factors that drive location decisions by generators. These considerations, together with the LMP price signal, influence where new plants will be sited. If a new supply source chooses to locate at a point that results, for example, in an increase to the loss component of the LMP, that does not by itself suggest the decision was not economically rational.

In this case, because the NECEC-enabled energy will be paid based on a contract price, rather than the LMP at Larrabee Road, the 83D RFP process and results may also bear on the economic rationality question. As discussed at the January 8, 2019 hearing, the NECEC was selected as part of competitive solicitation process in which more than 50 bids from 46 different bidders were received. Hearing Tr. at 129 (Jan. 8, 2019). The Commission presumes that the evaluation of the competing bids would have taken into account the relative economics of the various projects, including the energy value at the project's delivery node given that, at least with respect to the NECEC, is the energy market value the MA EDCs will realize. As noted above, although the LMP would be higher in load centers such as Boston, it would be difficult and expensive to actually site a new power plant in, or deliver energy to, those areas. Thus, in evaluating economic rationality, the analysis, either in the wholesale market or a competitive bid process, becomes one of tradeoffs among various factors. Finally, it should be noted that, from a consumer's point of view, lower zonal LMP's, *i.e*., more negative loss and congestion components, translate directly into lower prices for customers located in that zone.

c. Price-Taking Resources

A supplier bidding energy into the ISO-NE market will generally bid a price that reflects its marginal cost of production. Resources such as the NECEC, which have delivery obligations and are paid pursuant to a pre-established contract, or resources like hydropower that have a low marginal cost of production, have the economic incentive to bid a low or zero price with ISO-NE to ensure they will be dispatched. This type of resource is described as "price taking" in that the resource will commit to, or "take," the market clearing price, whatever it turns out to be when actually dispatched. Price-taking resources lower the energy market clearing price by displacing energy from more expensive units.

The NECEC is likely to be a price-taking resource. As noted by LEI: "LEI also assumed that the shippers on NECEC would offer as price takers in the wholesale energy market in order to fulfill their contractual obligations to Massachusetts." LEI Report at 18. By offering NECEC energy as a price-taking resource, HQUS can ensure that the NECEC energy will be selected before higher-priced resources.

d. Analysis in the Record and Positions of the Parties

As noted above, analyses of the effect of the NECEC on wholesale energy prices in Maine and the region were provided by Daymark and LEI.[14] Daymark's analysis, which was conducted using its AURORA production cost model, indicated that the import of energy at the full 1,200 MW capacity of the NECEC transmission line would reduce LMPs on average by $3.70/MWh. CMP Exh. NECEC 5 at 11. Daymark concluded that these price reductions would save Maine electricity customers $44 million per year relative to what customers would have paid but for the NECEC. *Id*. Daymark concluded, further, that the NECEC would provide a benefit of $496 million NPV (2023$) for Maine electricity customers over the first 20 years of the project. *Id*.

LEI's analysis of the energy market benefits of the NECEC, conducted for a 15-year period using LEI's proprietary production cost model POOLMod, also indicated savings for Maine electricity customers, albeit at a lower level than Daymark's. Specifically, LEI found that over the first 15 years of operation, the NECEC would yield wholesale energy cost reductions for Maine customers of about $14 million per year, which equates to an aggregate benefit of $122 million NPV (2023$) over this period. LEI Report at 31-32.

CMP asserts that the NECEC will lower wholesale electricity supply prices in Maine, and that this is consistent with Maine's policy to encourage the reduction of electricity costs for Maine customers. CMP Initial Br. at 29. CMP cites to the analyses of energy market price impacts on the record, including the single-year analysis of GINT, as evidence that the NECEC will reduce wholesale and retail electricity prices in Maine and throughout New England. *Id*. at 30. According to CMP, the models taken together delineate a potential range of energy price suppression benefits from the NECEC, with LEI on the low end at $13 million per year in retail energy price suppression benefits, GINT in the middle at $26-$36 million wholesale energy price suppression benefits for the year 2023, to Daymark on the high end at $44 million per year in wholesale energy price suppression benefits. *Id*. at 35. CMP disputes the claims of GINT and NextEra that NECEC will create material congestion in the ISO-NE wholesale energy market. *Id*. at 36-38. CMP argues, further, that the NECEC will mitigate the impacts of sustained natural gas price increases by inducing an average annual reduction of 54.2 million MMBtu of natural gas and provide a hedge against temporary increases in natural gas prices. *Id*. at 39-40.

The IECG states that there is no dispute in this proceeding that increasing the available supply of zero-bid energy into the ISO-NE market would provide energy market price benefits to Maine electricity consumers. IECG Initial Br. at 20. The IECG notes that, as a generation resource with no incremental fuel cost, HQ's hydroelectric power will be able to bid into the ISO-NE energy markets a price of zero, allowing it to collect the locational marginal price for its output in all hours that it supplies energy. In every hour that this occurs, the market clearing price will be lowered as the most

[14] GINT also conducted and analysis of energy market benefits of the NECEC using Calpine's UPLAN model. However, the analysis was conducted for only the first year of the NECEC operations.

expensive generation resource is replaced by a lower-cost generation resource as the unit that sets the market clearing price. The IECG notes, further, that because the market clearing price is paid to all successful bidders, regardless of the price that they themselves bid, this represents a price reduction for every kilowatt hour sold in such hours. *Id*. at 21.

The IBEW argues that the LEI estimates of energy and capacity market savings are based on extremely conservative assumptions, but provide additional corroboration of Daymark's conclusion that there are significant ratepayer savings that would be provided by the NECEC. IBEW urges the Commission to make such a finding. IBEW Br. at 3. The City of Lewiston argues that the NECEC will facilitate the transmission of up to 1,200 MW clean hydropower generation to the New England transmission grid for 40 years and help to lower electricity costs. Lewiston Initial Br. at 4. The Chamber notes that, although it supports the NECEC for a variety of reasons, the energy cost reduction benefits of the Project are particularly significant for Maine businesses that use a lot of electric energy and any prospective Maine business considering its energy costs. Chamber Initial Br. at 4. Acadia Center states the region will economically benefit from the NECEC through expected reductions in regional wholesale market prices. Acadia Center Initial Br. at 3. WM&RC also asserts that the NECEC will likely provide lower wholesale market prices. WM&RC Initial Br. at 11. Finally, the NRCM agrees that the NECEC will depress energy prices in Maine; however, NRCM asserts that the NECEC could increase congestion, making it more costly for Maine renewable generators to reach the market. NRCM Initial Br. at 17.

GINT argues there is no meaningful energy market price suppression benefit to ratepayers. GINT Initial Br. at 33. GINT bases this position on a number of different factors. First, natural gas price futures have decreased since the energy price impact analyses have been conducted. *Id*. at 34. Second, GINT asserts that, because there is no meaningful requirement for NECEC deliveries to be incremental, price suppression will be minimal. *Id.* at 35. GINT also argues that any energy market price reductions would be negated by increases to capacity market prices as generators submit higher capacity market bids in an effort to recover revenues needed to remain viable. *Id*. at 39. GINT asserts, further, that the NECEC will increase "wasteful" line losses and congestion to the detriment of Maine's existing and future generation base. *Id*. at 43. Finally, GINT argues that any energy market price suppression due to the NECEC could harm Maine generators, especially biomass and small hydropower plants. *Id*. at 59-60.

NextEra asserts any energy benefits from the NECEC are speculative and limited in time. NextEra Initial Br. at 19. According to NextEra, the flexibility of the contract delivery terms with the MA EDCs can affect when and how much energy flows over the NECEC, which in turn, impacts whether and how much of the claimed energy price suppression benefits will be realized. *Id*. at 21. Finally, because the analytical estimates of energy benefits extend to only the first 20 years of the contract, NextEra argues that any price suppression benefits from years 21–40 are only speculative. *Id*. at 24.

Caratunk argues that the NECEC will not do much if anything to lower costs for ratepayers. Caratunk Initial Br. at 4. Ms. Kelly cautions that there are no assurances that the NECEC will, in fact, lower costs for Maine ratepayers over the long term, and that the analyses conducted to estimate the benefits are based on assumptions. Kelly Initial Br. at 13.

e. Discussion

As noted above, HQUS has contractually committed to provide, and the MA EDCs have committed to purchase, 9.45 TWh of energy per year for 20 years to be delivered over the NECEC. Given the available capacity of the NECEC, this obligation will require energy to be delivered at a very high capacity factor. Stated another way, energy will have to be delivered in almost every hour of the year. To ensure that it meets its contractual obligations, HQUS can be expected to participate in the market as a price-taking resource, *i.e.*, submitting a low- or zero-price bid, and taking the clearing price in all hours. It is clear that the injection of such a large quantity of price-taking energy into the Maine Zone will have a materially beneficial effect on energy prices in Maine.

Although the magnitude of these benefits cannot be measured precisely, the LEI and Daymark analyses provide a credible range. As noted above, these analyses indicate wholesale market benefits of from $14 million per year (LEI) to $44 million per year (Daymark), with estimated NPV benefits ranging from $122 to $496 million (2023$).

With respect to the congestion issues raised by GINT and NextEra, the Commission finds that the record does not support a finding that the NECEC will result in a material increase in congestion in Maine. The analyses of both Daymark and LEI indicate only small increases in the number of hours that either the Surowiec-South or Maine-New Hampshire interface would be congested. Daymark Report at 25; LEI Report at 25. In addition, the GINT modeling indicated no congestion at the Surowiec-South interface and only modest congestion at the Maine-New Hampshire interface. Hearing Tr. at 127 (Jan. 8, 2019); Daymark Reb. Test. at 19. NextEra, based on its initial modeling, asserted that the NECEC would result in significant congestion. However, NextEra subsequently acknowledged errors in its modeling that render their results unreliable. Hearing Tr. at 7-55 (Oct. 22, 2018). Finally, the Commission notes that, to the extent the NECEC did result in increased congestion and/or losses in Maine, this would result in lower wholesale energy prices in the Maine Zone.

Finally, for the reasons discussed in Section V(A)(5) below, the Commission finds that the energy benefits resulting from the NECEC will not be offset by other factors, such as early retirement of other Maine generators.

3. Capacity

a. Overview

The evidence in the record also indicates that the NECEC will likely result in a reduction to wholesale capacity prices in Maine and across the New England region. The wholesale capacity market benefits in Maine, as estimated by the Commission's expert, LEI, and CMP's expert Daymark, range from $19 million to $27 million per year in nominal dollars, and the estimated NPV benefits over the first 15 years of NECEC operations range from $223 million to $292 million (2023$). LEI Report Figure 4. For the reasons discussed below, however, capacity market savings from the NECEC are less certain than those in the energy market.

As with the energy market, the capacity market benefits would accrue to Maine due to the substantial amount of capacity that could be delivered across the NECEC into Lewiston. Bringing such a large quantity of incremental capacity into the regional market will tend to lower prices, given the simple supply/demand balance in the region.

b. Description of Forward Capacity Market

The ISO-NE FCM is governed by ISO-NE Market Rule 1, Section 13.[15] Pursuant to the ISO-NE Rule, FCM auctions (FCA) are conducted each year to acquire capacity 3 years in advance of when it is to be delivered. Resources eligible to participate in the FCM include in-region generating plants and demand resources, and imports from other regions. Resources are awarded CSOs when their offer price clears the auction. Resources may exit the market and relieve themselves of their CSO by submitting de-list bids in subsequent auctions. Only new or de-listing resources may set the auction clearing price. All other resources are considered "Existing Resources" and "take" the FCM clearing price. Pursuant to the market rules, the NECEC would participate in the FCM as an "Elective Transmission Upgrade" (ETU) backed by a "New Import Capacity Resource."

As is clear from the record in this proceeding, the FCM rules are complicated, and how they would apply to the NECEC has been extensively debated by the experts and the parties. The three elements of the FCM rules that have been most debated are (1) the Qualification, (2) the MOPR, and (3) the Competitive Auctions for Supported Policy Resources (CASPR). Each of these is discussed in more detail below.

c. Qualification

Before participating in an FCA, a resource must go through a Qualification process administered by ISO-NE. With respect to the NECEC, which as noted above is both an Import and an ETU, Section 13.1.3 of the ISO market rules governs the Qualification process. First, the rules require that an ETU must be built to a higher interconnection standard than non-ETU resources. This higher standard, which is referred to as the Capacity Capability Interconnection Standard, or CCIS, is intended to ensure that capacity from an ETU can be delivered into the relevant zone without

[15] Information relating to ISO-NE's FCM can be found at https://www.iso-ne.com/participate/rules-procedures/tariff/market-rule-1.

relying on the system delivery capability being used by other resources in the zone that already have a CSO.[16] Second, with respect to a New Capacity Import, the resource must demonstrate the reliability of the generation source behind the import to qualify. This can be done by providing contracts for capacity for one or more years, demonstrating proof of ownership over one or more External Resources to back the Import, or ensuring that the capacity it supplies to the New England Control Area will not be recalled or curtailed to satisfy the load of the external Control Area, or that the external Control Area in which it is located will afford New England Control Area load the same curtailment priority that it affords its own Control Area native load.[17]

d. The Minimum Offer Price Rule (MOPR)

The ISO-NE Internal Market Monitor (IMM) oversees the FCAs to ensure they are conducted in a fair and competitive manner. Pursuant to the rules for new entrants, all offers of capacity that are below the Offer Review Trigger Price (ORTP) are subject to review by the IMM for consistency with the facilities' costs. This is known as the "MOPR."[18] The objectives of MOPR are to prevent the exercise of buyer-side market power and resulting capacity price suppression and to ensure that new resources are offered into FCM on a competitive basis. EXM Exh. 3 at 1.

The ORTP reflects the IMM's calculation of what a given capacity resource should require for compensation from the capacity market. Prior to each FCA, the IMM publishes the ORTP for all resources. Market Rule 1, Appendix A, Section III.A.21.1.1. Pursuant to the MOPR, any offer of capacity from a new facility that is below the applicable ORTP is subject to review by the IMM for consistency with the facility's costs. As part of this review process, a facility can provide information to the IMM that

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[16] On this point, CMP states:

> This interconnection standard is more stringent than the Minimum Interconnection Standard (MIS) that is typically used for Section I.3.9 Approval. Unlike the MIS, which allows other generation to be dispatched off to permit the interconnection of the proposed new resources, the more stressful overlapping impact analysis that is performed pursuant to the terms of the ISO-NE Planning Procedure No. 10 to satisfy the CCIS, requires that new generation be fully deliverable to a Load Zone (in this case Maine), without dispatching off existing generation within the same zone of interconnection.

CMP Petition at 43. *See also* Section 1 of Schedule 25 of the ISO Open Access Transmission Tariff.

[17] Thus, should an emergency situation require the shedding of load to preserve overall system reliability, the external control area would not preserve operations in its own control area by shedding load in the receiving control area first.

[18] MOPR is not a defined term in the ISO tariff. It is the IMM administration of the Offer Floor Price and Offer Review Trigger Price collectively that is referred to as the "MOPR."

demonstrates that its offer is reasonable. Based on this review process, the IMM may establish an alternative "Offer Floor Price" which is the value below which the facility may not bid.[19] If the MOPR set by the IMM for a given facility is higher than the FCA clearing price, the facility would be prevented from clearing in the auction.

e. Competitive Auctions with Sponsored Policy Resources (CASPR)

In 2018, ISO-NE adopted rules related to CASPR to address the concerns about the participation of subsidized resources in the FCM. CMP Exh. NECEC 48 at 1. CASPR allows state-sponsored resources which otherwise do not clear the primary auction due to the MOPR to acquire a CSO by "trading" with an existing generator.[20] Immediately following an FCA primary auction, there is a second "substitution auction" in which the subsidized resource has an opportunity to buy out the position(s) of a resource (or resources) that was (were) awarded a CSO in the primary FCA. Once the CASPR resource acquires the existing generator's CSO, the existing generator must then permanently retire from the capacity market. The subsidized resource then holds a CSO and receives capacity revenues as an existing resource for subsequent capacity auction periods, but the total amount of capacity on the system is unchanged, and prices remain competitive. Fowler Dir. Test. at 9. Additionally, as LEI testified, once a CASPR resource acquires a CSO in the substitution auction, it does not have any MOPR constraints in future primary auctions. Tech. Conf. Tr. at 54 (Dec. 19, 2018).

Finally, as is the case with the energy market, prices in the FCM can vary by zone. While not as granular as LMPs in the energy market, there are also locational pricing incentives built into the capacity market. Market Rule 1 Section III.12. When constraints occur in Import Constrained Zones, the capacity clearing price in the constrained zone will be higher relative to clearing prices in the rest of the pool. When constraints occur in Export Constrained Zones, prices in the constrained zone will be lower relative to the prices in the rest of the pool.

f. Analyses in the Record and Positions of the Parties

Four expert witnesses provided analyses of the NECEC with respect to the capacity market benefits and the issues discussed above. Daymark provided estimated capacity market benefits for Maine and the region. LEI provided an analysis of the potential capacity market benefits from the NECEC, and also provided expert testimony and analysis on the likelihood that the NECEC-enabled capacity would clear the auction. Finally, witnesses for GINT and NextEra provided testimony and analysis regarding the likelihood of NECEC-enabled capacity being able to qualify and meet the MOPR.

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[19] The terms "Offer Floor Price" and "MOPR" are sometimes used interchangeably.

[20] The capacity offers of these subsidized resources do not affect FCA clearing prices.

Daymark assumed that 1,090 MW of capacity from the NECEC would qualify in, and clear, the FCM. Daymark's estimated capacity market price reductions for Maine averaged $50 million per year during the first 8 years of the Project, yielding a $312 million NPV over the life of the Project. Daymark Report at 13-14. Daymark did not provide any analysis on the MOPR issue.

LEI provided multiple capacity market analyses. In its initial Report, LEI provided its estimate of the capacity market benefits from the NECEC, assuming that 1,090 MW cleared. LEI estimated that this would result in savings for Maine of $19 million per year, and $223 million NPV over the 15-year LEI study period. LEI Report, Figure 4. Subsequently, in a memo dated September 10, 2018, LEI provided support for its conclusions about the NECEC MOPR price, and the likelihood that, given this MOPR price, the NECEC capacity would clear the capacity market. LEI MOPR Memo. LEI also recalculated the MOPR price and estimated capacity market benefits that would result for the entire New England region if HQUS were to qualify a lower amount of capacity. LEI Supplemental MOPR Memo at 4-6. LEI's analysis of the benefits to the market region-wide indicated savings of between $2 and $3 billion NPV (2023$). *Id*. at 5-6. This equates to approximately between $155 and $243 million (2023$) in benefits to Maine. CMP Initial Br. at 48, fn. 143. Finally, LEI highlighted a number of different ways HQUS might choose to offer different levels of capacity into the market based on an assessment of all options and economic opportunities. *Id*. at 5.

GINT experts testified that there would be no capacity market price suppression benefits because the NECEC would fail the MOPR. Fowler Sur. Test. at 13. Mr. Fowler's testimony regarding how the IMM would interpret the provisions for setting the Offer Floor Price indicated that NECEC MOPR prices would exceed future auction clearing prices. Corrected Fowler Sur. Test. at 4.

NextEra witness Robert Stoddard testified that the NECEC is unlikely to have a measurable change on capacity prices in New England because HQ does not have surplus winter capacity and because the Project cost is likely to exceed the relevant clearing price in the FCA. Stoddard Sur. Test. at 4. Dr. Stoddard's MOPR analysis indicated that the NECEC's minimum offer price would not clear the market, "this capacity is far too expensive to clear in the primary auction of the FCA in the foreseeable future." *Id.* at 14.

CMP argues that NECEC's participation in the FCM is likely to reduce capacity prices for customers in Maine and New England. CMP Initial Br. at 44. CMP notes that there is substantial evidence in the record that demonstrates HQ Production will have capacity to offer via the NECEC. *Id.* at 46. CMP argues that LEI's MOPR Memo, which establishes that the NECEC-enabled capacity will clear in the primary auction, is reasonable and should be adopted by the Commission. *Id*. at 50. CMP notes that LEI's method of calculating the relevant transmission costs more accurately reflects the true costs of the capacity resource because HQ TransEnergie, not HQ Production, will be responsible for paying the construction costs of the line on the Canadian side, and HQ TransEnergie's transmission rate for firm point-to-point transmission service is designed

to capture the marginal cost of new transmission construction in Québec. *Id*. at 53. With respect to energy costs, CMP agrees with LEI's and NextEra's use of an energy opportunity cost approach, and disagrees with GINT's claim that the energy cost factor must be calculated using the total cost of new energy generation capacity required to serve the NECEC. *Id.* at 54-55. CMP notes that the energy opportunity cost approach is the appropriate methodology to reflect the energy costs associated with the NECEC capacity resource because it is the most accurate representation of the true costs of the resource, particularly in light of market conditions, which indicate that HQ Production is not building new generation for the NECEC; but in the absence of the NECEC, HQ Production would sell its energy to other markets. *Id*. at 56. Even if the NECEC-enabled capacity does not clear in the primary auction, and acquires a CSO through the substitution auction, CMP asserts that customers in Maine and in the ISO-NE region will still benefit. *Id*. at 65.

IECG argues that the LEI estimate of the value of capacity market benefits is reliable and should be used by the Commission as a basis for estimating benefits to Maine energy consumers. IECG Initial Br. at 28. However, according to the IECG, given the uncertainty related to the MOPR issue, it may be prudent to discount the LEI estimate by 50% to reflect this uncertainty. IECG therefore recommends that the Commission adopt a value of $110 million in benefits to Maine energy consumers related to capacity market savings. *Id.*

WM&RC asserts that the NECEC will likely provide capacity benefits. WM&RC Initial Br. at 13-14. WM&RC argues: "LEI's ultimate conclusion was that, based on a range of conditions and likely MOPR estimates, the NECEC should not be constrained from clearing in the primary auction." *Id.* at 14. WM&RC notes further that even if the NECEC does not clear the primary auction, ratepayers would not be adversely impacted and the Project would still yield net benefits to Maine's consumers. *Id.*

IBEW argues that that the LEI estimates of energy and capacity market savings are based on extremely conservative estimates, but corroborate Daymark's conclusion that there are significant ratepayer savings that would be provided by the NECEC. IBEW Initial Br. at 6.

GINT argues there is no capacity market price suppression benefit to ratepayers. GINT Initial Br. at 9. GINT notes that there is no evidence that Hydro-Québec has excess incremental generating capacity beyond what it is already offering into the New England market. *Id*. at 10. GINT notes that Hydro-Québec and CMP have stated that Hydro-Québec would not need to construct any new dams or other generating capacity in order to provide energy under the Massachusetts contracts. *Id*. at 11-12. Moreover, according to GINT, the North American Reliability Corporation has projected a significant shortfall in Hydro-Québec capacity levels by 2024. *Id*. at 13. GINT also asserts that, the Hydro-Québec Minimum Offer Price would not clear in the FCA and that LEI calculation of the NECEC MOPR is unreasonable. *Id*. at 19. GINT asserts that the appropriate calculation should rely on the capital cost to build new generating capacity, and the capital cost to build new transmission on both sides of the border

and, that, if calculated this way, any capacity that could be offered through the NECEC would cost more than the market clearing price. *Id*. at 22.

NextEra agrees with GINT that the NECEC will produce no capacity benefits. NextEra asserts that HQUS will be unlikely to qualify in the capacity market unless the load in Québec can be curtailed on the same basis as the HQUS deliveries into New England, and argues that CMP failed to submit substantial evidence demonstrating this to be the case. NextEra Initial Br. at 20. NextEra also asserts that the Offer Floor Price for the NECEC would prevent it from clearing the auctions. Finally, NextEra argues there has been no showing of a seller of capacity over the NECEC for years 21–40 of the Project. *Id.*

NRCM agrees with GINT and NextEra that the NECEC will provide no capacity benefit because it is unlikely to satisfy the MOPR due to the significant out-of-market revenues it will receive by virtue of its selection in the MA 83D solicitation process. Instead, it is more likely that the NECEC would have to obtain a Capacity Supply Obligation through the new CASPR substitution auction, which would require the permanent retirement of an equal number of MWs of existing generation in Maine for the number of MWs the NECEC wished to clear in the FCA, noting that such retirements would result in some loss of jobs and tax revenues in the state. NRCM Initial Br. at 16. NRCM notes that, in evaluating bids into the MA RFP process, the MA EDCs did not calculate capacity benefits for different projects because of the difficulty in forecasting capacity market prices and because the new FCM rules, such as CASPR, were likely to make it more difficult for state-sponsored resources, such as the NECEC, to impact capacity clearing prices. NRCM argues that the Commission should follow suit and ascribe zero benefits to potential capacity price suppression effects. *Id.* at 16-17.

g. Discussion

The Commission finds that the NECEC will result in capacity market benefits to Maine. As noted above, the NECEC must satisfy the CCIS standard of the ISO-NE Open Access Transmission Tariff (OATT), which will ensure that NECEC-enabled capacity can participate in the FCM. In addition, the energy product that will be provided by HQUS, which is firm delivery of 1,090 MW of energy per hour in virtually all hours, is very much like a capacity product and is likely to require capacity to ensure that these firm energy delivery obligations will be met. Furthermore, the Commission notes that HQP has recently added new capacity to its system (Romaine 3), and is planning to add additional capacity over the next several years, suggesting that it will have incremental capacity for sale over the NECEC into the ISO-NE FCM. CLF Exh. 14 at 17.

With respect to the MOPR issue, the Commission finds the analysis and testimony of LEI to be the most internally consistent and credible and, thus, the Commission concludes that NECEC-enabled capacity is likely to clear in the primary auction. Given these factors, HQUS would have the ability to participate in the FCA

and, given the substantial revenue it would receive, would have a strong financial incentive to do so.

However, the Commission also recognizes the uncertainty regarding the capacity market benefits. As noted above, the record reflects benefits for Maine that range from $19 million to $27 million per year. Moreover, given the fluctuating nature of the ISO-NE capacity market and related rules, any such benefits, even if certain in the near term, cannot be certain over the longer term. Thus, the Commission concludes that the lower end of the range of benefits, $19 million per year, for the first 10 years of NECEC operation, is a reasonable and conservative estimate of the capacity market benefits to Maine from the NECEC.

4. Reliability

a. Reliability Elements and Positions of the Parties

There are two distinct elements related to reliability that have been raised in this proceeding. The first is the degree to which transmission system reliability may be affected by the NECEC HVDC facility and the associated AC system upgrades required to accommodate it. The second is the degree to which the NECEC affects regional "fuel security."[21]

CMP and NextEra have both conducted transmission system studies for the NECEC. CMP provided two studies: The "New England Clean Energy Connect (NECEC) Project Analysis and Technical Report," and the "New England Clean Energy Connect Surowiec-South Interface Limits and Overlapping Impacts Study." CMP Exh. NECEC 3. The Project Analysis and Technical Report was conducted pursuant to the ISO-NE I.3.9 process. The I.3.9 process ensures that any changes to the system, such as generator additions, do not have an adverse impact on the system. The Overlapping Impacts Study examines the NECEC to ensure that, along with identified upgrades, it would meet the CCIS. These studies identify the system upgrades needed for the NECEC. CMP Exh. NECEC 3; CMP Petition at 40-42.

NextEra also conducted transmission system modeling. Based on its assumptions that the NECEC would cause Maine-based generators to retire, NextEra witnesses conducted a study of the resulting reliability issues from such retirements. The NextEra study results, which were provided in the surrebuttal testimony of Mr. Whitley, indicated a potential need for future reliability upgrades given those assumptions. Whitely, Mayers, Wang Sur. Test. at 11.

In its brief, CMP highlights transmission reliability benefits that it asserts the NECEC will provide. First, CMP argues that the NECEC will add important redundancy between the Québec and New England systems, which will better protect the region in

[21] "Fuel security" is a term that is frequently being used within ISO-NE. By its use of the term, the Commission is referring to the reliability, adequacy, and diversity of the fuel types behind supply resources serving the region.

the event of the loss of the existing Phase II intertie, one of the largest possible losses of supply in New England. CMP Initial Br. at 94. The additional interconnection between New England and Québec would also allow both control areas to provide incremental emergency support in the event of capacity deficiencies (tie benefits). *Id*. at 95. According to CMP, the AC upgrades required by the NECEC will increase the transfer limits at the Surowiec-South interface from 1,600 MW to 2,600 MW. CMP further states that the new 345 kV line between the Coopers Mills Road substation and the Maine Yankee substation (Section 3027) and the rebuilding of the 115 kV lines (Sections 62 and 64) out of Larrabee Road will add redundancy and additional transmission capacity to the transmission system across central Maine. *Id*. Finally, CMP argues that the additional transformer at Raven Farm will improve reliability in the greater Portland area. *Id*. at 95-96. CMP also states that the NECEC will provide significant fuel security benefits by delivering clean baseload hydropower to replace retiring resources in the region and by reducing the region's dependence on natural gas fired generation. *Id*. at 83.

The IECG argues that the additional capacity and fuel diversity provided by the NECEC will help to address a portion of the energy price spikes and reliability risk posed to Maine and New England by the lack of adequate natural gas pipeline infrastructure. IECG Initial Br. at 29.

GINT argues that the NECEC would make electric service in Maine less reliable by hastening the retirement, or preventing the development, of reliable generators under dispatch control here in New England and replacing them with less reliable power from Québec. GINT Initial Br. at 1. GINT asserts that the NECEC would provide no reliability if it does not deliver incremental energy. *Id*. at 63. GINT notes, further, that because New England and Québec experience winter weather at the same time and because Québec is a winter peaking system, relying on energy from HQ in the winter may have risks. *Id*. at 64. Finally, GINT argues that NECEC could reduce the reliability of the ISO-NE system by inducing the retirement of a potentially fuel-diverse resource through the CASPR program. *Id*. at 68.

NextEra does not refute the transmission modeling conducted by CMP and its consultants. NextEra Initial Br. at 25-26. However, NextEra argues that CMP has failed to show that the NECEC will not have a negative impact on reliability in future years because it did not present any probabilistic transmission studies regarding this issue. Without such studies, claims NextEra, it is not reasonable for CMP to claim there will be no reliability upgrades resulting from the operation of the NECEC. *Id*.

NRCM argues that attention devoted by CMP to the NECEC could strain CMP resources and result in less reliability and diminished ratepayer experience. NRCM Initial Br. at 20. NRCM also notes that, if the NECEC were to substitute for one or more of these (Maine) generators through CASPR, in-state resources with stored fuel would be traded for a long transmission line to Québec which would not help regional fuel security. *Id*. at 21.

b. Discussion

The Commission finds that the NECEC and associated upgrades will increase the reliability of the Maine transmission system. As noted above, because of the requirement that the Project meet the CCIS, the overlapping impact test requires that the NECEC must not erode the capacity deliverability of other resources in the Maine Zone. Because the overlapping impact test requires all of the generators with a CSO in the same zone to be "turned on" at their full output before the impact of the NECEC is modeled, any system upgrades necessary to ensure that the NECEC, as well as all of the other resources with CSOs in Maine, can operate at full output without being curtailed are the responsibility of the NECEC. Because, in reality, the system rarely operates this way, the system upgrades required by (and provided by) the NECEC will provide extra redundancy and reliability to the Maine system during normal operations modes.

The Commission finds that NextEra's assertions about the potential adverse impacts of the NECEC 5-10 years in the future is not persuasive. As noted above, NextEra's position reflects its assumed retirement of one or more Maine generators, the retirement of which is not indicated by the modeling done by LEI or Daymark. Moreover, the Commission notes that the NextEra witnesses admitted that NECEC system upgrades would resolve the N-1 reliability problems their study revealed. Hearing Tr. at 71-74 (Oct. 22, 2018).

The Commission notes, further, that seven Maine generation facilities totaling 1,370 MW in capacity, including those cited by GINT and NextEra as "at risk" due to the NECEC, had already submitted de-list bids in FCA 13 that were accepted by the ISO-NE.[22] Had the de-listing of any of these facilities created the type of reliability problem that is here asserted by NextEra, these de-list bids would never have been accepted by the ISO-NE.

With respect to "fuel security," the Commission concludes that the addition of this interconnection to Québec, and the substantial amounts of baseload hydroelectric energy it will enable, will enhance supply reliability and supply diversity in Maine and the region. The Commission notes that there are significant challenges to siting new energy infrastructure in the region, as is evidenced by local opposition to natural gas pipeline and electric transmission projects. At the same time, natural gas supplies from remaining gas fields offshore of Nova Scotia have diminished, and most of the supply from that region is expected to be gone by 2020. CMP Exh. NECEC 45 at 23. The Commission notes, further, that in response to fuel security concerns stemming from the potential loss of existing generators in the region, such as the Mystic Units 8 and 9 in Massachusetts, the ISO-NE is taking steps to prevent their retirement through

[22] *See* Forward Capacity Obligations spreadsheet for FCA 13 which can be found at https://www.iso-ne.com/markets-operations/markets/forward-capacity-market/.

mechanisms such as cost-of-service Reliability Must Run contracts with ISO-NE. CMP Exh. NECEC 40 at 5.

With respect to fuel diversity, the region's dependence on natural gas presents serious challenges and risks, such as exposure to price spikes and concerns about supply adequacy in the winter periods. In an effort to address these concerns, ISO-NE has adopted various market rule changes over the past few years, such as Pay for Performance and the Winter Reliability Program. Excerpts from ISO-NE filings and presentations on these matters are provided below.

> *From the ISO January 17, 2014 filing for PfP - ER14-1050-000 MR1 Performance Incentives Changes*
>
> Indeed, as fully detailed in the testimony of Peter Brandien, the ISO's Vice President of Operations, the ISO has observed and documented pervasive and worsening performance problems among the existing generation fleet in New England. These problems, which are not limited to a single resource or fuel type, fall into three general categories. First, the region's growing dependence on natural gas leaves it extremely vulnerable to interruptions in gas supply, which can occur with little notice and which can affect multiple generators simultaneously. Second, a significant portion of New England's oil and coal units cannot provide reliable backup when gas problems arise due to increased outage rates, start-up problems, and other operational difficulties. Third, across the entire fleet, the ISO is observing increasing outage rates, poor responses to contingencies, and a host of other issues, such as failure to maintain liquid oil inventory, mothballing dual fuel capability, and inadequate staffing.
>
> *From the June 28, 2013 filing for the Winter 2013-2014 Reliability Program - ER13-1851-000*
>
> In the last few years, the ISO and stakeholders have identified a number of strategic risks. Two of these risks – related to New England's increased reliance on natural gas-fueled generation and to resource performance during periods of stressed system conditions – are most pressing, and the region is working on a number of solutions to address these concerns. For example, the ISO has implemented a change in Day-Ahead Energy Market timing and is making filings to improve offer flexibility and amend the reserve market. In addition, review of two sets of ISO-proposed revisions to the Forward Capacity Market ("FCM") rules is or will be underway with stakeholders. These proposed revisions aim to tighten the shortage event trigger and to redesign market incentives and, at the conclusion of the stakeholder processes, will likely be filed with the Commission later this year. The ISO intends that the proposed changes to FCM to redesign market incentives will directly address the gas dependence and resource performance issues discussed herein. This FCM performance incentive proposal is planned for implementation for the 2018-2019 Capacity Commitment Period. As a transition between the Winter Reliability Project and the FCM performance incentives project, the ISO intends to propose a scaled-down version of the

performance incentives project to purchase a fuel-neutral, winter-based reliability product for the winters of 2014-15 through 2017-18.

From the ISO March 6, 2018 Markets Committee meeting presentation on "Winter Energy Security Improvements: Market Based Approaches."

In accordance with FERC's July 2, 2018 order in EL18-182-000, the ISO must develop and file improvements to its market design to better address regional fuel security.

Finally, as noted above, fuel security has been a growing issue in the ISO-NE region such that it has become a subset of system reliability as viewed by ISO-NE and the FERC. The Commission points to the Operational Fuel Security Analysis provided by ISO-NE in January 2018. This analysis was later adopted by FERC in its fuel security order. *Order Denying Waiver Request,* FERC Dockets ER18-1509-000, EL18-182-000 (July 2, 2018). The study conclusions state: "The study indicates that over the next several decades, New England's power system will largely depend on the availability of two key elements, sufficient injections of LNG and electricity imports from neighboring regions." The Commission recognizes that there may be challenges associated with depending on imports, but given the difficulty that the region faces in terms of siting any energy infrastructure, the ISO NE's conclusions regarding the future are compelling. Thus, in this case, the Commission is presented with a transmission line that will provide a pathway to import up to 1,200 MW at no cost to Maine and will provide significant mitigation for the issues identified in Operational Fuel Security Analysis. Because fuel security, through FERC jurisdiction and its ruling on the Mystic Units, has been determined to be a regional issue and, thus, the costs to address it are socialized across the region, if a significant import line is not built now, it will likely be built later, the costs for which are likely to be treated in a way that is much less favorable to Maine than the NECEC.

5. Effect of the NECEC on New and Existing Generators in Maine

a. Overview

There have been three questions raised in this proceeding related to potential adverse effects on new and existing generators in Maine resulting from the NECEC. First, whether the NECEC would result in reductions to energy prices in Maine which, in turn, would reduce revenues for in-state generators. Second, whether, by its participation in the CASPR, the NECEC would cause existing Maine generators to retire. Third, with respect to new generators, whether the NECEC would "use up" the existing transfer capacity "headroom" at the Surowiec-South interface, thereby rendering that transfer capacity unavailable to new generators seeking to locate in Maine.

b. Positions of the Parties

GINT and NextEra argue that the NECEC, because of its effect on wholesale energy prices in Maine, will cause in-state generating plants to be more likely to retire.[23] In addition, GINT and NRCM note that because it is likely that NECEC would have to obtain a CSO through the new CASPR substitution auction, the NECEC would result in permanent retirement of an equal number of MWs of existing generation in Maine for the number of MWs the NECEC wished to clear in the auction. These parties note that such retirements would result in a loss of jobs and tax revenues in the State. GINT Initial Br. at 53; NRCM Initial Br. at 16.

On these points, CMP notes that the analyses of both LEI and Daymark do not indicate that the NECEC will result in any early retirement of Maine generators. CMP Initial Br. at 131-132. CMP notes that these results make sense, given the low capacity factors of the units. *Id* at 132. In addition, CMP cites to evidence in the record that certain Maine generators, most notably the Wyman units, are already at risk of retirement for reasons entirely unrelated to the NECEC, including their location, age, and the significant financial risks they face under ISO-NE's new Pay for Performance rules.[24] *Id* at 134.

The IECG agrees with CMP in regard to the tenuous position of the Maine generators today, due to their poor capacity factors and low revenues. IECG Initial Br. at 32. IECG observes, further, that, with respect to property tax revenues, the facilities most at risk contribute only $5.5 million per year, which is substantially less than the estimated property tax revenues of $18.4 million from the NECEC. *Id.*

In addition, several parties have raised concerns related to potential new generators in Maine. RENEW argues that, if NECEC capacity were to absorb existing transfer capacity "headroom," the Commission should condition any approval on (1) CMP increasing the Surowiec-South interface by the full 1,000 MW as planned regardless of whether ISO-NE finds a lower amount would be satisfactory, and (2) requiring that HQ seek qualification of a lower amount of capacity. RENEW Initial Br. at 5. On this point, GINT argues that the NECEC would "fill the headroom at Surowiec-South, increasing the expense of transmission development for Maine renewables." GINT Initial Br. at 60.

Acadia Center, CLF, and NRCM share these concerns, noting that the NECEC could hinder the development of new Maine-based renewable resources by consuming spare transmission system transfer capability. Acadia Center Initial Br. at 4; CLF Initial Br. at 6; NRCM Initial Br. at 19.

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[23] GINT witness Bodell asserted the NECEC's participation in ISO-NE energy markets would hasten Maine generating plant retirements, eliminating jobs and property tax base. Bodell Dir. Test. at 40. However, no quantitative analysis or modeling to support these claims was provided.

[24] As noted in Section V(A), many of these generators submitted de-list bids in FCA 13.

CMP argues that, on the contrary, the NECEC will not prevent the development of renewable energy in Maine. CMP notes that the NECEC will have no effect on any of the proposed 765.5 MW of renewable generation that are ahead of it in the ISO-NE interconnection queue. CMP Reply Br. at 47-48. With respect to other renewable generation projects, CMP argues that the NECEC-related transmission system upgrades will actually benefit new renewable projects by increasing the transfer capability at the Surowiec-South interface and defraying system upgrades and costs that would otherwise be required of these projects by ISO-NE in order to interconnect. *Id* at 51-53.

IECG argues that the decision regarding the NECEC should not involve consideration of negative effects on generators, new or existing, in Maine's restructured market. IECG Initial Br. at 8. IECG argues that generators are not entitled to, and should not receive, protection from the entry of new entrants in a competitive market. *Id* at 10. According to the IECG, the Commission's decision whether to grant a CPCN must be based on considerations relating to electric consumers, not generators. *Id* at 8.

c. Discussion

Based on the record in this proceeding, the Commission does not find that the NECEC will result in the adverse effects on Maine generators as alleged by GINT and NextEra. With respect to the effects the NECEC will have on energy market prices, the Commission finds that, because of the already low capacity factors and energy revenues of these facilities, reductions in energy market prices are unlikely to be material for them. The Commission notes, further, that other factors, including the ISO-NE Pay for Performance rules, create far greater risks for these generators than the NECEC. It may be, at least in part, that because of these risks, most GINT and NextEra generators submitted de-list bids in FCA 13.[25] Moreover, the Commission agrees with the IECG that, as a policy matter, it is the interests of customers, not generation competitors, that must be the priority consideration in deciding whether or not to grant a CPCN for the NECEC.

The Commission also finds little merit to the concerns regarding the extent to which the NECEC may frustrate Maine-based renewables development by absorbing "headroom" on the transmission system. First, as noted above, there is more than 750 MW of new, renewable capacity in Maine ahead of the NECEC in ISO-NE's interconnection queue. Second, as also noted above, the Surowiec-South interface must be upgraded to accommodate 1,200 MW of capacity in order for the NECEC to meet the CCIS. If, as some parties argue, the level of NECEC-enabled capacity will be less than 1,200 MW, the available headroom at the interface may be substantially greater than the 200 MW that currently exists. Moreover, for the reasons expressed by CMP and the IECG, the Commission finds that "preserving" headroom for potential future competing projects at the expense of a project in development is poor public

[25] *See* Forward Capacity Auction Capacity Obligations FCA 13: https://www.iso-ne.com/markets-operations/markets/forward-capacity-market/

policy, as well as being wholly inconsistent with the ISO-NE interconnection rules and processes.

B. In-State Economic Impacts[26]

1. Economic Impact Studies

In its Petition, CMP presented a study conducted by Ryan Wallace, Director of the Maine Center for Business and Economic Research (MCBER) of the University of Southern Maine (USM) that assessed the macroeconomic effects of the NECEC in Maine and New England using economic models developed by the Regional Economic Models Inc. (REMI). (USM Study). The USM Study grouped the effects into three broad areas or time periods: development/construction related; post-construction, or operations, phase; and market price reduction related. The USM Study indicates that NECEC transmission infrastructure investments are expected to support a $573 million (2009$) addition to Maine GDP and over $440 million (2009$) in total worker compensation during the 6-year development and construction period (2017-2022). CMP Initial Br. at 70. In addition, the USM Study indicates that the NECEC would support over 1,740 direct, indirect, and induced jobs per year in Maine during that same period. *Id*. According to Mr. Wallace, these construction-period benefits would be realized throughout the State. *Id.* at 71. During the NECEC post-construction, or operations, period, the USM Study indicates that the NECEC would support a total of 37 jobs, 21 of which would be to maintain and operate the NECEC and the remaining 16 from indirect and induced spending. *Id.* at 72. Finally, the Study indicates that the NECEC's energy market price suppression effects will result in over 260 jobs in Maine, on average, and more than $23 million in GDP and $17 million in total compensation each year over the 20-year term of the PPAs. *Id.* at 73.

The LEI Study included a review of the USM Study and an independent analysis of the macroeconomic benefits resulting from the NECEC. In conducting its analysis, LEI used the same REMI PI+ software as USM. LEI Report at 32. As was done in the USM Study, LEI analyzed the macroeconomic effects during (1) the development/construction period and (2) the operations period. LEI's analysis reflected its projected energy market prices (rather than Daymark's), and included certain factors that were omitted in the USM analysis, most notably, NECEC capacity market price impacts, contract costs borne by Massachusetts ratepayers, and early retirement and deferred investment in generation capacity triggered by the NECEC. *Id*. at 54. LEI also provided its independent analysis of tax revenue from the NECEC by municipality. *Id*. at 37.

[26] For the reasons discussed in Section IV(A) above, the Commission's focus is on benefits to Maine rather than to the New England region as a whole.

A comparison of the LEI and USM macroeconomic benefits is shown in Figure V.1 below:[27]

Figure V.1

Figure 5. Comparison of LEI's analysis and USM's analysis

Benefit categories	LEI Analysis		USM Analysis	
	Maine	New England	Maine	New England
Jobs - development and construction period (Annual average for 2017-2022)				
Direct	856	N/A	868	N/A
Indirect and Induced	775	N/A	824	N/A
Total	1,631	N/A	1,691	N/A
Jobs - operations period (Annual average for 2023-2037)				
Total	291	1,826	329	3,735
GDP - development and construction period (Annual average for 2017-2022), fixed 2009$ million				
	$98.2	N/A	$94.1	N/A
GDP - operations period (Annual average for 2023-2037), fixed 2009$ million				
	$29.1	$205.3	$25.8	$406.2

Note:

1. Economic impacts in terms of incremental jobs and GDP presented in the table are the annual average of the modeling periods in LEI's study, namely 2017-2022 for the construction period and 2023-2037 for the operations period.
2. The incremental jobs and GDP in New England do not include those created by O&M activities of the NECEC project (indicated in the table as "N/A"), since the macroeconomic impacts of O&M spending is modeled within Maine, to be consistent with USM's approach.

LEI Report at 15.

As shown in Figure V.1, LEI's analysis reflects employment and GDP benefits in Maine that are generally consistent with those reflected in the USM Study. With respect to the broader New England region, LEI's analysis reflects benefits that are significantly less than those in the USM Study due to LEI's inclusion of the contract costs borne by ratepayers in Massachusetts, as well as early retirement of generators in Connecticut. *Id.* at 16.

Both LEI and the USM Study estimate approximately $18 million annual incremental municipal tax revenue received from the NECEC based on the Project's taxable value and the municipal mill rates in effect in 2016. LEI Report at 64; USM Study, Section 6. As noted by LEI, the actual tax payments from the Project will depend

[27] CMP provided an update to the information in its Petition in which it estimated the number of direct, indirect and induced jobs would be 1,742 on an annual average basis based on updated projected NECEC costs. ODR-003-011, Highly Confidential Attachment 2.

on a number of factors, including the taxable valuation in each municipality, the budget plan and mill rates in each municipality, and the change in valuation of other properties. LEI Report at 64-65. Additionally, tax payments from the NECEC are expected to decline as the taxable value of the project depreciates. *Id*. at 65.

2. Positions of the Parties

CMP describes the USM Study as "conservative" in that it does not reflect any potential NECEC capacity market price suppression effects, nor any benefits from increased property and sales taxes. CMP Initial Br. at 73. CMP notes that LEI's analysis confirms that the NECEC will produce substantial jobs and increased GDP during its development/construction and operations periods, and that LEI generally confirms the macroeconomic benefits to Maine shown in the USM Study. *Id.*

GINT argues that the USM Study overstates macroeconomic benefits and is unreliable. GINT Initial Br. at 61. GINT points to the following flaws of the USM Study to support its assertion: (1) reliance on Daymark's energy price forecast; (2) failure to include the contract costs borne by Massachusetts ratepayers; (3) failure to include the effect of early retirement of or deferred investment in generation in Maine;[28] and (4) the adverse effect on the tourism industry in Maine. *Id*. at 62-63. Other parties, including the NRCM and Caratunk, also dispute the macroeconomic benefits as estimated by the USM and LEI Studies, for reasons such as overstated property taxes and failure to consider the effect of the NECEC on local economies. NRCM Initial Br. at 18-19; Caratunk Initial Br. at 36-38.

The IECG observes that the USM and LEI Studies show macroeconomic benefits for Maine that are highly consistent with one another. IECG Initial Br. at 31. The IECG agrees with GINT that, as a general matter, lost tax revenues and employment from shutdowns or cutbacks at existing Maine generators are appropriately included in this type of analysis; however, the IECG disagrees with GINT's position that the NECEC would cause any such shutdowns or cutbacks. *Id.* at 32. Other parties, including the Chamber, Lewiston, IBEW, and WM&RC, support the Project due to the economic benefits it will provide at the local level through increased employment, property tax revenue, and eco-tourism opportunities.

3. Discussion

The Commission finds both the USM and LEI Studies to be supportive of the fact that positive and substantial direct, indirect, and induced macroeconomic benefits will accrue to Maine from the development, construction, and operation of the NECEC. Although the numbers of jobs and dollar increases in GDP cannot be precisely quantified, the Commission finds that the range reflected by the USM and LEI Studies

[28] The LEI Study, which does include the effects of the NECEC on generator retirement, concludes that most of the impact will be on generators in other states, and there would be only a minor impact in Maine. LEI Report at 35.

provides a reasonable estimate. Moreover, the Commission agrees with the observation of CMP that a $1 billion investment in a project located entirely in Maine, with the resulting employment and taxes it will produce, would result in substantial macroeconomic benefits to the State. CMP Initial Br. at 32. With respect to offsetting negative impacts due to premature shutdowns or cutbacks of Maine generators, for the reasons discussed in Section V(A)(5) above, the Commission finds that such shutdowns or cutbacks, if they occur, are not attributable to the NECEC. And, with respect to deferral of investment, the Commission notes that, according to the LEI Study, any such deferrals would affect new investment in Massachusetts, not Maine. LEI Report at 63. Finally, as will be discussed in Section V(D) below, the NECEC will have an adverse effect on scenic and property values, and local tourism and recreational economies, which cannot be quantified. These adverse economic impacts offset to some degree the economic benefits of the Project.

C. Public Health and Safety

1. Background

Section 3132(2-C)(A) directs the applicant for approval of a CPCN to include in its petition, among other things, "[a] description of the effect of the proposed transmission line on public health and safety." Section 3132(6) directs the Commission to, in determining public need for the proposed project, consider the project's impact on "public health and safety."

2. Public Health

In its initial filing in this case on September 27, 2017, CMP indicated it had retained Exponent, Inc. to conduct an electric and magnetic fields (EMF) study for the NECEC which would be submitted as a supplement to CMP's initial petition when the report is completed. On January 12, 2018, CMP filed Exponent's report titled *Modeling of the Electrical Environment, Report New England Clean Energy Connect Transmission Project* (Exponent Report). CMP Exh. NECEC 16. The Exponent Report presents the EMF levels and ion densities for transmission lines and interconnections (1) along the NECEC route and (2) in portions of the transmission system in which CMP proposes to complete necessary upgrades.

CMP summarizes the findings and conclusions of the Exponent Report as follows:

> Exponent found that the NECEC HVDC line will produce static EMFs similar to those encountered in the natural environment, with magnetic-field levels similar to the earth's static geomagnetic field and electric-field levels similar to those produced by atmospheric phenomena, weather, and friction charging. Such levels are below the National Radiation Protection Board's threshold that static fields above 25 kV/m may be annoying, and well below International Commission on Non-Ionizing Radiation Protection (ICNIRP) and Food and Drug

> Administration guidelines for static magnetic-field exposure. Exponent also concluded that calculated ion densities for the project are within the range of levels encountered in the natural environment, and the new AC lines associated with the NECEC's necessary network upgrades will produce EMF levels that are well below the assessment criteria established by ICNIRP and the International Committee on Electromagnetic Safety.

CMP Initial Br. at 122-123.

The scope of issues addressed, and conclusions reached, in the Exponent Report received relatively little attention in this proceeding. CMP argues: "In discovery, CMP made clear its intent to focus on EMFs as the only public health impact that CMP will be investigating. No party has submitted any testimony contesting Exponent's findings or demonstrated any other health concern related to the NECEC." *Id*. at 123.

WM&RC echoes CMP's argument that no testimony has been presented in this case that contradicts the findings of the Exponent Report. WM&RC Initial Br. at 16.

Ms. Kelly argues that the Exponent Report is flawed and that CMP has failed to make a sufficient showing that the NECEC does not present risks to the public health. Referring to the Exponent Report, Ms. Kelly asserts:

> It is a narrow report that uses models developed in 1983 to 1991 to determine static electric fields, magnetic fields and air ions associated with the operation of the DC and AC portion of the NECEC project. There was no mention of experimental testing to validate the modelling, not even on the AC modelling where the transmission lines are already in existence. The report makes no representation about whether these values will be guaranteed maximum levels or even within an order of magnitude to the levels that will exist once the line is constructed and used over time.

Kelly Reply Br. at 8. Ms. Kelly outlines what she considers to be additional flaws in the Exponent Study and concludes that CMP has failed to demonstrate that the NECEC adequately protects the public health. *Id.* at 10.

The topic of the NECEC's impacts on public health rarely came up during the three public witness hearings that the Commission held in this case. The most specific testimony on health issues relating to the Project was provided by Julie Tibbetts, a medical technologist specializing in oncology and hematology. Ms. Tibbets noted that, although the ill effects of living under high tension power lines is debatable, both the World Health Organization and the Center for Disease Control acknowledge that increased electromagnetic fields increase the risk of various health issues, including heart arrhythmias and cancer. The Forks PWH Tr. at 81-82 (Sept. 14, 2018).

3. <u>Public Safety</u>

As with the public health issues relating to the NECEC, issues relating to the public safety implications of the Project were addressed by only a few parties in this proceeding. Regarding the public safety issues relating to the NECEC, CMP asserts:

> CMP has committed to design and construct the project in accordance with the applicable North American Electric Reliability Corporation (NERC), Northeast Power Coordinating Council, Inc. (NPCC) and ISO-NE transmission planning standards and criteria as well as all applicable safety codes including the National Electric Safety Code (NESC), the American National Standards Institute (ANSI) standards, and the Occupational Safety and Health Administration standards, among others. CMP's lead engineer responsible for the design of the project, Justin Tribbet, also described CMP's commitment to project safety for the NECEC, including the retention of a full-time safety engineer tasked with reviewing the project designs to ensure that they comply with applicable OSHA standards. No party has offered testimony demonstrating in any way that the NECEC will be designed, constructed or operated in an unsafe manner.

CMP Initial Br. at 123-124.

WM&RC asserts that no party introduced evidence asserting or demonstrating that "the construction, operation, or maintenance of the NECEC will be inconsistent with applicable standards (i.e., NERC, NPCC, ISO-NE) and would jeopardize public health and safety." WM&RC Initial Br. at 16.

Caratunk raised issues relating to the host communities' ability to provide adequate accommodations for work crews on the Project. Caratunk also argues that CMP did not consider whether the affected communities in rural Somerset County would be able to provide adequate fire and emergency response services during the construction of the Project and after the Project is complete. Hearing Tr. at 123-124; 126 (Jan. 9, 2019).

Similar concerns about whether local emergency services would be able to respond to the potential public safety issues posed by the NECEC were raised during the public witness hearings. For example, Heather Sylvester noted that the West Forks Volunteer Fire Department is small and primarily a volunteer department and that members work full-time jobs out of the area. Ms. Sylvester expressed her concern that potential medical, fire, or trauma events associated with construction of the NECEC may tax such small and primarily volunteer departments. The Forks PWH Tr. at 12 (Sept. 14, 2018).

In responding to these concerns on behalf of CMP at the January 9, 2019 hearing, Mr. Stinneford noted that CMP has existing transmission lines that traverse areas of Maine that are equally or even more remote than the NECEC corridor. Hearing Tr. at 126 (Jan. 9, 2019). According to Mr. Stinneford, there are CMP transmission lines that run through many unorganized townships that have no fire departments and no

public safety resources, noting that the public safety issues raised by Caratunk (and others) are issues that CMP is accustomed to. *Id*.

4. Discussion

As noted above, issues relating to the NECEC's effect on public health and safety were not addressed by many of the parties in this proceeding. Based on the Commission's review of the record, the Commission concludes that CMP has, through the Exponent Report and the written and oral testimony by Mr. Malone, Mr. Hodgdon, Mr. Tribbet, and Mr. Stinneford, satisfied the filing requirements relating to public health and safety set forth in section 3132(2-C) and provide a sufficient basis for the Commission to consider these issues pursuant to Section 3132(6).

In her Exceptions, Ms. Kelly takes issue with the lack of attention to safety that is incorporated into the Examiners' Report. Kelly Exceptions to Examiners' Report at 2-3. The Commission emphasizes that ensuring public safety with respect to public utility operations is a central purpose of the Commission outlined in Section 101 of Title 35-A. That section states that the "basic purpose of this regulatory system is to ensure safe, reasonable, and adequate service." The above ground HVDC line is designed by professional engineers who by the nature of their training and licensure requirements attest to safety when final stamping of the design occurs. While there were many issues in this case that were raised during the 18 months of litigation, this Order details the areas of disagreement of the parties and makes findings with respect to statute. The Commission does not agree that it is necessary in this case to have had hired a consultant on these matters when licensed engineers responsible for the design were witnesses and were available for cross examination.

The Commission finds that, with respect to the safety concerns raised by Caratunk, Ms. Kelly, and several public witnesses relating to the availability of fire protection and other emergency response services in the proposed transmission corridor, the record reflects that CMP has adequately addressed such safety concerns throughout other remote areas of its existing transmission system. The Commission, therefore, finds that the NECEC does not pose a threat to public health and safety. However, it is evident that there are ongoing concerns about safety issues posed by the NECEC. The Commission therefore directs CMP to, as part of its ongoing outreach and communications with the host communities, provide direct and clear information to the affected community about how CMP (1) has dealt with fire and medical support issues in comparable rural areas of its system and (2) plans to deal with fire and medical support issues in the context of the NECEC.

D. Scenic, Historic, and Recreational Values

1. Background

Section 3132(6) directs the Commission to, in determining public need for the proposed project, "at a minimum, take into account … scenic, historic and recreational values."

As discussed in Section IV(C) above, there is overlapping jurisdiction among the Commission, the DEP, and the LUPC regarding the review of such things as the NECEC's impact on scenic, historic, and recreational values. Several parties in this case suggested the Commission defer to the DEP and LUPC's evaluation of scenic, historic, and recreational values. For the reasons outlined in Section IV(C) above, the Commission finds that in the context of this proceeding, it is required by statute to consider the specified issues of scenic, historic, and recreational values as part of its overall assessment of the benefits and costs of the NECEC.

To discharge its responsibilities under Section 3132 with respect to consideration of scenic, historic, and recreational values, the Commission must engage in a two-step balancing process. Step one involves the Commission's evaluation of the NECEC's impacts on scenic, historic, and recreational values. In this initial step, the Commission must weigh and balance the NECEC's impacts to determine whether the Project will have a net beneficial or a net adverse impact on scenic, historic, and recreational values. Step two is a more comprehensive balancing activity in which the Commission must weigh its determination of the NECEC's impact on scenic, historic, and recreational values against the other factors listed in Section 3132(6) which include economics, reliability, 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. At the conclusion of the second step of the balancing process, the Commission will be able to determine whether sufficient public benefits exist to justify the issuance of the requested CPCN.

In this Section of the Order, the Commission focuses on only the impact of the NECEC on scenic, historic, and recreational values. The more comprehensive balancing of these impacts and the other factors set forth in Section 3132(6) is addressed in Section V(D)(5)(e) of this Order.

2. Positions of the Parties

a. Scenic Values

There is wide disagreement between the proponents and the opponents of the NECEC relating to the impacts the Project will have on scenic values. To begin with, parties disagree over the current scenic value of the affected area. Some parties argue that the proposed new corridor will run through a pristine wilderness, while others assert the area in question is more properly characterized as a heavily-harvested working forest. Parties also differ on the extent to which the Project will alter the current character of the area in question. Finally, the parties disagree on whether CMP

sufficiently analyzed the scenic impact of the NECEC and whether CMP adequately explored lower-impact options.

i. Proponents of the Project

CMP asserts that the NECEC is designed to minimize adverse impacts on scenic values. CMP notes that, where reasonably practical, the NECEC is sited in an existing transmission corridor to minimize impacts, and where new corridor is needed the Project is designed to reasonably avoid environmentally sensitive areas and resources, including conserved lands, stream crossings, wetlands, deer wintering habitat, and inland waterfowl and wading bird habitat. CMP notes, further, that approximately 73% of the NECEC route lies within CMP-owned, existing transmission corridor, and that the remainder of the route is located on nearly all privately-owned, commercial forest land, better allowing CMP to site the project to avoid adverse impacts on scenic, historic, and recreational values. CMP Initial Br. at 124.

A major issue of contention in the scenic value debate is the current quality of the 53 miles of new corridor. On this point, WM&RC argues that, as shown by the Natural Resource Maps provided by CMP in response to the September 12, 2018 Procedural Order, the land that will be the site of the new transmission corridor extending to the Canadian border are working forests that have been heavily harvested in recent years. Thus, according to WM&RC, the transmission corridor should not unreasonably detract from the scenic, historic and recreational values offered by these areas. WM&RC Initial Br. at 16.

Two other major points of disagreement between those who support the Project and those who oppose it are whether CMP (1) sufficiently analyzed the scenic impact of the NECEC and (2) adequately explored lower-impact options. CMP argues that it went to great lengths to consider the impacts of the new corridor on scenic values and to take steps to reduce the extent of those impacts. On these points, CMP states that it designed the Project to comply with DEP requirements that a transmission project not unreasonably interfere with existing scenic and aesthetic uses of resources within and nearby the project area, or Area of Potential Effect. CMP notes that, in accordance with these requirements, it prepared a comprehensive Visual Impact Assessment that articulates its methodology for determining potential visual impacts of the Project, and establishes clear mitigation strategies for minimizing impacts. CMP Initial Br. at 124-125.

ii. Opponents of the Project

The opponents of the NECEC focus primarily on the portion of the line that would be constructed in the new corridor. NRCM asserts that the route of the NECEC would disturb 53 new miles of habitat from Beattie Township to Caratunk, and would clear over 1,800 acres of land, cross 115 streams, disturb 263 wetlands covering 76.3 acres, and cross 8 deer wintering areas and 12 inland waterfowl and wading bird habitat areas. NRCM Initial Br. at 21. NRCM argues that the NECEC is likely to have a permanent

and dramatic impact to environmental and scenic resources, along the line, most notably along the 53 miles currently undisturbed by transmission lines. *Id.*

Caratunk asserts that the characterization by CMP of the 53 miles of proposed corridor as "working forest," as if to say an already spoiled landscape, is dismissive of local concerns and is untrue and disrespectful. Caratunk Initial Br. at 11. Caratunk notes, further, that clear-cuts in a working forest grow back, but the NECEC corridor will not. Caratunk Comments on Stip. at 8 (Mar. 1, 2019).

Caratunk also argues that CMP's analysis of the NECEC's impacts on the scenery along the proposed 53 miles of new corridor was inadequate. Caratunk argues that CMP's Visual Impact Analysis was insufficient, noting that the DEP found it to be "sorely lacking" and "sent them back to the drawing board." Caratunk Initial Br. at 11-12. Caratunk is also critical of the adequacy of CMP's consideration of installing the proposed new line underground. *Id*. at 11. Caratunk asserts that the relatively superficial analyses CMP conducted regarding Project impacts is extremely disturbing to the local communities and to those whose livelihoods and families are at stake. *Id.*

iii. Testimony Presented During Public Witness Hearings

The disagreement over the NECEC's impacts on scenic values was nowhere more apparent than during the three public witness hearings the Commission held in this proceeding. Comments were provided by those that supported the Project and disagreed with the proposition that the NECEC would go through wilderness that was pristine, including by Richard B. Anderson, a former Commissioner of the Maine Department of Conservation and Executive Director of the Maine Audubon Society, and Lloyd Ireland who served as Maine's Director of Public Lands and also as State Economist during the 1980s. Farmington PWH Tr. at 50-51 (Sept. 14, 2018); Hallowell PWH Tr. at 109 (Oct. 17, 2018).

Other commenters offered a different perspective. Former State Senator Thomas Saviello noted that, notwithstanding the fact that the new corridor would be located in areas that are currently forested, the impact of the NECEC would be significant, noting that the NECEC clear cut corridor will not grow back. Farmington PWH Tr. at 11-12 (Sept. 14, 2018).

Speaking to the amount of logging traffic currently in the area of the proposed new corridor, Jennifer Poirier testified she seldom even passes a logging truck. Ms. Poirier also echoed Senator Saviello's comments about the permanent nature of the NECEC clear-cut in contrast to forest harvesting, in which case the trees come back. The Forks PWH Tr. at 72-73 (Sept. 14, 2018).

Many other commenters spoke with passion about the scenic value of the area, noting the significance of the area's beauty, remoteness, and lack of development. Commenters noted that these attributes not only contributed to their own quality of life, but were integral to drawing visitors who sustain the local tourist economies to the

region. Robert Kimber (Farmington PWH Tr. at 68-69 (Sept. 14, 2018)); Drew Bates (*Id*. at 81); Todd Towle (*Id*. at 46); Cecil Gray (Hallowell PWH Tr. at 31 (Oct. 17, 2018)).

Finally, in written comments that were read by Susan Percy, Field Rider stated, with some irony, that the remoteness and low population density of the area through which the proposed new corridor would run make it both attractive to tourists and vulnerable to projects like the NECEC. Hallowell PWH Tr. at 156 (Oct. 17, 2018).

b. Historic Values

When compared to the Project's impact on scenic and recreational values, the effect the NECEC would have on historic values received relatively little attention by the parties in this proceeding. In support of the steps it took to consider the Project's potential effects on historical values, CMP noted that it undertook a comprehensive desktop review to identify historic properties potentially affected by the Project. CMP noted, further, that impacts on historic values are undergoing a thorough review by the Maine Historic Preservation Commission and DEP. CMP Initial Br. at 126.

c. Recreational Values

As with scenic values, there is considerable disagreement between the proponents and the opponents of the NECEC regarding the Project's impacts on recreational values. Proponents and opponents disagree on whether CMP adequately identified, and took reasonable steps to avoid, the Project's detrimental impacts on recreational values. Proponents and opponents also disagree on the extent to which the NECEC will degrade recreational values. There is also marked disagreement between the proponents and the opponents on whether there are beneficial recreational effects from the NECEC. Finally, the proponents and opponents disagree on the NECEC's likely effects on tourism in the new corridor portion of the Project.

i. Proponents of the Project

CMP argues that it was mindful of the potential impacts of the NECEC on recreational values and that it took steps when designing the Project to minimize the negative impacts from the Project. CMP Initial Br. at 126-127. CMP argues that the Project route within the new corridor almost entirely avoids sensitive recreational resources, such as state and national parks, and that the remaining portions of the transmission corridor contain existing transmission lines, thus, the addition of the NECEC will have minimal impacts on those areas. *Id.*

CMP asserts that it was receptive to comments about the Project's impacts on the recreational values associated with the crossing of the Kennebec Gorge and made adjustments to the Project in response to those comments. *Id.* at 127. CMP states that it is aware of concerns that have been expressed about the Project's impact on the Appalachian Trail, but believes those concerns lack merit. *Id*. at 127-128.

While stating that the NECEC's detrimental effects on the recreational values in the 53 miles of new corridor are not unreasonable, CMP further asserts that the Project will have positive effects on the recreational values of the area through which the new corridor passes. CMP states that its "siting of the NECEC will also facilitate snowmobile touring, one of Maine's primary winter recreational industries." *Id.* at 128. CMP points to this as a benefit to tourism in Somerset County by strengthening one of Maine's strongest recreational industries and the local economies in which the snowmobile riders spend time. *Id*.

ii. Opponents of the Project

The opponents to the NECEC state that the negative impacts of the Project on recreational values of the host communities are undeniable and substantial. On this point, Caratunk notes that installing 100-foot-tall transmission towers along a new corridor as wide as the New Jersey Turnpike through relatively undeveloped western Maine will have numerous, significant, and permanent impacts. Caratunk Initial Br. at 10. Caratunk describes this conclusion as "self-evident." *Id.*

The opponents to the Project contest CMP's assertions that it was (1) mindful of the potential impact of the NECEC on recreational values and (2) took sufficient steps when designing the Project to minimize negative recreational impacts. For example, Caratunk argues that CMP did not adequately identify or analyze the Project's impacts on recreational values, describing CMP's consideration of these matters as after-the-fact and dismissive. *Id.* at 13.

Caratunk also contests CMP's claim that the Project will attract snowmobilers. First, Caratunk argues that CMP failed to do the analysis necessary to support the claim that the NECEC will promote snowmobiling in the area. Second, Caratunk refutes CMP's assertion that snowmobilers will be attracted to the new corridor. *Id.* at 10. Caratunk argues that, to the contrary, if given the choice, the snowmobile community will elect not to ride on a trail in the proposed new corridor. Caratunk Reply Br. at 11-12.

Caratunk also refutes CMP's assertion that it actively engaged the communities along the proposed new corridor and modified the Project design based on feedback from the local stakeholders. Caratunk describes CMP's efforts and analysis in this regard as unsupported and inaccurate. Caratunk Initial Br. at 13.

iii. Testimony Presented During Public Witness Hearings

As with the public witness testimony on the NECEC's impact on scenic values, testimony on the Project's effects on recreational values was quite divided. With respect to CMP's position that the NECEC provides recreational value benefits related to snowmobiling, Mr. Bob Meyers, who is the Executive Director of the Maine Snowmobile Association, Inc. (MSA), presented testimony in support of this proposition, noting that the entire length of the new corridor would be open to snowmobile access,

thus, creating significant new opportunities for Maine residents and non-residents. Hallowell PWH Tr. at 44-46 (Oct. 17, 2018).

However, other members of the MSA testified that such benefits are illusory. For example, Tania Merrett and John Willard testified strongly against the proposition that snowmobilers would want to ride under a power line. *Id*. at 60-61.

Two other themes that were repeatedly addressed in public witness hearing testimony were the wild nature of the area and the broad appeal that the wilderness has for people. Tony Diblasi, a registered Maine Guide, testified to the natural splendor of the region and the wilderness river trips he has shared with people from around the world. The Forks PWH Tr. at 42 (Sept. 14, 2018).

Greg Caruso, a resident of Caratunk and owner of Maine Guide Services LLC, testified to his experience in guiding visitors who come to the region for whitewater rafting, hunting, and ATVing and snowmobiling. In particular, Mr. Caruso noted that visitors come to the region to get away from the modern industrial world, and that comments he has heard from thousands of visitors reinforce the importance of the region's beauty, remoteness, and silence. *Id*. at 118-120.

These comments were echoed by other public witnesses who articulated their concerns about the effect the Project would have on their own quality of life, as well as on the Maine economy. Witnesses noted that the economic impacts would be felt not only in the communities in proximity to the Project, but also statewide, citing the negative impact the Project would have on the "Maine Brand." Kate Stevens (Hallowell PWH Tr. at 121 (Oct. 17, 2018)); Monica McCarthy *(Id.* at 67-69); Beverly Hughey (The Forks PWH Tr. at 129 (Sept. 14, 2018)); Jan Collins (Farmington PWH Tr. at 104 (Sept. 14, 2018)); Heather Sylvester (The Forks PWH Tr. at 125 (Sept. 14, 2018)); Eric Sherman (*Id*. at 59).

3. CMP's Efforts to Mitigate the NECEC's Adverse Impacts on Scenic, Historic, and Recreational Values Through the Negotiation of an MOU with WM&RC

a. Background

CMP's mitigation efforts relating to the NECEC's detrimental effects on the host communities in Somerset County have focused on CMP's Memorandum of Understanding (MOU) with WM&RC and the placement of the transmission line under the Kennebec Gorge. On May 30, 2018, CMP and WM&RC entered into an MOU. CMP Exh. NECEC 25. In the MOU, WM&RC is identified as

> a Maine nonprofit public benefit corporation that was formed for the purpose of expanding conservation of the Kennebec, Dead, Sandy, Moose, Sebasticook and Carrabassett rivers; developing recreation projects; developing education

> programs about the history, ecology and uses of Maine's rivers; and expanding economic development opportunities along the rivers of Western Maine.

WM&RC MOU at 1, Section C.

The MOU provides that "CMP and WM&RC wish to establish a framework to mitigate any environmental, natural resource and community impacts of the Project and to provide additional economic development opportunities to Somerset County." *Id*., Section (D).

Section 4(a) of the MOU addresses the situation in which the Project crosses the Kennebec Gorge overhead and provides that, under such circumstance, CMP will provide WM&RC a lump sum of $22 million. Sections 4(a)(iii) and (iv) provide a breakdown of the $22 million that CMP will pay to WM&RC in the event of an overhead crossing, and state that CMP will:

> (iii) Contribute in a lump sum to the trust described in Section 4(c) $16,000,000 to support and enhance tourism and outdoor recreation in the Central and Northern Somerset County, including construction, operation and staffing of a visitor center, maintenance of trails, funding of education programs to improve the local tourism economy; WM&RC commits to leverage these grant funds to obtain funds from philanthropic donations, the local tourism bureau, local businesses and other sources to the maximum extent possible.
>
> (iv) Contribute in a lump sum to the trust described in Section 4(c) $6,000,000 to fund maintenance costs associated with the tourism infrastructure described in clause (iii) above and for continued funding of education and other programs to improve the local tourism.

Section 4(b) of the MOU addresses the situation in which the Project crosses the Kennebec Gorge underground and provides:

> (b) In the event that the Project is constructed such that it (i) crosses the Kennebec Gorge underground, (ii) crosses overhead at Harris Dam, or (iii) completes the Project by any other overhead or underground crossing of the Kennebec or Dead rivers, and subject to the Preconditions being met, CMP agrees to contribute in a lump sum to the Trust described in Section 4(c) to support the programs described in clause (a)(iii) above of at least $5,000,000, but in no case exceeding $10,000,000.

The MOU provides specific instructions regarding WM&RC's participation in the regulatory review process of the NECEC.

> At the request of CMP, WM&RC will provide written and/or oral testimony to one or more regulatory agencies with the power to issue one or more of the Required Approvals. The essence and extent of WM&RC's testimony will be that

> the mitigation packages for the crossings described in Sections 4(a) and 4(b) of this MOU are appropriate offsets to the environmental, natural resource and community impacts of the Project because the benefits of the packages to the region are substantial and long lasting.

Id. at 6, Section 7(a).

In its September 27, 2017 Petition, CMP included an NECEC Communications Plan (Communications Plan). CMP Exh. NECEC 9. The Communications Plan emphasizes such things as keeping key stakeholders well-informed through early and frequent outreach activities and building trust throughout the area where the Project will be built. CMP Petition at 88-89.

b. Positions of the Parties

The proponents and opponents of the NECEC are divided on CMP's efforts to mitigate the Project's detrimental impacts on scenic and recreational values. The proponents and opponents also differ on the sufficiency of CMP's outreach activities and CMP's communication efforts with key stakeholders regarding the negotiation and content of the MOU. Proponents and opponents disagree on the following aspects of CMP's MOU with WM&RC: (1) the legitimacy of WM&RC, (2) the sufficiency of funding provided by the MOU, and (3) the adequacy of the way MOU funds are allocated.

i. Proponents of the Project

CMP states that the MOU "was the result of extensive discussions with WM&RC representatives that began in Spring 2017 regarding the project's river crossing at the Kennebec River Gorge and Moxie Stream in Somerset County." CMP Initial Br. at 81. CMP summarizes the terms of the WM&RC MOU as follows:

> CMP has provided WM&RC with a $250,000 initial donation, and will, subject to the NECEC's receipt of all relevant regulatory approvals, provide additional annual grants of $50,000 to WM&RC for five years, to support WM&RC's charitable mission, including, in particular, the promotion of outdoor activities in central and northern Somerset County and the improvement of the current trail and track network in those areas. To ensure that the NECEC does not unreasonably interfere with or adversely affect existing scenic, aesthetic, recreational or navigational uses, CMP has also consulted with WM&RC on the design, construction, and ongoing maintenance plan for the NECEC in the vicinity of the Kennebec Gorge.
>
> As part of the MOU, CMP has also agreed to certain measures regarding relevant, CMP-owned land in the NECEC project area, including to negotiate in good faith with businesses operating on land leased from CMP regarding options to purchase such land, to consider making available for purchase land that is not essential for CMP's current or anticipated future needs, and to cooperate in good

> faith in facilitating access to the NECEC corridor for recreational uses, consistent with applicable law. In the event that CMP constructs the NECEC, the Company has also agreed to facilitate broadband, wide area Wi-Fi, and other enhanced communication services for the residents and business of Somerset and Franklin counties by laying an optical ground cable with multiple strands of fiber-optic cable, at CMP's sole expense. CMP has also agreed to additional mitigation measures based on the NECEC's proposed underground crossing of the Kennebec Gorge. The Company has established and will fund an irrevocable Maine charitable trust fund to support and enhance tourism and outdoor recreation in central and northern Somerset County and contribute a lump sum of at least $5 million, and as much as $10 million, to fund maintenance costs associated with such tourism infrastructure. All of these provisions provide real and tangible benefits to Somerset County.

Id. at 81-82.

Other proponents of the Project assert that the benefits included in the MOU are substantial and provide significant mitigation of any negative impacts to the host communities in Somerset County that may result from the NECEC. In its initial brief in this case, WM&RC describes the provisions of the MOU and the benefits the MOU would provide to the people of Somerset County. WM&RC concludes that the record supports a finding that the various financial and non-financial contributions offered by CMP under the MOU will likely provide additional economic development opportunities in western Maine and Somerset County. MW&RC Initial Br. at 8-9.

The Chamber argues that the MOU will provide robust economic development opportunities for the promotion of outdoor activities and tourism in that part of our State. Chamber Initial Br. at 5.

Regarding CMP's broader outreach and communications activities, CMP witnesses were questioned during the January 9, 2019 hearing about the adequacy of CMP's implementation of its Communications Plan. CMP witnesses stated repeatedly that CMP's pre- and post-filing outreach efforts were robust, that the outreach team was committed to complying with the requirements of the Communications Plan, and that, knowing what it knows now, CMP would not change the way it conducted its outreach efforts. Hearing Tr. at 115, 121-122 (Jan. 9, 2019).

ii. <u>Opponents of the Project</u>

Opponents of the Project are critical of CMP's MOU with WM&RC on four fundamental grounds. First, opponents question the legitimacy of WM&RC and whether it sufficiently represents the people in Somerset County who would be directly affected by the Project. Second, opponents argue that CMP has not done the analysis necessary to quantify the damage caused by the new corridor. Third, opponents assert that, notwithstanding CMP's failure to conduct any analysis of the monetary damage caused by the Project, it is clear that the amount offered by CMP in the MOU (between

$5 million and $10 million) is insufficient to offset the damages caused by the Project. Finally, opponents assert that the mitigation included in the MOU is not equitably distributed among those along the new corridor who will be most harmed by the Project.

Regarding the legitimacy of WM&RC, Caratunk asserts that the WM&RC is simply a shell organization created by CMP, noting that the MOU also requires WM&RC to proactively support NECEC in front of governmental bodies. Caratunk Initial Br. at 38.

Opponents also assert that CMP has not conducted a sufficient analysis to quantify the impacts of the proposed new corridor on scenic and recreational values and tourism. Relating the lack of analysis and quantification of the harm caused by new corridor to the adequacy of the benefits package contained in the MOU, Caratunk questions how a proper mitigation package could ever be determined. *Id*. at 27.

In questioning the adequacy of the MOU's funding for Somerset County residents, Caratunk notes the indefinite amount of funds being committed (somewhere between $5 million and $10 million) and complains that this uncertainty makes it difficult to evaluate the actual value of the mitigation package. Hearing Tr. at 75 (Jan. 9, 2019). Caratunk adds that the MOU is structured in a way that places primary emphasis on the crossing of the Kennebec Gorge and further notes that CMP's decision to underground that portion of the line substantially reduced the value of the mitigation package from a guaranteed amount of $22 million to a guaranteed amount of $5 million. Caratunk Initial Br. at 38. Caratunk asserts that this $5 million is insufficient to offset the damage caused by the Project to the people of Somerset County.

In addition to the MOU providing insufficient funding, Caratunk argues that the MOU is structured in a way that inequitably distributes those insufficient mitigation dollars. Speaking to the mismatch between the beneficiaries of the MOU and those who would be most harmed by the Project, Caratunk argues that funds should be directed to where the direct impacts will be. *Id*. at 27.

In addition to its criticism of the contents of the MOU, Caratunk also criticizes CMP for its failure to include any Caratunk Town officials in any of its negotiations with WM&RC regarding the MOU. Hearing Tr. at 112-113 (Jan. 9, 2019). Finally, Caratunk criticizes CMP's broader outreach and communications activities and its failure to comply with its Communications Plan. *Id*. at 116.

iii. Testimony Presented During Public Witness Hearings

Public witness hearing testimony relating to WM&RC and the MOU focused primarily on two issues: (1) whether WM&RC was representative of the affected local communities and (2) whether the MOU allocates mitigation funds to the proper people.

In their Procedural Order issued on September 6, 2018, the Examiners noted: "These public witness hearings are being held pursuant to Chapter 110, Section 8(B)(6) of the Commission's Rules to allow persons who are not parties in this case to present

testimony or argument to the Commission." Consistent with the September 6th Order, no person testified on behalf of WM&RC at any of the public witness hearings. But, there was a great deal of testimony critical of WM&RC and the MOU regarding each of the two issues. Witnesses testified that WM&RC does not speak for them, some even expressing feelings of betrayal. Ed Buzzell (Forks PWH Tr. at 78 (Sept. 14, 2018)); Julie Tibbetts *(Id*. at 82);

In the opinion of others, the MOU and the process that led to it was described as a "done deal" put together by CMP behind the scenes. Cecil Gray (Hallowell PWH Tr. at 30 (Oct. 17, 2018)); Former Senator Howard Trotsky *(Id*. at 160).

There was no testimony during the public witness hearings that explicitly referenced CMP's Communications Plan or whether CMP had complied with that Plan. However, there was testimony about CMP's trustworthiness, which the Plan noted as a goal for CMP to be achieved through its outreach and communications efforts in the affected communities. Several witnesses spoke critically of CMP's trustworthiness, citing presentations about the Project by CMP that were "deceptive" and meetings in which county commissioners and residents were told "half-truths". Vaughan Woodruff (Farmington PWH Tr. at 34-37 (Sept. 14, 2018)); Beverly Hughey (The Forks PWH Tr. at 130 (Sept. 14, 2018)); Former Senator Saviello (Farmington PWH Tr. at 7 (Sept. 14, 2018)); Eric Sherman (The Forks PWH at 49 (Sept. 14, 2018)); Kathy Barkley (*Id*. at 46); Pete Dostie (Hallowell PWH Tr. at 105 (Oct. 17, 2018)).

4. Balancing the NECEC's Impacts on Scenic, Historic, and Recreational Values with CMP's Mitigation Efforts

In addition to evaluating the Project's positive and negative impacts on the scenic, historic, and recreational values in and around the new corridor, and CMP's efforts to identify and mitigate the detrimental impacts of the Project, the Commission must also balance the totality of the impacts and mitigation to determine the NECEC's net impact on scenic, historic, and recreational values. Not surprisingly, the proponents and opponents of the Project have different positions on how the Commission should do the balancing and the results of that balancing activity.

a. Proponents of the Project

The proponents note that Section 3132 and Chapter 330 provide little guidance on how the Commission should weigh the various impacts of the Project and then compare and balance those impacts. CMP describes the process as "flexible," reflecting the context of the circumstances that exist at the time of the determination. CMP Initial Br. at 8. The IECG argues that the public interest balancing takes into account all relevant information contributing to the determination of whether the Project provides a positive net benefit to energy consumers. IECG Reply Br. at 16.

The IECG notes, further, that this case presents many benefits and detriments that are difficult to quantify and weigh. On this point, the IECG warns that "the complexity of many of the issues raised by the parties and the volume of such issues

have the potential to confuse the analysis and to obscure the value of benefits of NECEC that are substantial and indisputable." *Id.* at 2. The IECG adds that it "is confident that the Commission and its staff have the technical expertise to evaluate the record on these issues and to make appropriate findings, but the complexities are dwarfed by the indisputable." *Id.* The IECG notes that some issues are more difficult to quantify and argues that "rather than 'wandering into the weeds' to address these issues in significant detail," the Commission should stay focused on the more easily quantifiable benefits of the Project "that are known to exist with a high degree of certainty." *Id*.

WM&RC echoes the IECG's comments about the complexity of the issues relating to scenic, historic, and recreational values and argues that, with respect to in-depth assessments of the Project's impacts upon the natural environment and existing uses of lands, the Commission should defer to the Maine DEP and LUPC because they are the agencies charged to make such evaluations and have the expertise to do so. WM&RC initial Br. at 18. Notwithstanding its recommendation that the Commission defer on such issues, WM&RC concludes: "The Commission should find that any intrusions of the Project upon the scenic, historic and recreational values are not unreasonable and are outweighed by the benefits of the Project." *Id*.

b. Opponents of the Project

The opponents to the Project make two fundamental points regarding the balancing of the Project's beneficial and detrimental impacts. First, the opponents assert that CMP has failed to conduct sufficient analysis of the NECEC's detrimental impacts on the scenic, historic, and recreational values associated with the Project. Second, the opponents argue that, in spite of CMP's insufficient analysis, the record in this docket supports a finding that, on net, the NECEC is harmful to scenic, historic, and recreational values.

Regarding the sufficiency of CMP's analysis, Caratunk argues that CMP's failure to adequately examine the Project's impacts compromises the Commission's ability to weigh and balance those impacts. Caratunk Initial Br. at 42-43. Caratunk argues, nevertheless, that there is evidence in the record that shows how the NECEC will result in significant impacts to natural resources, and that it could cause economic harm to the local economy. *Id.*

NextEra makes a similar point, focusing on CMP's failure to analyze the possibility of placing the portion of the proposed transmission line from The Forks to the Canadian border underground. NextEra argues because of CMP's failure to provide any substantive evaluation of the scenic and recreational values impacted by NECEC for the 53 miles of greenfield forested corridor, its request for a CPCN should be denied. NextEra Initial Br. at 32-33

On the other hand, GINT argues that there is ample discussion in the record of the environmental harms that would be caused by NECEC, upon which the Commission can render a determination. GINT Initial Br. at 75.

5. Discussion

a. The NECEC's Impacts on Scenic Values

There was little discussion in this case regarding the portions of the NECEC that would lie within CMP's existing transmission corridor. The Commission's assessment on the Project's impacts on scenic values therefore focuses on the 53 miles of proposed new corridor that runs from the Canadian border in Beattie Township to the Town of Caratunk.

As noted above, some proponents of the Project characterize the proposed 53-mile corridor as a heavily-harvested working forest that cannot be considered "wilderness." Some opponents refer to the area in question as "pristine." The record suggests that the truth lies somewhere between these two characterizations.

The proposed new corridor would run through a well-managed working forest. That fact is not in dispute. However, the record also confirms that this area has special qualities that are treasured by residents in the area, as well as important to visitors that come to the area to recreate and enjoy its beauty, solitude, and remoteness.

As the testimony indicates, well-managed working forests that are clear-cut grow back, while the proposed new corridor would be cleared and maintained in a way that will not allow it to regenerate. The NECEC would result in the clearing of over 970 acres of land and the transmission line would cross streams, impact wetlands, and have an impact on the flora and fauna in and around the new corridor. The average pole height along the new transmission corridor would be 100 feet tall. Thus, the Commission finds that the Project will have an adverse impact on local scenic values.

The record does not allow the Commission to quantify the NECEC's potential impact on scenic values. However, it is important to note that the NECEC's proposed route is on private land which CMP owns or controls, including existing corridors for 73% of the Project's length. With respect to suggestions that the line should be underground rather than overhead, CMP considered the overhead solution as potentially lower impact given the environmental issues related to burying significant portions of the line underground. In addition, CMP incorporated the following design features to limit the Project's impact on scenic values:

- Adopting a perpendicular crossing to minimize visual impacts from approaching traffic, where the NECEC route intersects U.S. Route 201;

- Distancing the transmission corridor from major access roads, and, where possible, providing for a vegetative screen between the corridor and access roads;

- Siting the NECEC in mountain notches (as opposed to atop mountain peaks) to minimize visual impacts for those in the area, where the project route crosses high elevations, including in the area around Coburn Mountain;

- Installing taller pole structures where the project route crosses Gold Brook in Appleton Township to allow for full height canopy and thus minimize impacts to conservation management areas associated with the Roaring Brook Mayfly;

- Using "tapering" vegetation management methods that will soften the appearance of corridor visible from Rock Pond;

- Using roadside buffers to mitigate visual impacts in the locations in which the NECEC will cross U.S. Route 201 in Johnson Mountain Township and Moscow;

- Using specific vegetation management practices to reduce impacts within the Kennebec Deer Wintering Area, rare species conservation management areas at Mountain Brook in Johnson Mountain Township and Gold Brook in Appleton Township, and Rusty Blackbird habitat areas; and

- Using shorter, 75-foot poles, in the vicinity of Moxie Pond.

CMP Exceptions to Examiners' Report at 9-11.

Based on the record, the Commission concludes: (1) the scenic value of the area through which the proposed new corridor would run is substantial; (2) the running of an overhead transmission line through this area would have an adverse impact on the scenic value of the area; (3) the Commission is unable to quantify the adverse impact of the NECEC on the scenic value within the area in question; and (4) the DEP and the LUPC, the agencies with expertise in these matters, will conduct expert reviews of the scenic impacts of the NECEC and will, to the extent appropriate and feasible, mitigate these effect through their own proceedings.

b. <u>The NECEC's Impacts on Historic Values</u>

The question of the NECEC's impact on historic values received little attention by the parties. As required by Section 3132(2-C)(A), CMP included a description of the effect the Project would have on historic values in its September 27, 2017 Petition. No party in this case offered testimony on this issue and the issue was not directly addressed by any of the people who testified during the three public witness hearings in this case.

Based on the limited record in this case on this issue, the Commission finds that the NECEC will not have an adverse impact on historic values in the area through which it passes.

c. The NECEC's Impact on Recreational Values

As with the Commission's consideration of the NECEC's impact on scenic values, the consideration of the Project's impact on recreational values focuses primarily on the portions of the 53 miles of proposed new corridor that attract tourists and outdoor enthusiasts. The record indicates that the recreational activities that currently take place in the affected area are many and diverse. A partial list of these recreational activities includes: fishing, hunting, birding, moose watching, leaf-watching, star gazing, hiking, camping, rafting, tubing, canoeing, kayaking, snowmobiling, ATVing, skiing, taking photos, swimming, rejuvenating, and relaxing. The record further indicates that visitors come to this area to engage in these, or other, forms of recreation. Finally, the record indicates that the beauty, remoteness, and undeveloped character of the region contribute to its value as a recreational destination.

The record supports a finding that the perpetually-cleared corridor, and the transmission line located in that corridor, will have an adverse impact on the recreational values in the area in question and, a corresponding impact on tourism and the economy in the host communities.

As with NECEC's impact on scenic values, CMP did not attempt to analyze or evaluate the Project's impacts on recreational values and the potential effects on tourism and the local economy. As part of its initial Petition, CMP included the USM Study titled "The Economic and Employment Contributions of the New England Clean Energy Connect in Maine" (USM Study).[29] While the USM Study does address several macroeconomic issues relating to the NECEC, it does not consider, or attempt to quantify, the effects of the Project on recreational values, or, more specifically, the micro-impact the Project would have on the tourism industry in the host communities. None of the other studies and analyses filed in this case attempts to quantify the Project's impact on tourism in the affected area. Therefore, the record in this case does not include information that would allow for the quantification of the NECEC's impacts on recreational values and the Commission is left with the task of evaluating such impacts in general terms.

[29] CMP Exh. NECEC No 7. The Executive Summary of the USM Study indicates that CMP commissioned MCBER to "to estimate the employment and other economic development impacts provided by the NECEC Project." USM Study at 1. Based on its analysis, MCBER found that "Maine ratepayers and communities will benefit from a reduction in electricity rates and the development, construction, and operations of the NECEC will support significant employment and other economic development impacts in Maine." *Id*.

Based on the record, the Commission concludes (1) the current recreational value of the area through which the proposed new corridor would run is substantial; (2) the NECEC will adversely affect this value; (3) the NECEC's impact on recreational value would have a corresponding impact on tourism and the economy in the host communities; (4) the record does not support the assertion that increases in snowmobile riding or other recreational activity in the new corridor would offset these detrimental effects; (5) the Commission is unable to precisely quantify the extent of the adverse impact the NECEC would have on recreational values of the area in question; and (6) the DEP and the LUPC, the agencies with expertise in these matters, will conduct expert reviews of the recreational impacts of the NECEC and will, to the extent appropriate and feasible, mitigate these effects through their own proceedings .

d. CMP's Efforts to Mitigate the NECEC's Adverse Impacts on Scenic, Historic, and Recreational Values[30]

There are two sets of issues relating to CMP's mitigation efforts regarding the people of Somerset County. First, the Commission must consider such things as the composition of the WM&RC, and if it adequately reflected the interests of key stakeholders in Somerset County, and the extent to which some stakeholders were excluded from discussions that resulted in the MOU.

The record indicates that CMP's negotiations of its mitigation package for Somerset County took place with a small number of people representing a relatively narrow set of interests. Several key stakeholders, including the Town of Caratunk, were not given an opportunity to see or comment on preliminary drafts of the MOU. There is nothing in the record that adequately explains the reason for this omission.

The second set of issues relating to CMP's mitigation efforts regarding the people of Somerset County that the Commission must consider relates to the specific terms of the MOU and the amount and allocation of mitigation they provide. The MOU provides for:

- A $250,000 initial donation and additional annual grants of $50,000 to WM&RC for 5 years, to support WM&RC's charitable mission, including, in particular, the promotion of outdoor activities in central and northern Somerset County and the improvement of the current trail and track network in those areas;

- The creation of an irrevocable Maine charitable trust fund to support and enhance tourism and outdoor recreation in central and northern Somerset County and contribute a lump sum of at least $5 million, and as much as $10 million, to fund maintenance costs associated with such tourism infrastructure;

[30] CMP's mitigation, outreach, and communications activities discussed in this section address only the process and outcome related to the MOU with WM&RC and the decision to cross the Kennebec Gorge underground, and do not address either the process or outcome related to the February 21, 2019 Stipulation.

- Options to purchase CMP land;
- Access to portions of the corridor; and
- Access to broadband, Wi-Fi and other enhanced communications services to the people of Somerset and Franklin counties.

Although not part of the MOU, CMP has also agreed to the underground crossing of the Kennebec Gorge as part of its impact mitigation in that area.

It is clear that the MOU provides significant and quantifiable benefits. Less clear is how the funds from the MOU will ultimately be spent and who the primary and secondary beneficiaries of those funds will be. It is also evident that the undergrounding of the Kennebec Gorge crossing has positive value, though it is difficult to quantify that value.

In addition to CMP's failure to include key stakeholders, such as the Town of Caratunk, in the MOU process, the Commission finds that CMP's overall outreach and communications activities regarding the Project did not comply with its Communications Plan, which provides that "it is essential to provide clear information, address any concerns, offer Project updates and build trust throughout the area where the Project will be built;" that "interested members of the public want to feel engaged and have their concerns noted and validated by the Project team;" and that such a strategy "leads to the development of meaningful and valuable relationships built on mutual understanding, trust and respect." CMP Exh. NECEC 9 at 2 and 8.

When CMP witnesses were questioned about the adequacy of CMP's implementation of the Communications Plan, they stated repeatedly that CMP's outreach efforts were robust and that the outreach team was committed to complying with the goals reflected in the Communications Plan. Hearing Tr. at 115, 119, 121-122 (Jan. 9, 2019).

However, the record includes substantial criticism about CMP's communications efforts. The criticism accuses CMP of failing to provide some key stakeholders with accurate and timely information about the Project, failing to be transparent, failing to build trust throughout the area, and failing to develop relationships among the affected community that is built on mutual respect.

However, notwithstanding this criticism, Mr. Dickinson stated repeatedly during the January 9th hearing that he is either "incredibly proud" or "very proud" of the outreach team and its efforts on this Project and that, in spite of this criticism, "I can't point to a specific thing that we would do differently." *Id*. Such a response suggests a strong disconnect from the views of members of the host communities and appears at odds with the results achieved by CMP's Communications Plan.

Thus, based on the record in this proceeding, the Commission concludes (1) with respect to some stakeholders, CMP failed to comply with several of the core goals of its Communications Plan; (2) CMP's after-the-fact view of its success in complying with its Communications Plan appears unrealistic; and (3) whether intentional or not, CMP's failure to reach out to, and communicate with, certain key stakeholders compromised those stakeholders' ability to understand the details of the NECEC, evaluate the Project's negative impacts on scenic and recreational values along the proposed new corridor, and to participate in discussions relating to the mitigation of those negative impacts.

In addition to these findings, as noted above, there are a significant number of people in this proceeding who have questioned CMP's trustworthiness.[31] The assertion that CMP has not been forthright with respect to the NECEC is reflected in the arguments of several opponents to the Project, the testimony of numerous people at the public witness hearings, and the majority of the more than 1,350 public comments the Commission has received in this case.

e. Balancing the NECEC's Impacts on Scenic, Historic, and Recreational Values with CMP's Mitigation Efforts

There are qualitative and quantitative differences between (1) the scenic, historic, and recreational values that are under consideration in this Section of the Order and (2) other factors listed in Section 3132(6), such as economic, reliability, state renewable energy generation goals, and alternatives to construction of the transmission line, that are discussed elsewhere in this Order. The unquantifiable and subjective nature of the NECEC's impact on scenic, historic, and recreational values reverberates repeatedly throughout the arguments of several parties and the testimony provided at each of the three public witness hearings held in this case. Testimony provided at those hearings clearly demonstrates that the assessment of the Project's impact on scenic, historic, and recreational values varies dramatically depending on, among other things, the identity and experience of the commenter. Moreover, the scenic, historic, and recreational impacts of the NECEC are relatively localized, whereas other impacts, such as the market price benefits discussed elsewhere in Section V of this Order, are much broader, if not statewide.

As noted above, neither CMP, nor any other party, provided evidence that would allow the Commission to quantify the NECEC's impact on these values. As a result, the weighing and balancing of the Project's impact on scenic, historic, and recreational values must necessarily be subjective.

Based on the record in this case and the above discussion, the Commission finds that the NECEC will have adverse impacts on the scenic and recreational values in

[31] There is also some inevitable confounding of unrelated CMP billing and outage matters with any NECEC concerns in some public witness testimony and some public comments with regard to CMP's "trustworthiness."

certain communities in Somerset and Franklin counties, as well as the associated tourism and recreation-based economy in these communities. The Commission also finds that the benefits represented by the MOU and the undergrounding of the line at the Kennebec Gorge are positive and offset the adverse impacts to some extent.

E. Proximity to Inhabited Dwellings

Section 3132(2-C)(A) directs the applicant for approval of a CPCN to include in its petition, among other things, "[a] description of the effect of the proposed transmission line on… the proximity of the proposed transmission line to inhabited dwellings."[32] Section 3132(6) directs the Commission, in determining public need for a proposed project, consider "the proximity of the proposed transmission line to inhabited dwellings."

The issue of the NECEC's proximity to inhabited dwellings received little discussion in this case. Addressing this issue, CMP asserts that its design of the project route also reflects its diligent efforts to avoid impacts on inhabited dwellings. Foremost, CMP sited approximately 73% of the NECEC within existing transmission corridor owned by CMP. Where the Company was unable to site the project within existing corridor, CMP conducted due diligence on necessary real estate purchases and sited the project within newly acquired corridor nearby few, if any, inhabited dwellings. Following this approach, the NECEC route runs almost exclusively on privately-owned, commercial forestland containing few, if any, nearby inhabited dwellings. During the discovery phase of this proceeding, CMP provided written responses to data requests on this issue in at least two instances. Other parties neither offered these data responses as record evidence nor presented any testimony on this subject. CMP Initial Br. at 128-129.

No party in this case offered testimony on this issue and the issue was not directly addressed by any of the people who testified during the three public witness hearings in this case. Based on the limited record in this case on this issue, the Commission finds that CMP has designed the Project in a way that results in sufficient distance between the proposed transmission line and inhabited dwellings.

F. State Renewable Energy Goals

1. Incremental Hydroelectric Generation and GHG Emissions

As discussed in Section IV(D) above, the Commission finds that incremental hydroelectric generation for delivery into New England promotes the State's renewable energy generation goals. At issue, then, is whether the NECEC will result in incremental hydroelectric generation and, thus, advance the State's renewable energy

[32] As required by section 3132(2-C)(A), CMP included a discussion of the proposed transmission line's proximity to inhabited dwellings in its September 27, 2017 Petition. CMP Petition, Vol. 1, at 69-70.

generation goals, including GHG emissions reductions.[33] As discussed below, this issue involves consideration of: (1) whether there would be excess water within the HQ system that could be used to generate energy as a result of the NECEC export path; (2) whether it is reasonably likely that HQ will develop additional hydroelectric capacity on its system, at least to some significant degree, as a result of the NECEC; and (3) if HQ did divert energy from another market to meet its NECEC obligations, as has been argued by some parties, what type of supply would that other market use to replace the diverted HQ energy.

a. Positions of the Parties

CMP and IECG argue that HQ Production currently has excess energy available to supply the NECEC without diverting energy from other markets. CMP Initial Br. at 98-110; IECG Initial Br. at 35-38. In support of this, these parties cite to publicly available information, as well as to a letter in which Hydro-Québec states that it spilled over 4.5 TWh worth of energy in 2017 and 10.4 TWh worth of energy in 2018 due to lack of economic transmission, and that without additional transmission export capability, the quantity of spilled water in future years is expected to be comparable. CMP Initial Br. at 108-109; Kelly-004-001. CMP and IECG note, further, that that the PPAs between HQUS and the MA EDCs are firm contracts that impose significant financial consequences for failure to perform to provide incremental energy. CMP Initial Br. at 138-150. CMP also argues that the NECEC will contribute to HQ Production's economic incentives to develop new hydroelectric facilities. *Id*.

Moreover, CMP states that all three analyses conducted in this case regarding the NECEC's GHG reduction benefits show that the Project's operation would result substantial GHG reductions for Maine. CMP Initial Br. at 102-104. Specifically, CMP refers to the Energyzt analysis[34] that found that the NECEC would reduce Maine GHG emissions levels by approximately 255,000 metric tons per year, the Daymark analysis that found that the NECEC would result in reductions of 264,000 metric tons per year, and the LEI analysis that found that the NECEC would reduce Maine's GHG emissions levels by approximately 306,000 metric tons per year. On a regional level, these amounts are equivalent to GHG emissions reductions of between 3.0 and 3.6 million metric tons per year. According to LEI, such reductions are equivalent to removing approximately 700,000 passenger vehicles from the road. LEI Report at 30.

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[33] Regarding the issue of potential increases in CO_2 emissions from the HQ facilities, as noted in the LEI Report, on a lifecycle basis, any such increases would be substantially lower than emissions by natural gas generation. LEI Report at 30.

[34] The Energyzt analysis also concluded that the NECEC would result in increases in GHG emissions in other regions (New York, PJM, Ontario) and may actually increase overall emissions. Speyer Dir. Test., Exh. JMS-4, Technical Report: New England Clean Energy Connect (NECEC) Regional Carbon Emissions Impacts at 3 (Apr. 2018).

GINT, NextEra, NRCM, and Ms. Kelly argue that the NECEC would not have any meaningful GHG reductions benefits, and, in fact, would increase GHG emissions because HQ Production would divert energy from other regions to serve its obligations under the NECEC. GINT Initial Br. at 71-73; NextEra Initial Br. at 15-19; NRCM Initial Br. at 14-16; Kelly Initial Br. at 9-11. GINT and NextEra support this position by asserting that the PPAs with the MA EDCs do not actually require HQ Production to fulfil its obligations with incremental hydroelectric generation GINT argues that HQ Production spilled water for reasons other than those stated by Hydro-Québec, arguing that Hydro-Québec has more than enough physical transmission available to export that energy to market. GINT Initial Br. at 70-73. GINT asserts, based on the testimony of Ms. Bodell and Mr. Fowler,[35] that because Hydro-Québec did not do so, that there were other non-transmission constraints that led to the spillage (*e.g.*, reservoir management, multi-year smoothing, opportunity cost). *Id.*

b. Discussion

The Commission concludes that the NECEC will result in significant incremental hydroelectric generation from existing and new resources in Québec and, therefore, will result in reductions in overall GHG emissions through corresponding reductions of fossil fuel generation (primarily natural gas) in the region. In making this decision, the Commission recognizes the inherent uncertainty in determining how HQ Production will develop and operate hydroelectric facilities over the next 20 years and beyond; thus, the levels of incremental hydroelectric generation and GHG reductions resulting from the NECEC cannot be precisely determined.[36]

In support of this conclusion, the Commission observes the representations made by Hydro-Québec in Kelly-004-001 that it was a lack of transmission that resulted in the spilling of a substantial amount TWh in 2017 and 2018 (4.5 TWh worth of energy in 2017 and 10.4 TWh worth of energy in in 2018). Hydro-Québec represented, further, that, "without additional transmission export capability," a comparable amount of water will be spilled in future years. *Id.* This conclusion is supported by both the Daymark and LEI analyses, as well as through LEI's testimony stating that HQ Production has surplus capacity and the NECEC will provide a means to sell that surplus capacity into New England. CMP Exh. NECEC-5 at 4; LEI Report at 12; Hearing Tr. at 127-128 (October 19, 2018). The Daymark and LEI testimony, thus, corroborate the Hydro-Québec statements in this regard.

[35] Corrected Fowler and Bodell Supp. Test. at 53-54.

[36] Hydro-Québec did not seek to intervene or participate in this proceeding. The Commission notes that such participation would have been helpful in understanding its prior and near-term operations. However, the operations over 20- to 40-year period would have remained uncertain to a large degree.

Furthermore, HQ Production, as a rational economic actor, will seek to maximize profits, and therefore will use whatever water it has available to generate energy for the NECEC rather than using the NECEC to divert energy from existing markets into New England. In addition, the Commission agrees with CMP that HQ Production has systematically increased capacity and storage capability over time in response to market signals for more clean energy. Dickinson, Stinneford, and Escudero Reb. Test. at 30-35 and Figures 4 and 5; CMP Initial Br. at 107. Thus, the Commission finds that the generation imported into New England over the NECEC is likely to be incremental at least to a large degree, and not, in any significant way, be simply diverted from other markets.[37]

With respect to Ms. Bodell's analysis that concluded that HQ Production's spillage was due to factors other than transmission availability, the Commission notes that it was based on one-year (2017) of data and did not account for numerous material factors regarding the actual available transmission capacity and market conditions that actually determine whether it would be economic for HQ Production to sell available additional energy into New England or some other export market. Hearing Tr. at 55-83 (Jan. 8, 2019).

Further, the Commission notes that, because the PPAs between HQUS and the MA EDCs are firm contracts, that, except for a *force majeure* or transmission outage, HQUS is required to sell and deliver the specified amounts of energy. If it fails to do so, it will incur significant financial consequences for failure to perform. The PPAs do not permit HQUS to choose non-performance for economic reasons (*i.e*., to sell available energy into an adjoining spot market in one or more hours in which the spot price in the market exceeds the PPA price for the Products) and to then cure the resulting delivery shortfall at a later time. Moreover, a willful breach of the PPAs would subject HQUS to substantial termination payments being owed to both the MA EDCs and CMP, and would also result in substantial reputational damage to HQUS, and its parent Hydro-Québec, that would hinder future business relationships with current and prospective purchasers of hydropower generation in the region.

Therefore, because the Commission finds that the NECEC will result in incremental hydroelectric generation, it follows that the Project will also provide GHG emissions reduction benefits in the region. As noted above, the expert analyses provided in the record in this proceeding indicates that the GHG emission reductions in the region resulting from the NECEC would be in the range of approximately 3.0 to 3.6 million metric tons per year, which as noted above, is equivalent to removing approximately 700,000 passenger vehicles from the road.

2. Renewable Generation Development in Maine

[37] The Commission notes that, even if significant power were to be diverted from New York, that State's renewable energy power policies goals would likely limit to a large degree replacement of the power with fossil fuels. CLF-002-003.

a. Positions of the Parties

NextEra, RENEW, and NRCM argue that the NECEC will prevent the development of renewable energy generation in western Maine. NextEra Initial Br. at 16-19; RENEW Initial Br. at 4-6; NRCM Initial Br. at 8-9. Specifically, these parties argue that, in the event that CMP constructs the Surowiec-South interface upgrades as required, and the NECEC proceeds, the Project will "use up" the existing "headroom" at that interface to the detriment of future Maine-based renewable projects. For this reason, RENEW suggests that the Commission condition issuance of a CPCN for the NECEC on limiting the amount of import capacity that it can seek to qualify in the FCM so as not to disadvantage Maine-based renewable generation development. RENEW Initial Br. at 2-6.

NextEra argues that if the NECEC was constructed as an AC transmission facility rather than a DC facility, the NECEC would be congruent with Maine's renewable energy generation goals. NextEra Initial Br. at 34-38. NextEra also argues that, if the NECEC were an AC facility, Maine-based solar and wind projects could use the line by buying transmission rights from HQUS for the 110 MWs of unused transmission in years 1-40 and 1,090 MWs of unused transmission in years 21-40. *Id.*

CMP argues that that the NECEC will have no impact on renewable generation ahead of it in the interconnection queue and that there is no record evidence to support the claims that the NECEC will impede the development of renewable generation projects that are behind it in the interconnection queue. CMP Initial Br. at 116-122; CMP Reply Br. at 47-54. CMP states, that in fact, the NECEC's transmission system upgrades will likely render it cheaper for renewable generation in western and northern Maine to interconnect to the regional transmission grid, which is an additional benefit to generation developers. *Id*. In response to NextEra's argument that a significant portion of the NECEC should be HVAC transmission, CMP states that the use of additional HVAC transmission would result in: (1) the use of larger, unsightly transmission structures; (2) a more expensive project; and (3) higher transmission losses. CMP Reply Br. at 57-59.

b. Discussion

In Section V(A) above, the Commission discusses the impact of the NECEC on existing Maine generators, as well as on the development of new generation facilities in Maine. In that section, the Commission finds little merit to the concerns that the NECEC would frustrate Maine-based renewable energy development by absorbing "headroom" on the transmission system. Accordingly, the Commission concludes that NECEC will not hinder Maine in making progress towards meeting its statutory renewable portfolio requirements and the goals under the Maine Wind Energy Act and Maine Solar Energy Act.

The Commission agrees with CMP that the NECEC will have no impact on any proposed renewable generation projects in Maine with a better interconnection queue

position. As noted above, there are currently more than 750 MW of renewable capacity in Maine ahead of the NECEC in the queue. For projects that are behind NECEC in the queue or are not yet in the queue, whether these projects move forward depends on numerous factors, including the results of ISO-NE's planning studies, the economic viability of each project, and the availability of PPAs that may be necessary for the financing of such projects.

The Commission notes that the NECEC could facilitate renewable generation in Maine in that it will provide for additional transfer capacity at no cost to future generation developers if, as argued by several parties, the NECEC does not qualify in the FCM, or qualifies less than 1,200 MW.

In addition, as described in Section II(C) above, the NECEC requires construction of several reinforcements to the transmission system south of Larrabee Road, including a parallel 345 kV line between the Coopers Mills Road Substation and the Maine Yankee Substation. The ISO-NE has identified certain of these upgrades, including the new Coopers Mills line, as necessary to the interconnection of new renewable generation in western and northern Maine.[38] Because the costs of these reinforcements will be borne by the NECEC, future renewable generation projects may benefit from the fact that they already exist at the time their projects seek to interconnect.

For these reasons, the Commission rejects RENEW's suggestion that the Commission limit the amount of NECEC-enabled capacity for participation in the capacity market and "reserve" that amount for certain generation types or projects. Such a condition would not be in the public interest and would be contrary to the first-come, first-served design of the ISO-NE interconnection queue and study process.[39]

VI. REVIEW AND DISCUSSION OF STIPULATION

A. Stipulation Provisions

The major provisions of the Stipulation include the issuance of a CPCN for the NECEC and a set of "CPCN Conditions" that contains benefit provisions in various categories. Specifically, certain CPCN Condition provisions provide ratepayer protections against costs and financial risks associated with the Project or are intended

[38] CMP-010-006, Attachment 1 (2016/2017 Maine Resource Integration Study) at 3 (identifying a "second 345 kV Coopers Mills – Maine Yankee 302 line" as a shared requirement for interconnection of both the northern and western Maine clusters).

[39] CMP argues that a condition that an amount of NECEC-enabled capacity eligible for participation in the capacity market be "reserved" for other generation projects is preempted by federal law in that the Federal Power Act vests in FERC "exclusive jurisdiction over wholesale sales of electricity in the interstate market." Because the Commission finds that such a condition would not be in the public interest, it need not address the preemption issue.

to reimburse ratepayers for prior costs associated with the Project and to compensate ratepayers for the benefits provided to the Project. Additionally, certain provisions provide a series of public benefits through funding of various initiatives and commitments. The Stipulation also includes various additional commitments by the Project sponsors. Each of the CPCN Condition provisions is described below.

1. Ratepayer Protections and Compensation

a. NECEC Project Ownership

The Stipulation includes a condition that CMP will convey the Project to NECEC Transmission LLC (NECEC LLC), a newly-organized subsidiary within the Avangrid Networks that is not a subsidiary of CMP. Stip. Sec. V.B.1. Upon the transfer, CMP and NECEC LLC will enter into a Service Agreement which contains the provisions under which CMP will provide various services to NECEC LLC, including accounting, legal, information technology, other corporate support, supply chain and engineering services. Stip. Sec. V.B.1.c. In addition to the transfer of the Project, the Stipulation provides for the following:

- The transfer of the Project from CMP to NECEC LLC will occur prior to the start of construction;

- NECEC LLC will not participate in any money pooling arrangements, credit facilities or other financing agreements with CMP without Commission consent;

- NECEC LLC and CMP will remove NECEC-related development expenses from CMP's books;

- NECEC LLC will put in place a guaranty by AVANGRID, Inc. of its payment obligations to CMP and with respect to the Heat Pump Fund, the Dirigo EV Fund, the Franklin County Host Community Benefits Fund and the Education Grant Funding. In addition, NECEC LLC will grant a first priority security interest to CMP in NECEC LLC's payment rights from HQUS or Hydro-Québec with respect to the Low-Income Customer Benefits Fund and the Rate Relief Fund;

- NECEC LLC and CMP will facilitate access to the NECEC transmission corridor for ATV, snowmobile, and other recreational uses;

- NECEC LLC will not use CMP's brand name, reputation or customer relations and will not engage in joint marketing or advertising with CMP;

- Maine transmission and distribution customers shall not be responsible for any portion of the revenue requirement for the Project during at least the first 40 years of its useful life;

- CMP and NECEC LLC will not take or support any action to change the NECEC cost recovery mechanism that would result in Maine customers being responsible for any portion of NECEC LLC's revenue requirement during the first 40 years of the Project without Commission approval; and
- Provided, however, that these provisions would not prohibit Maine customers from paying for a portion of the Project through the purchase of electricity provided through the 110 MW not contracted by the Massachusetts EDCs.

Stip. Sec. V.B.1.d.

b. Consideration Payment

As consideration for the transfer of the Project assets and any goodwill of CMP related to the Project, NECEC LLC will pay CMP $60 million, payable in 40 installments of $1.5 million annually. CMP will direct these payments to the NECEC Rate Relief Fund described below. Stip. Sec. V.B.1.b.

c. Transmission Rates Customer Credit

Effective with the 2019 transmission rate change, CMP will provide a one-time credit for RNS and LNS transmission customers of $1.005 million. This credit represents the amounts paid in rates by transmission customers for those portions of the transmission corridor held by CMP that have been included in FERC Account 105 for Plant Held for Future Use. CMP will remove all NECEC-related property from FERC Account 105 upon issuance of the CPCN. Stip. Sec. V.B.2.

d. New Corridor Removed from Transmission Rates

Upon issuance of the CPCN, CMP will remove the unused portion of the transmission corridor from the Canadian border to the existing Section 222 from Account 105 and classify it as Non-Operating Property in FERC Account 121. CMP agrees that it will not reclassify this unused corridor or seek recovery in any other way unless the transmission project that will use this corridor is otherwise eligible for rate recovery from Maine retail customers pursuant to a FERC-approved transmission tariff. Stip. Sec. V.B.3.

2. Public and Ratepayer Benefits

a. Low-Income Customer Benefits Fund

Beginning with the NECEC commercial operations date (COD), NECEC LLC will fund a $40 million Low-Income Customer Benefits Fund by making 40 annual payments of $1.25 million. This fund will be available to fund programs that benefit low-income energy customers in Maine and may be used to reduce the amounts paid by low-income customers for electricity or other sources of energy, for weatherization and household efficiency programs. The specific use of these funds will be as designated by the OPA in consultation with the Efficiency Maine Trust (EMT) and a designee of the

Governor. In designating the use of these funds, a preference for customers located in the NECEC Host Communities may be applied. Stip. Sec. V.B.4.

b. Rate Relief Fund

Effective with the NECEC COD, a $140 million Rate Relief Fund will be established to provide per kilowatt hour rate relief for CMP's retail customers. As noted, CMP will direct the annual $1.5 million consideration payment received from NECEC LLC to this fund. NECEC LLC will provide an additional $2 million annual payment. The Rate Relief Fund will be funded over 40 years and will flow to ratepayers through stranded costs or comparable per kilowatt hour mechanism. In addition, to the extent that CMP is able to monetize the Environmental Attributes discussed in Section VI.A.3.d, those funds will also be contributed to the Rate Relief Fund. Stip. Sec. V.B.5.

c. Broadband Benefits

As part of the final design, CMP and NECEC LLC will include facilities and equipment necessary to provide additional fiber optic capacity on the transmission line with an estimated value of $5 million. In addition, beginning with COD, a $10 million Broadband Fund will be established and funded by five annual contributions of $2 million by HQUS. This fund may be used for grants to study and implement expanded availability of high speed broadband in the host communities. Stip. Sec. V.B.6.

d. Heat Pump Benefits

Beginning with COD, a $15 million Heat Pump Fund will be established and funded by annual contributions over 8 years of $10 million by HQUS and $5 million by NECEC LLC. This fund will be used for the installation of heat pumps or other efficient heating technologies as agreed to by the OPA, the Governor's designee(s), CLF, Acadia Center, and IECG in consultation with EMT. Stip. Sec. V.B.7.

e. Electric Vehicle (EV) Funds

The Stipulation provides for two EV funds. The $5 million Dirigo EV Fund, to be funded either by a lump sum contribution or over time by NECEC LLC beginning in the year NECEC LLC and Hydro-Québec receive all necessary permits. This Fund will provide consumer rebates for the purchase of qualifying EVs by Maine residents and rebates to defray the cost of workplace and other public vehicle charging installations and be managed pursuant to an agreement among CLF, Acadia Center, and the Governor's designee. Stip. Sec. V.B.8.a.

The $10 million Hydro-Québec EV Fund will be funded through five payments of $2 million annually from HQUS beginning on COD. This Fund will be used to fund the deployment of a state-wide fast and ultra-fast public charging infrastructure network for EVs in Maine. In addition, Hydro-Québec commits to share its expertise with respect to EV infrastructure in developing the programs funded by the Hydro-Québec EV Fund. Stip. Sec. V.B.8.b.

f. Franklin County Host Community Benefits

Beginning with COD, a $5 million fund for the benefit of communities in Franklin County will be established and funded by ten annual contributions of $500,000 by NECEC LLC. This fund will be used to support the economic and community development efforts of the Greater Franklin Development Council. Stip. Sec. V.B.9.

g. Education Grant Funding

NECEC LLC will provide a total of $6 million for education-related grants and programs. NECEC LLC will contribute $1 million to the University of Maine for research and development associated with the commercialization of marine wind generation technology once all State of Maine permits and approvals are received. Stip. Sec. V.B.10.a. Beginning with COD, NECEC LLC will make 10 annual contributions of $500,000 each to fund programs and scholarships for needy Maine students to attend the University of Maine at Farmington and vocational and training programs and scholarships in the math, science and technology fields in Franklin and Somerset Counties. Stip. Sec. V.B.10.b.

3. Other Commitments

Finally, the Stipulation contains the following additional commitments on the part of CMP and NECEC LLC.

a. Mitigating Impacts on Transmission System

In the Stipulation, CMP and NECEC LLC agree to a number of initiatives intended to mitigate the impacts of the NECEC on the transmission system and existing and future energy resources in Maine. Stip. Sec. V.B.11. These provisions are conditioned on the NECEC receiving a CPCN and all other necessary approvals and include commitments by CMP and NECEC to:

- Participate in all ISO-NE studies to determine the thermal, voltage and stability ratings for the Surowiec-South interface and advocating to maximize its stability rating and the total transfer capacity;
- Engage a consultant at CMP's expense, not to exceed $2 million, to evaluate non-wires solutions that would reduce congestion at the Maine/New Hampshire and Surowiec-South interfaces;
- For any cost-effective and commercially viable non-wires solution identified, assess and pursue approval and cost allocation pursuant to the ISO-NE Tariff and to propose such solutions in applicable competitive solicitations; and
- Within one year of COD, create and make available an annual electric transmission and distribution system report which analyzes system needs that may potentially be met by non-wires alternatives.

Id.

b. Regional Carbonization

Conditioned upon the NECEC receiving a CPCN and all other necessary approvals, CMP and NECEC LLC will participate in a regional decarbonization

collaborative comprised of CLF, Acadia Center, utilities, the Governor's designee, OPA, IECG, and other stakeholders to study ways by which the Northeast Region may achieve economy-wide decarbonization of zero emissions by 2050. CMP will provide 50% of the cost of the study, not to exceed $500,000. Stip. Sec. V.B.12.

c. Securitization

Upon COD, NECEC LLC will provide $1 million to pay for any investment bank, investment advisor or consultant and/or legal fees incurred by OPA, the Governor's designee, IECG, and CMP related to the securitization of the annual payments to the Low-Income Customer Benefits Fund and the Rate Relief Fund. Any funds not used for this purpose will be disbursed to the Rate Relief Fund. Stip. Sec. V.B.13.

d. HQ Support Agreement

Prior to the start of construction, CMP, NECEC LLC, and HQUS will enter into a support agreement reflecting HQUS's funding commitments for the Broadband Fund, Heat Pump Fund, Hydro-Québec EV Fund, HQUS's commitment to pay NECEC LLC $3.5 million annually and HQUS's commitment to provide CMP 400,000 MWh annually of Environmental Attributes related to deliveries of hydroelectric power to New England. CMP will seek to monetize the Environmental Attributes and any proceeds, net of costs to CMP, will be directed to the Rate Relief Fund.

The HQ Support Agreement will also reflect Hydro-Québec's commitment to share EV infrastructure expertise and to include sufficient fiber optic capacity in the Québec transmission facilities to provide a fiber optic connection between Maine and Montreal. Finally, the Support Agreement will reflect the guaranty from Hydro-Québec of HQUS's payment obligations. Stip. Sec. V.B.14.

e. Maine Worker Preferences

NECEC LLC, and its contractors working on the construction of the NECEC will give preference to hiring Maine workers. Stip. Sec. V.B.15.

B. Stipulation Review and Approval Requirements

Chapter 110 of the Commission's Rules specifies that, in deciding whether to approve a stipulation, the Commission will consider the following criteria:

a. Whether the parties joining the stipulation represent a sufficiently broad spectrum of interests that the Commission can be sure that there is no appearance or reality of disenfranchisement;

b. Whether the process that led to the stipulation was fair to all parties;

c. Whether the stipulated result is reasonable and is not contrary to legislative mandate; and

d. Whether the overall stipulated result is in the public interest.

Ch. 110, Sec. 8(D)(7). These review requirements are discussed below.

C. Do the Parties to the Stipulation Represent a Sufficiently Broad Spectrum of Interests?

1. Background

There are 30 parties in this case. Of these 30 parties, the following 11 parties were signatories to the Stipulation: CMP; OPA; GEO; IECG; CLF; Acadia Center; WM&RC; Lewiston; the Chamber; IBEW; and FMM (Stipulating Parties). The following 11 parties expressed opposition to the Stipulation in either written comments or oral comments made during the hearing on the Stipulation that was held on March 7, 2019: NextEra; Ms. Kelly; GINT; NRCM; RENEW; MREA; ReEnergy; Caratunk; Former Senator Thomas Saviello; Old Canada Road; and the Town of Wilton. On March 28, 2019, the Town of Farmington filed a letter stating its formal opposition to the NECEC.[40] This letter did not specify the Town of Farmington's position regarding the Stipulation. The remaining seven parties have expressed no formal position regarding the Stipulation: GFDC[41]; Trout Unlimited; Darryl Wood; Town of Alna; Town of New Sharon; Town of Jackman; and Franklin County Commissioner Terry Brann.

2. Positions of the Parties

a. Signatories to the Stipulation

The signatories to the Stipulation argue that they represent a sufficiently broad spectrum of interests to ensure that there is no appearance or reality of disenfranchisement. After identifying the "interest" represented by each of the signatories, CMP argues "[t]he Stipulating Parties' varied obligations, missions, and constituencies all demonstrate that the Stipulation has the support of a diverse group of stakeholders, and that the signing parties do not 'represent only a narrow interest.'" Cover Letter to Stipulation, February 21, 2019, at 3-5.

[40] The Town of Farmington's letter is dated March 26, 2019.

[41] On February 22, 2019, GFDC filed a letter in which it "endorce[d] the project," expressed "disappointment that CMP is not doing more to benefit Franklin County from a broadband expansion perspective," noted its unsuccessful efforts to get CMP to support the "Franklin County Broadband Initiative's efforts," and urged the Commission to "modify the Settlement Agreement to better utilize the value of CMP's commitment, to provide greater incentives for additional private investment to expand the availability of broadband. Implementing our recommendation will have a much greater impact to the expansion of broadband than the current plan incorporated into the Settlement Agreement." However, the Greater Franklin Development Council took no formal position on the merits of the Stipulation. Letter dated Feb. 19, 2019 and filed on Feb. 22, 2019 at 1-2.

Citing *Central Maine Power Company and Public Service of New Hampshire*, *Request for Certificate of Public Convenience and Necessity for the Maine Power Reliability Program Consisting of the Construction of Approximately 350 Miles of 345 kV and 115 kV Transmission Lines ("MPRP")*, Docket No. 2008-00255, Order Approving Stipulation at 20 (June 10, 2010), (*MPRP Order*) CMP states:

> [T]he Stipulation satisfies the "primary purpose" of the sufficiently broad spectrum of interests standard in Chapter 110, as articulated in Docket No. 2008-00255, particularly:
>
> > [T]o ensure that the Commission does not approve stipulations where the signing parties represent only a narrow interest. The criterion is not intended to require, and does not mean, that all parties participating in a case must sign a stipulation for the Commission to approve it.

Id. at 5.

CMP argues that in the *MPRP Order,* the Commission found that "a stipulation entered into by 19 of more than 100 parties to a CPCN proceeding, including the petitioning utility, 'the OPA, representatives of the environmental community, representatives of the business and construction communities, the City of Lewiston, and an abutter' satisfied the 'first criterion for approval of a stipulation.'" *Id*. at 5, fn. 12.

The IECG and OPA filed joint comments regarding the Stipulation. Citing *Public Utilities Commission, Investigation into Verizon Maine's Alternative Form of Regulation,* Docket No. 2005-155, Order Approving Stipulation, Docket No. 2005-155 (Oct. 3, 2007) (*Verizon AFOR Order*), IECG and the OPA assert that the Commission found that the participation in the stipulation by the OPA was sufficient to address the interest of all consumers in Maine in a manner to satisfy this prong of the Commission's test. IECG and OPA Comments at 12 (Mar. 1, 2019).

The IECG and OPA further argue the failure of certain interests to join a stipulation does not mean that the stipulating parties have failed the "broad spectrum of interests" requirement in Section 8(D)(7)(a). The IECG and OPA cite the *MPRP Order* as support for their position on this point. *Id*. at 12-13.

In its written comments on the Stipulation, IBEW states that it supports the IECG's comments regarding the sufficiency of breadth of interests joining the Stipulation. IBEW comments at 1 (Mar. 1, 2019). In their comments, the Chamber, the City of Lewiston, CLF, Acadia Center, the GEO, and FMM agree that the joining parties reflect a sufficiently broad spectrum of interests to meet the first evaluation criterion of Section 8(D)(7). Chamber and Lewiston Comments at 2 (Mar. 1, 2019); CLF and Acadia Center Comments at 4 (Mar. 1, 2019); GEO Comments at 1-2 (Mar. 1, 2019); FMM Comments at 1 (Feb. 28, 2019).

b. <u>Parties that Did Not Sign the Stipulation</u>

NRCM asserts that the parties joining the Stipulation do not represent a sufficiently broad spectrum of interests. NRCM Comments at 1 (Mar. 1, 2019). NRCM notes that approximately two-thirds of the parties in this case did not sign the Stipulation. *Id*. at 2. NRCM argues that notwithstanding CMP's claim that the parties to the contested stipulation represent a broad spectrum of interests, the limited number of stipulating parties represents only a relatively narrow list of interests. *Id*. at 3.

NextEra argues that the Stipulation fails to represent a sufficiently broad spectrum of interests and should be denied because it does not represent the relevant interests of Maine generators. NextEra Comments at 3 (Mar. 1, 2019). NextEra attempts to distinguish this Stipulation from the stipulation approved by the Commission in the *MPRP Order,* noting differences between the two in terms of both support for and participation by generators. *Id.*

Noting that more parties oppose the Stipulation than support it, GINT argues that the signatories do not represent a sufficiently broad spectrum of interests. GINT Comments at 9 (Mar. 1, 2019). GINT asserts that generators are not represented by the settling parties and that environmental groups and the affected towns are divided in their support of the Stipulation. *Id*.

Caratunk defines "public" to include the rural people located along the proposed corridor who will be "directly harmed by the NECEC" and asserts that this broader public is not represented in this Stipulation and has been "disenfranchised." Caratunk Comments at 2 (Mar. 1, 2019). Caratunk argues that the affected people of Somerset County are not being adequately compensated for the harm that the NECEC would cause them. *Id*. at 2. Caratunk also argues that the Stipulation does not address the interests of Maine's existing generators and would suppress the future location of renewable energy projects in Maine. *Id*. at 4.

Ms. Kelly argues a different standard*, i.e*., that the breadth of interests in the joining parties to the Stipulation reflects "an appearance and reality of disenfranchisement." Kelly Comments at 4 (Mar. 1, 2019).

ReEnergy argues that a sufficiently broad spectrum of signatories requires a majority of the parties in a case to join a stipulation. ReEnergy Comments at 2 (Mar. 1, 2019). ReEnergy asserts that here, only one third of the parties are signatories to the Stipulation. *Id*. ReEnergy further asserts that the fact that no independent power generator has joined the Stipulation indicates a lack of diversity in the Stipulating Parties. *Id*.

Old Canada Road states that the stipulating parties lack inclusion of those who will be most affected by the construction and presence of the powerline. Old Canada Road Comments at 1 (Mar. 1, 2019).

RENEW and MREA filed joint comments in opposition to the Stipulation. However, those comments did not specifically address the issue of whether the stipulating parties represent a sufficiently broad spectrum of interests.

3. Discussion

The Stipulation presented to the Commission in this case is signed by 11 of 30 parties and is opposed by an equal number of active parties. As summarized above, several parties argue that any stipulation signed by a smaller percentage of parties, and opposed by a larger percentage, must fail to satisfy the "sufficiently broad spectrum of interests" criterion of the four Section 8(D)(7) stipulation approval criteria.

In the *MPRP Order*, the Commission stated:

> In the case before us, the Stipulation was entered into by 19 parties, including all of the utilities involved in the project, the OPA, GridSolar, the IECG, representatives of the environmental community, representatives of the business and construction communities, the City of Lewiston, and an abutter. We find that these signatories represent a broad spectrum of interests and that there is no disenfranchisement or appearance of disenfranchisement…. We thus conclude, that the first criterion for approval of a stipulation has been satisfied here.

MPRP Order at 20.

In case before us, the Stipulation is signed by parties that represent a comparably diverse and broad spectrum of interests. Here, the signing parties include the utility seeking the CPCN; OPA, that is charged with representing the interests of Maine's ratepayers; IECG, that represents the interests of large industrial customers; CLF and Acadia Center, that are representatives of the environmental community; the Chamber, that represents both large and small businesses; Lewiston; and the IBEW, that represents the interests of electrical workers.

In addition to the broad group of interests represented by the above-listed signatories, the GEO also joined the Stipulation. Furthermore, the Governor's Office played a significant role in the negotiation of the Stipulation. IECG and OPA Comments at 12 (Mar. 31, 2019). The Governor is the only elected state official representative of all Maine citizens. The Governor's participation in the negotiations, and her endorsement of the results of those negotiations through the GEO signing the Stipulation, enhance the breadth of the spectrum of interests joining the Stipulation. *Verizon AFOR Order* at 7.

Because of the diverse interests represented by the signatories, the Commission finds that the parties joining the Stipulation represent a sufficiently broad spectrum of interests to ensure that there was no appearance or reality of disenfranchisement. The Commission therefore concludes that the Stipulation satisfies the first criterion for approval of a stipulation.

D. Fairness of the Process to All Parties

1. Positions of the Parties

a. Signatories to the Stipulation

In the cover letter to the Stipulation, CMP asserts that the process that gave rise to the Stipulation was "fair, open and transparent" and that the provisions of the Stipulation are "based on extensive information presented in this proceeding and gathered through exhaustive discovery and discussions among CMP and the intervening parties, including the Stipulating Parties and Staff." Stip. Cover Letter at 5. CMP further states:

> During the case, CMP and interested intervenors participated in bilateral settlement discussions from time to time. In addition, Staff, CMP, and many of the intervenors participated in formal settlement conferences on September 7 and 14, 2018, and February 5 and 12, 2019. Staff provided advance notice of all such settlement conferences by procedural order or email notifications sent to all parties on the service list. None of the participating parties objected to Staff's participation in such settlement conferences.
>
> All Intervenors had the opportunity to participate in the settlement conferences and there is no appearance or reality of disenfranchisement. All of the settlement conferences were publicly noticed in advance and the parties were given a reasonable opportunity to participate. Additionally, those intervenors who were active in the proceeding and who now oppose the Stipulation attended and participated in the settlement conferences (e.g., Ms. Kelly, NRCM, the Generator Intervenors, and NextEra).

Id. at 6.

Citing the *Verizon AFOR Order*, IECG and OPA assert that Chapter 110 does not require that every party participate in every settlement discussion and that it is "reasonable not to include all individual parties in certain settlement discussions, for instance parties whose views are clear and the other parties did not plan to incorporate such views in their agreement." IECG and OPA Comments at 10 (Mar. 1. 2019). The IECG and OPA further argue that the Commission affirmed these findings in the *MPRP Order*. *Id*. at 10-11.

The IECG and OPA argue that, in evaluating the fairness of the process, the Commission must look at the entire process as a whole. The IECG and OPA note that, in this case, the Stipulation was filed after the briefing and hearing stages of the proceeding and after the case had been fully developed. *Id*. at 11. The IECG and OPA further note that in this case, all parties were given an opportunity to (1) participate in settlement conferences prior to the filing of the Stipulation, (2) file written comments on

the Stipulation, and (3) make oral argument during a hearing that was held on the Stipulation. *Id*.

Finally, the IECG and OPA note the similarity between the process that produced this stipulation and the processes in the *Verizon AFOR* and *MPRP* cases, concluding that under Commission precedent the process leading to this Stipulation was fair. *Id.* at 18.

In its written comments on the Stipulation, IBEW states that it supports the IECG's comments regarding the fairness of the process that led to the Stipulation. IBEW Comments at 1 (Mar. 1, 2019). In their jointly-filed comments, the Chamber and Lewiston also state their support for the IECG's comments regarding the second evaluation criterion of Section 8(D)(7). Chamber and Lewiston Comments at 2 (Mar. 1, 2019).

In their joint comments, CLF and Acadia Center describe the Stipulation process as fair, open, and transparent. CLF and Acadia Center Comments at 4 (Mar. 1, 2019).

To support its position that the process that produced the Stipulation was fair, the GEO notes the fact that there were four formal settlement conferences that were noticed in advance by the Hearing Examiner in the proceeding. GEO Comments at 2 (Mar. 1, 2019).

FMM asserts that when considering the fairness of the stipulation process, the Commission should look at the process for the entire case and notes that that process has been "exhaustive." FMM comments at 1 (Mar. 1, 2019). Furthermore, FMM notes that any party could have participated in the stipulation discussions, and that many did. *Id*.

b. Parties that Did Not Sign the Stipulation

NRCM argues that the process that produced the Stipulation was not fair to all parties in this case. NRCM Comments at 3 (Mar. 1, 2019). NRCM argues that, notwithstanding the formal settlement conferences convened by the Commission Staff, the Stipulation was largely "fixed" when NRCM and other parties were first provided the settlement terms in February. NRCM supports that provision by noting that the stipulation changed very little after that point. *Id.*

GINT argues that the process that produced the Stipulation was not fair to all parties. GINT Comments at 9 (Mar. 1, 2019). GINT notes that it would not be fair to them nor to other intervenors, who invested substantial funds and effort in the proceeding to have their factual issues resolved by a stipulation to which they did not agree. *Id.*

Caratunk asserts that the process that produced the Stipulation was not fair. Caratunk argues that the process should have incorporated some of the valid concerns

of the parties and addressed some of the issues brought up in the hearings and briefs. Caratunk Comments at 4 (Mar. 1, 2019). In support of its assertion that the Stipulation process was not fair, Caratunk notes that CMP failed to sufficiently analyze critical issues and failed to explore reasonable amendments to its proposed Project. *Id*. at 4-5. Caratunk also asserts that CMP's failure to include Caratunk in the Stipulation negotiations is similar to CMP's failure to include Caratunk and other key stakeholders in CMP's outreach efforts regarding the Project and its discussion with WM&RC about the MOU. *Id*. at 3.

Ms. Kelly and Old Canada Road agree with these parties that the process that led to the Stipulation was not fair. Kelly Comments at 5-4 (Mar. 1, 2019); Old Canada Road Comments at 1 (Mar. 1, 2019).

Finally, ReEnergy and NextEra noted that they took no position on the fairness of the process, and RENEW and MREA did not address the issue. ReEnergy Comments at 2 (Mar. 1, 2019); NextEra Comments at 2, fn. 7 (Mar. 1, 2019).

2. Discussion

a. Summary of Settlement Process

The Commission held settlement conferences in the Commission's hearing room on September 7 and 14, 2018. Through separate procedural orders, all parties were given notice of the settlement conferences and an opportunity to attend the conferences. After the September 14th conference, CMP pursued bilateral discussions with several parties including the IECG, OPA, CLF, Ms. Kelly, and "representatives from Franklin County." Hearing Tr. at 153, 179 (Mar. 7, 2019). On November 8, 2018, CMP, Avangrid, the IECG and OPA met to discuss settlement issues. *Id*. at 155. Following that meeting, CMP had bilateral discussions with the GEO, CLF, Acadia Center, and "other interested stakeholders." *Id*. at 157.

On or about December 30, 2018, IECG and OPA met with representatives of HQUS. *Id*. at 158. During the month of January, there were several meetings involving HQ, HQUS, CMP, GEO, IECG, and OPA. *Id*. at 158. Also during the month of January, CMP had bilateral discussions with several parties and stakeholders including CLF, Acadia Center, IBEW, the Chamber, Lewiston, WM&RC, Former State Senator Saviello, GFDC, Representative Landry, Ms. Kelly, and FMM about issues relating to settlement. *Id*. at 160-162, 179. During this time, OPA also had bilateral discussions with Former State Senator Saviello, GFDC, Representative Landry, and CLF, and IECG had discussions with NRCM. *Id*. at 163-165.

As a result of their bilateral and multilateral settlement discussions, HQ, HQUS, CMP, IECG, OPA, GEO, CLF, and Acadia Center entered into a term sheet in late January 2019. *Id*. at 160.

The Commission held settlement conferences in the Commission's hearing room on February 5 and 12, 2019. Through separate procedural orders, all parties were given notice of the settlement conferences and an opportunity to attend the conferences. During the February 5th settlement conference, CMP presented the term sheet that had been agreed to in late January. *Id*. at 169. After the February 5th settlement conference, CMP had bilateral discussions about the term sheet with Former State Senator Saviello, GFDC, Representative Landry, NextEra, and the Towns of Alna and Jackman. *Id*. at 169, 171. The evolving Stipulation was modified based on these conversations. *Id*.

CMP presented the Stipulation to those present during the settlement conference held at the Commission on February 12th. *Id.* at 170. Additional changes were made to the Stipulation following the February 12th settlement conference. *Id*. Between February 12th and February 20th, CMP had bilateral discussions with MREA and RENEW. *Id*. at 171. CMP sent the final Stipulation to all parties via e-mail on February 20, 2019. *Id*. at 170. CMP received feedback on the Stipulation from FMM and the Towns of Alna and Jackman. *Id.* at 171. CMP filed the Stipulation on February 21, 2019.

While GINT participated in all four settlement conferences held in the Commission's hearing room, GINT does not recall ever receiving notice of, or invitation to, any bilateral or multilateral settlement discussions that took place between September 14, 2018 and February 20, 2019. *Id*. at 176. Neither the Town of Caratunk nor Old Canada Road received notice of, or invitation to, any bilateral or multilateral settlement discussions that took place between September 14, 2018 and February 20, 2019. *Id*. at 180. The IECG states that, during the September 14, 2018 to February 20, 2019 timeframe, it had two conversations with an NRCM representative about settlement issues and, from those conversations, "it was clear…that there was no interest in settling." *Id*. at 178.

b. Decision

Section 8(D)(1) of the Commission's Rules of Practice and Procedure provides:

> All parties shall be given an opportunity to participate in stipulation discussions. Accordingly, persons initiating such discussions should provide reasonable notice of discussions to all other parties where feasible, hold discussions at the office of the Public Utilities Commission where practicable and defer execution of comprehensive stipulations until the deadline for petitions to intervene, if any, has passed. In addition, all parties and proposed intervenors must be provided sufficient opportunity to review any executed stipulation in order to allow reasonable opportunity to object to the stipulation.

As noted above, Section 8(D)(7) provides that, when deciding whether to approve a stipulation, the Commission must consider four criteria. The second of

the four criteria is "[w]hether the process that led to the stipulation was fair to all parties."

In this case, parties opposed to the Stipulation argue that the process that led to the Stipulation was not fair for several reasons including (1) the Stipulation was negotiated between and among a small number of parties; (2) there were few changes made to the agreement after it was presented to the parties during the February 5th and February 12th settlement conferences; (3) the settling parties excluded some parties in the settlement discussions; (4) the public was not adequately represented in settlement discussions; (5) the settling parties were not required to provide evidence, analysis, or explanation about the specific Stipulation terms; (6) the Stipulation does not address many of the key issues raised in the case; (7) CMP failed to do the analysis necessary to evaluate the provisions of the Stipulation; and (8) the stipulating parties failed to adequately consider possible amendments to the Stipulation.

In the *Verizon AFOR* Case, the Commission held that neither Section 8(D)(1) nor the Commission's second stipulation review criterion requires that every party be included in every settlement meeting. In the *Verizon AFOR* Case, the Commission also found that failure to include a party in certain settlement discussions was not unreasonable, because the views of the party were clear and the other parties did not plan to incorporate such views in their agreement. As the above summary of the Stipulation settlement indicates, CMP, IECG, and OPA had numerous bilateral and multilateral discussions with several parties in this case and during the course of such discussions, and the four settlement conferences held in the Commission's hearing room, it became clear that the positions of parties such as NRCM, GINT, Caratunk, and Old Canada Road, were not reconcilable with the positions of the settling parties.

In deciding whether the process that lead to the Stipulation was fair, the entire process must be looked at as a whole. *See, Verizon AFOR* Case*,* Order Approving Stip. at 9. In this case, the Stipulation was filed with the Commission after the hearing and briefing stages and the parties have had a full opportunity to present their positions to the Commission. In addition, the Examiners scheduled four noticed settlement conferences, which were open to all parties in the case. Furthermore, the process allowed those parties who were not signatories to the Stipulation, to file written objections and also provided such parties with an opportunity to present oral argument on the Stipulation. Under comparable circumstances in the *MPRP Case*, the Commission found that the stipulation process in that that case was fair to all parties. *MPRP* Case*,* Order Approving Stipulation at 21-22. In this case, the Commission finds that the overall process, including the process provided by the full litigation schedule, noticed settlement conferences, and process subsequent to the presentation of the Stipulation, was fair and that the Commission's second stipulation review criterion has been satisfied here.

E. Stipulated Result is Reasonable, is Not Contrary to Legislative Mandate, and is in the Public Interest

The third and fourth stipulation review criteria are whether the stipulated result is reasonable and not contrary to Legislative mandate, and in the public interest. In the context of this proceeding, the Commission concludes that these stipulation approval criteria are essentially the same as the requirement in statute that the Commission find a public need to approve a transmission line project. The issue of public need is discussed in Sections IV(A), above.

As discussed above, the Commission finds that, even without the additional benefits provided by the CPCN Conditions set forth in Stipulation Section V.B (Stipulation Benefits), the NECEC would meet the statutory public need and public interest standards of Title 35-A, Section 3132 and, thus, would be granted a CPCN. The Commission finds, further, that these provisions of the NECEC Stipulation, and the benefits they provide, augment the market benefits and the direct, indirect, and induced macroeconomic benefits which will accrue to Maine from the development, construction, and operation of the NECEC. The Stipulation Benefits are described in Section VI(A) and discussed and evaluated below.

1. Positions of the Parties on the Stipulation Benefits

CMP, OPA, and IECG argue that the Stipulation will provide additional, substantial benefits that supplement the benefits provided by the Project and further support the conclusion that the Stipulation is in the public interest. Specifically, the transfer of the Project into a separate entity and other ring-fencing provisions ensure that Maine ratepayers will not bear the cost of the NECEC. Additionally, they cite the creation of a $50 million Low-Income Customer Fund and $140 million Rate Relief Fund; the construction of broadband infrastructure in the NECEC corridor; the creation of additional funds, including, $15 million for heat pumps, the $15 million EV fund, the $5 million Franklin County fund, and the $6 million education fund as providing an additional $250 million in benefits to Maine Citizens and energy consumers. OPA and IECG also argue that these benefits are tangible and enforceable, are incremental to the $1 billion in benefits already provided by the NECEC and incorporate the customer protections previously agreed to by CMP as part of this proceeding. Finally, OPA and IECG state that, collectively, the benefits and protections substantially exceed any costs or risks related to the Project.

GINT argues that most of the benefits are illusory or unproven and that CMP overstates the value of the benefits, for example, payments to the rate relief fund are "paltry" and represent only about 9 cents per month for the average CMP residential customer.[42] GINT states that the negative effects of the Project include: decrease in

[42] Exhibit A to GINT's March 1, 2019 Comments on the Stipulation contains GINT's calculation of the Rate Relief Fund benefits. GINT's Total Rate Relief shown includes the annual $1.5 million consideration payment from NECEC LLC to CMP and the

efficiency in the regional electric grid resulting from increased system congestion and line losses; distortion of the wholesale energy markets; premature retirement of electric generating plants in Maine; elimination of new renewable plants in Maine due to increased interconnection costs and system inefficiencies; consequent loss of Maine jobs and taxes; increased carbon dioxide emissions in the region; and adverse effects on tourism in Western Maine. Finally, GINT states that the Stipulation does not adequately reimburse ratepayers for the purchase of the NECEC corridor or for the value of having CMP employees available for operations and repair of the line.

Citing a statement made at the March 7th Hearing in which CMP expressed concerns about the effect that including community benefits packages in the proposed transmission projects would have on transmission rates, NextEra states that, by CMP's own admission, the benefits contained in the Stipulation are not in the public interest. NextEra also questions the Commission's authority to enforce a number of the Stipulation benefits against Hydro-Québec and HQUS because the Commission lacks jurisdiction over third-party, foreign entities.

Other supporters of the Stipulation, including CLF, Acadia Center, GEO, FMM, IBEW, the Chamber, and Lewiston state that the Stipulation includes many benefits for Maine and the Project is poised to create additional jobs, fund electric vehicles, reduce electricity prices expand broadband access, and substantially reduce the State's carbon footprint. The Chamber and Lewiston argue that certain benefits are of particular significance, most notably the Low-Income and Rate Relief Funds which will particularly benefit the City because of its relatively high poverty rate and old housing stock and the likelihood of new local jobs because Lewiston will be the site of the NECEC converter station.

Other opponents of the Stipulation, including Caratunk, NRCM, RENEW, MREA, ReEnergy, and Old Canada Road cite a number of concerns with the settlement package, including that it does little to address the fundamental flaws in the Project or address the likely impacts of the Project on the land, brand, citizens, or ratepayers of Maine. Additionally, they argue that some of the benefits are spread over such a long period of time that the results will be imperceptible to Maine ratepayers, specifically the Rate Relief Fund payable over 40 years and the Low-Income Customer Benefits Fund, also payable over 40 years. Opponents with an interest in renewable generation argue that the NECEC will harm renewable energy development in Maine and the associated benefits to Maine ratepayers and will harm the attainment of Maine's economic development, renewable energy, and GHG reduction goals. Additionally, ReEnergy argues that the Stipulation does nothing to mitigate the substantial and irrevocable damage that will be done to in-state generators due to congestion on the Maine-New

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annual $3.5 million CMP Rate Relief Fund as separate and additive items. The Commission understands that the Stipulation provides that CMP will direct the annual consideration payment from NECEC LLC to the Rate Relief Fund and it is not, therefore, a separate, additive benefit.

Hampshire interface. Finally, Ms. Kelly urges the Commission to delay any action on the Stipulation or the proceeding until the DEP and LUPC proceedings are complete.

2. Discussion and Evaluation of Stipulation Benefits

As noted above, the Commission finds that the benefits provided by the Stipulation augment the market benefits and the direct, indirect, and induced macroeconomic benefits which will accrue to Maine from the development, construction, and operation of the NECEC. In addition, the Stipulation Benefits contain a number of provisions intended to protect CMP ratepayers from the risks and costs associated with the NECEC development, construction, and operation. As noted above, the Stipulation characterizes these benefits and protections as "CPCN Conditions" and the Stipulating Parties recommend that the issuance of a CPCN be conditioned on these terms contained in Section V.B. of the Stipulation. The Commission's assessment and valuation of these benefits and ratepayer protections is discussed below and summarized in Figure VI.2. Because many of the benefit funds are established and/or disbursed over time, the valuation is provided on both a nominal and present value basis.[43]

a. Ratepayer Protections and Compensation

i. NECEC Project Ownership and Affiliate Transactions

Stipulation Sections V.B.1. a, c, d, f, and g contain a number of provisions intended to insulate CMP from the risks of the NECEC. Specifically, the Project and any associated development costs will be transferred from CMP to the special purpose entity, NECEC LLC, prior to the start of construction. NECEC LLC will be within the Avangrid Networks family of companies but will not be a direct subsidiary of CMP. Additionally, NECEC LLC will not participate in money-pooling arrangements or credit facilities with CMP and CMP will have no responsibility for any on-going costs of the Project. Any transactions between CMP and NECEC LLC will be governed by a Service Agreement or other affiliate agreements to be approved by the Commission. NECEC LLC will put into place an AVANGRID, Inc. guaranty with respect to its payment obligations for the EV, heat pump, host community and education funds and grant CMP a security interest in its payment rights from HQ and HQUS for the rate relief and low-income funds. Finally, NECEC LLC will not use CMP's brand name, reputation or customer relations to its benefit.

These ring fencing arrangements provide effective separation of CMP from the risks associated with the remaining development efforts and, most particularly, the construction of the Project. These protections provide a clear benefit to CMP ratepayers. The transactions and on-going interactions between CMP and NECEC

[43] The present values shown in Figure VI.2 were calculated using an 8.5% discount rate. The ranges shown in Figure I.1 are based on present value calculations using discount rates of 7% and 8.5%.

LLC, and among CMP, NECEC LLC, and other entities involved in the NECEC Project, including HQ, HQUS and AVANGRID, Inc., will be governed by various agreements, including the proposed NECEC Transfer Agreement (Attachment B to the Stipulation), the Service Agreement (Exhibit H to the NECEC Transfer Agreement), the guaranty provided by AVANGRID, Inc., and the HQUS Support Agreement. The Commission does not approve the form of any agreements provided in connection with the Stipulation but will conduct proceedings pursuant to Title 35-A, Sections 707 and 708 to approve the creation of NECEC, LLC and all associated affiliated transactions. The Commission emphasizes that, in these proceedings, the issues determined in this proceeding will not be relitigated.

ii. Consideration Payment

Section V.B.1.b provides that, as "consideration for the conveyance of the NECEC, including without limitation, the Real Estate Interests, the Permits, the TSAs, the Third-Party Vendor Agreements, the Related Assets, and any goodwill of CMP related to the NECEC," NECEC LLC will pay to CMP the sum total of $60 million, payable in 40 annual installments of $1.5 million beginning when the NECEC reaches commercial operations. The present value of this flow of payments is approximately $12 million. CMP will direct these payments to the Rate Relief Fund and the benefit the Rate Relief Fund provides to ratepayers is discussed below. Pursuant to statute and rule, however, the Commission must determine the appropriate value to assign to the consideration payment for the transfer of the NECEC irrespective of how CMP is directing the funds it receives. Title 35-A, Section 707(3)(G), requires that "for any contract of arrangement expected to involve the use by an affiliated interest of utility facilities, services or intangibles, including good will or use of a brand name, the Commission shall determine the value of those facilities, services or intangibles." In addition, although the Commission is making no determination here as to whether the NECEC is a non-core utility service, Section 4.C.3 of Chapter 820 of the Commission's Rules provides useful guidance as to the valuation of any goodwill associated with the NECEC that CMP is transferring. Section 4.C.3 provides:

> The value of good will shall be presumed to be, and calculated as, 1% of the total capitalization of the affiliate, or 2% of the gross revenues of the affiliate, whichever is less, and shall be paid annually by the affiliate. Where the name of the utility has been used in Maine by the utility for less than 3 years, the value of good will shall be presumed to be zero. At the end of six years from the date the affiliated transaction is approved or upon the date that the affiliate commences use of the good will, whichever is later, the value of good will is zero.

GINT argues that the Commission should value the right-of-way by reference to a 2012 study for the Western Electricity Coordinating Council and estimates made by American Electric Power, both of which suggest that the value of the corridor should be 10% of total project costs, or $100 million. GINT Comments at 4 (Mar. 1, 2019). The Commission declines to follow that estimating methodology. In this case, NECEC LLC can be viewed as any other interconnecting generator which is required to pay for incremental upgrades but not for facilities and land that already exist. The property cost

of the new corridor from the Canadian border to the Kennebec Gorge was approximately $12.5 million. EXM-001-017, Attachment 1. These parcels were acquired largely between 2016 and 2017 in what appear to be arms-length transactions. There is no evidence that the cost of real property in Western Maine has changed substantially in the last several years. The Transfer Agreement contemplates the transfer of only half of this part of the corridor with a value of approximately $6 million.

With respect to goodwill, in the context of the Massachusetts 83D solicitation, CMP emphasized the value of its experience, proven track record in developing large transmission projects and financial strength as competitive advantages it offered. In this situation, where establishing a precise value for goodwill would be exceptionally difficult, the Commission can follow the guidance contained in Chapter 820. Using this methodology does not constitute a Commission finding that the NECEC is a Non-Core Service. As shown in Figure VI.1, assuming the total capitalization of NECEC LLC is approximately equal to the project cost and using the payment stream provided for in the TSAs, the value of goodwill would total approximately $15 million over the first 6 years of the TSA terms or approximately $9 million on a present value basis.

Figure VI.1

Goodwill Payments from NECEC LLC to CMP Pursuant to Chapter 820			
	At 1% of Total Capitalization	At 2% of Gross Revenue	Lesser Amount
2023	$ 10.0	$ 2.4	$ 2.4
2024	$ 10.0	$ 2.4	$ 2.4
2025	$ 10.0	$ 2.5	$ 2.5
2026	$ 10.0	$ 2.5	$ 2.5
2027	$ 10.0	$ 2.6	$ 2.6
2028	$ 10.0	$ 2.6	$ 2.6
Sum			$ 15.1
PV			$8.9

The proposed transfer includes the assumption by NECEC LLC of the obligations of CMP pursuant to the 83D bid and the TSAs. Specifically, NECEC LLC will assume the costs and risks associated with the construction of the Project. These risk of cost overruns may be substantial, especially with respect to any environmental mitigation that may be ordered by the DEP and the LUPC and the costs of the underground crossing of the Kennebec Gorge. On balance, the Commission determines that the proposed Transfer Consideration is reasonable.

iii. Transmission Rates Customer Credit

Since CMP acquired the property in the 2016-2017 time-period for the approximately 53-mile long corridor from the Québec border to the Kennebec Gorge, CMP has recorded the property as a rate base item in FERC Account 105, Plant Held for Future Use. Pursuant to FERC regulations, property may be recorded in Account 105 if and when a transmission project for development on the property is sufficiently definite. Once recorded in this account, the revenue requirements, which are comprised of a return on the property rate base (investment amount), are recovered from ratepayers through operation of the FERC formula rate. Since 2016, CMP has recovered from ratepayers in Maine and the region approximately $1 million associated with the NECEC corridor.

Section V.B.2 of the Stipulation provides that, effective with the 2019 transmission rate change, CMP will provide a $1.005 million rate credit to regional and local network service customers. This credit reflects the amounts that have been paid by these customers for the NECEC corridor, plus carrying costs using the FERC refund formula. Finally, Section V.B.2 provides that, upon issuance of a CPCN, CMP will remove from FERC Account 105 all NECEC-related property.

This provision provides equity for ratepayers by crediting back to them all amounts that they have paid in rates since 2016 for the NECEC property and requiring the property to be accounted for in a manner such that, on a going forward basis, no amounts will be included in rates. Because transmission rates and accounting rules are FERC-jurisdictional, including this provision in the Stipulation produces a result that avoids any potential preemption challenge that might ensue if the Commission sought to impose a condition that would produce the same result. This is a clear benefit provided by the Stipulation.

iv. New Corridor Removed from Transmission Rates

Paragraph V.B.3 of the Stipulation requires CMP to classify the portion of the corridor that will not be used by the NECEC, which will remain CMP property, as Non-Operating Property. Pursuant to FERC requirements, Non-Operating Property is recorded in FERC Account 121 and may not be included in transmission rates until such time CMP identifies a sufficiently definite transmission project for development in the corridor. Pursuant to this Stipulation provision, CMP agrees that it will not seek to recover any amounts associated with this property unless the identified transmission project that would use the corridor is otherwise eligible for rate recovery in whole or in part from Maine customers pursuant to the then-applicable FERC transmission tariff. Thus, this provision eliminates the risk that ratepayers would again be charged amounts for property associated with an NECEC-like project, or a generator lead, as they have been since 2016 for the NECEC corridor.

As with the transmission rate credit provision discussed above, because the accounting and ratemaking treatment of transmission property are FERC-jurisdictional,

including this provision in the Stipulation produces a result that avoids any potential preemption challenge that might ensue if the Commission sought to impose a condition that would produce the same result and, as such, is a clear benefit of the Stipulation.

b. Public and Ratepayer Benefits

i. Low-Income Customer Benefits Fund

Section V.B.4 of the Stipulation provides for annual payments of $1.25 million over the 40 years following COD that will be directed to a fund to be used for the benefit of low-income electric customers throughout the State. The funds may be used to reduce the amounts that low-income customers spend for energy and may include weatherization and household energy efficiency programs. In designating uses for these funds, the OPA, in consultation with the Efficiency Maine Trust and the Governor's designee, may apply a preference for low-income energy customers in the NECEC Host Communities. This direct benefit will total $50 million over 40 years. On a present value basis, the Low-Income Customer Fund provides approximately $10 Million of direct benefit to the citizens of Maine.

ii. Rate Relief Fund

Section V.B.5 of the Stipulation provides for two payment streams totaling $3.5 million annually over the 40 years following COD that will be directed to the Rate Relief Fund. First, the annual $1.5 million consideration payment from NECEC LLC to CMP will be directed by CMP to the Rate Relief Fund. Second, NECEC LLC commits to provide an annual payment of $2 million to CMP for the Rate Relief Fund. The Stipulation provides that the Rate Relief Fund will be paid to ratepayers on a per kilowatt hour basis through stranded costs or a similar per kilowatt hour mechanism. This direct ratepayer benefit will total $140 million over 40 years. On a present value basis, the Rate Relief Fund provides approximately $28 Million of direct ratepayer benefit.

iii. Broadband Benefits

The broadband benefits in Section V.B.6 of the Stipulation include provisions for including fiber optic facilities and equipment on the transmission line, with an estimated value of $5 million, and the creation of a $10 million broadband fund to be used to support high speed broadband infrastructure in the host communities. This direct benefit will total $15 million. On a present value basis, the broadband benefits provide approximately $9 million of direct benefit to the host communities.

iv. Heat Pump Benefits

Section V.B.7 establishes the Heat Pump Benefits Fund which includes the creation of a $15 million fund to support the installation of heat pumps or other future efficient heating technologies. The disbursement of these funds may include a

preference for targeted initiatives to reach low- and moderate-income individuals and communities. This direct benefit will total $15 million. On a present value basis, the heat pump benefits provide approximately $7.5 million of direct benefit to the State.

v. Electric Vehicle (EV) Funds

The EV benefits contained in Section V.B.8 include two funds, a $5 million fund to provide rebates to defray the cost of charging installations and consumer rebates on the purchase of an EV, and a $10 million fund to support the deployment of a statewide fast and ultra-fast public charging station infrastructure throughout the State. This direct benefit will total $15 million. On a present value basis, the EV benefits provide approximately $9 million of direct benefit to the State.

vi. Franklin County Host Community Benefits

The Franklin County community benefits in Section V.B.9 include the establishment of a $5 million fund for the benefit of communities in Franklin County. This fund will support economic and community development activities for the benefit of Franklin County residents. This direct benefit will total $5 million. On a present value basis, this fund provides approximately $2.4 million of direct benefit to Franklin County.

vii. Education Grant Funding

Section V.B.10 contains the education benefits which provide for a $1 million grant to the University of Maine for research and development associated with the commercialization of marine wind generation technology and for the creation of a $5 million fund to provide programs and scholarships for needy Maine students to attend the University of Maine at Farmington and vocational and training programs and scholarships in the math, science, and technology fields in Franklin and Somerset Counties. This direct benefit will total $6 million. On a present value basis, this fund provides approximately $3.3 million of direct benefit to the University of Maine and the residents of Franklin and Somerset Counties.

c. Other Commitments

i. Mitigating Impacts on Transmission System

Section V.B.11 of the Stipulation contains several commitments by CMP and NECEC LLC to initiatives intended to mitigate the impacts of the NECEC on the transmission system and existing and future energy resources in Maine. Although these initiatives may be valuable undertakings, the Commission does not assign a direct monetary benefit to these commitments.

ii. Regional Carbonization

Section V.B.12 contains the commitment by CMP and NECEC LLC to participate in and provide funding for regional decarbonization studies. Although this initiative may be a valuable undertaking, the Commission does not assign a direct monetary benefit to this commitment.

iii. Securitization

The provisions of Section V.B.13 address ways to accelerate the receipt of benefits associated with the Low-Income Fund and the Rate Relief Fund by providing $1 million in underwriting fees and other costs. Any funds not used for this purpose will be disbursed to the Rate Relief Fund. The Commission values this commitment at $1 million on a nominal basis. Because no time frame is associated with the use of these funds for their intended purpose, the Commission cannot determine a present value.

iv. HQ Support Agreement

The HQ Support Agreement contained in Section V.B.14 is intended to provide support to the commitments made by HQUS as part of the Stipulation. The Commission does not assign any value to this support other than the values already established as part of other Stipulation sections.

In addition, the HQ Support Agreement will contain HQUS's commitment to provide CMP 400,000 MWh annually of Environmental Attributes related to deliveries of hydroelectric power to New England. There is no active market for these Environmental Attributes, which are a creation of the Massachusetts statute which led to the 83D solicitation. The Commission does not assign any value to this commitment.

v. Maine Worker Preferences

Section V.B.15 contains the commitment of NECEC LLC, and its contractors working on the construction of the NECEC, to give preference to hiring Maine workers, all other factors being equal and consistent with applicable law and applicable labor agreements. Although this commitment may be valuable, the Commission does not assign a direct monetary benefit to it.

Figure VI.2

NECEC Stipulation Benefits			
Item	Timing	Total Nominal ($ millions)	Present Value ($ millions)
Ratepayer Benefits			
Rate Relief Fund	2023-2062	$ 140.000	$ 28.575
Transmission Credit	July 1, 2019	$ 1.005	$ 1.005
Low Income Customer Benefits			
Low Income Fund	2023-2062	$ 50.000	$ 10.205
Community and State-wide Benefits			
Broadband Benefits	2023-2027	$ 15.000	$ 9.295
Heat Pump Benefit	2023-2030	$ 15.000	$ 7.762
Host Community Benefits	2023-2030	$ 5.000	$ 2.367
EV Benefits	2021-2028	$ 15.050	$ 9.319
Education Grants	2019-2032	$ 6.000	$ 3.289
NTA Study	Unknown	$ -	$ -
Regional Decarbonization Planning	Unknown	$ -	$ -
Securitization	Unknown	$ 1.000	$ -
Environmental Attributes	2023-2062	$ -	$ -

VII. CONCLUSION

For the reasons discussed in this Order, the Commission concludes that the benefits from the development and operation of the NECEC to Maine ratepayers and citizens significantly outweigh the costs and detriments of the Project. In addition, the Commission concludes that the Stipulation, filed in this proceeding on February 21, 2019, provides significant additional benefits to Maine. Accordingly, the Commission concludes that: (1) the NECEC meets the public need and public interest standards required by Title 35-A, Section 3132; and (2) the Stipulation filed in this proceeding on February 21, 2019 satisfies the stipulation approval criteria contained in Chapter 110, Section 8(D)(7) of the Commission rules.

Accordingly, the Commission

O R D E R S

1. That Central Maine Power Company is, hereby, granted a Certificate of Public Convenience and Necessity for the New England Clean Energy Connect. Specifically, the Certificate of Public Convenience and Necessity applies to the construction of the transmission lines and

substation components listed in Section II(A) of this Order, and any related additional transmission facilities that ISO-NE determines are necessary to meet the requirements of (i) Section I.3.9 of the ISO-NE's Transmission, Markets and Services Tariff or (ii) the ISO-NE's CCIS, all at no cost to Maine electricity customers;

2. That the Stipulation, filed in this proceeding on February 21, 2019, and attached to this Order, is hereby approved;

3. That, beginning on July 1, 2019, and every 6 months thereafter, until the New England Clean Energy Connect is placed into commercial operation, NECEC LLC will file progress reports with the Commission summarizing any significant developments in the permitting, development and construction of the NECEC;

4. That, beginning on July 1, 2019, and every six months thereafter, Central Maine Power Company and NECEC LLC will file compliance reports detailing the activities and provision of benefits required by the Terms of the February 21, 2019 Stipulation;

5. That, on or before July 1, 2019, Central Maine Power Company shall file a proposal for: (1) tracking and reporting to the Commission, on an annual basis, the property tax revenues paid by the NECEC LLC during the construction phase of the Project and during the first 10 years of its commercial operation. Such information shall include the: (1) estimated tax revenue by municipality provided by Central Maine Power Company in this proceeding; (2) a description of the New England Clean Energy Connect facilities located in each municipality; (3) the amount of property taxes for the New England Clean Energy Connect facilities paid to each of those municipalities and townships for the tax year in question; and (4) an explanation for any differences between item (1) and item (3);

6. That, beginning on July 1, 2019 and concluding with the commercial operations of the New England Clean Energy Connect, Central Maine Power Company and NECEC LLC shall provide annual reports to the Commission detailing its ongoing outreach and communications with the host communities regarding: (1) fire and medical support issues in comparable rural areas of its system; and (2) plans to address fire and medical support issues related to the construction and operation of the New England Clean Energy Connect; and

7. That, Central Maine Power Company shall file: (1) a petition for reorganization approval, pursuant to Title 35-A, Section 708, to authorize the establishment of the NECEC LLC; and (2) a petition for approval for affiliate transactions, pursuant to Title 35-A, Section 707, related to the development and operations of the New England Clean Energy Connect.

Dated at Hallowell, Maine, this 3rd day of May, 2019.

/s/ Harry Lanphear
Harry Lanphear
Administrative Director

COMMISSIONERS VOTING FOR: Vannoy
Williamson (See Separate Concurring Opinion)
Davis

Concurring Opinion of Commissioner Williamson

I concur with the Commission's decision in this proceeding. I write separately on one point concerning the ratepayer benefits of NECEC. I agree with the finding that the NECEC will provide clear benefits with respect to grid reliability and fuel security. The Commission's decision, however, states that these benefits cannot be quantified. That is the way that Figure I.1 had been presented.

Although I generally agree that certain other monetary benefits cannot be easily quantified, that is not the case here: there is an empirical basis to assess the value of regional grid reliability and fuel security. There is a price range estimate for the willingness to pay for fuel security in the New England region and, accordingly, a means to calculate the cost (if fuel security were to be supplied without NECEC), or a benefit (if regional fuel security were to be augmented by NECEC) for Maine ratepayers and electric customers.

ISO-NE estimates that the Reliability Must Run (RMR) provisions related to the two Mystic units at the Boston load center will increase regional costs by approximately $102 million to $148 million per year during the two-year program.[44] This amount is ISO-NE's willingness to pay for what it terms "fuel security" for the system we depend upon. Using the midpoint of the range as a conservative estimate, this means $123 million is the regional price tag for the value of system reliability and wintertime fuel security. Because RMR costs are regionalized, the LNG-supplied Mystic units would cost Maine electric customers at least $9.8 million a year annually for the years 2023-2024 and 2024-2025. Such additional costs could very well extend longer if natural gas pipeline development remains stalled in lower New England and ISO-NE continues to be short of fuel secure alternatives for winter reliability for several more winter periods.

This level of annual cost represents the market value being assigned to the region's winter fuel security problem right now for the time when NECEC transmission could be available, or more technically, what certain costs to Maine customers could be avoided if the NECEC is put in-service on schedule. This data should be reflected in our assessment.

[44] *ISO New England Inc*., Inventoried Energy Program, Docket No. ER19-1428-000, ISO-NE Filing at 19 (Mar. 25, 2019).

NOTICE OF RIGHTS TO REVIEW OR APPEAL

5 M.R.S. § 9061 requires the Public Utilities Commission to give each party to an adjudicatory proceeding written notice of the party's rights to review or appeal of its decision made at the conclusion of the adjudicatory proceeding. The methods of review or appeal of PUC decisions at the conclusion of an adjudicatory proceeding are as follows:

1. Reconsideration of the Commission's Order may be requested under Section 11(D) of the Commission's Rules of Practice and Procedure (65-407 C.M.R. 110) within **20** days of the date of the Order by filing a petition with the Commission stating the grounds upon which reconsideration is sought. Any petition not granted within **20** days from the date of filing is denied.

2. Appeal of a final decision of the Commission may be taken to the Law Court by filing, within **21** days of the date of the Order, a Notice of Appeal with the Administrative Director of the Commission, pursuant to 35-A M.R.S. § 1320(1)-(4) and the Maine Rules of Appellate Procedure.

3. Additional court review of constitutional issues or issues involving the justness or reasonableness of rates may be had by the filing of an appeal with the Law Court, pursuant to 35-A M.R.S. § 1320(5).

Note: The attachment of this Notice to a document does not indicate the Commission's view that the particular document may be subject to review or appeal. Similarly, the failure of the Commission to attach a copy of this Notice to a document does not indicate the Commission's view that the document is not subject to review or appeal.