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STATE OF MAINE
PUBLIC UTILITIES COMMISSION

Docket No. 2008-255

March 12, 2010

MAINE PUBLIC UTILITIES COMMISSION
CMP and PSNH 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")

BRIEF OF INTERVENOR CONSERVATION
LAW FOUNDATION

INTRODUCTION

The Conservation Law Foundation (CLF) hereby submits this Brief in response to Central Maine Power's (CMP) Petition for a Certificate of Public Convenience and Necessity (CPCN) for the Maine Power Reliability Program (MPRP). CLF is a public interest advocacy organization that works to solve the most significant environmental challenges that face the people, natural resources and communities of Maine and New England. CLF has offices in Maine, New Hampshire, Vermont, Rhode Island and Massachusetts. As intervenors in this proceeding, CLF seeks to ensure that Maine's siting of electrical transmission facilities increases the opportunities to harness renewable energy resources, such as wind, solar, tidal and wood, and the efficient use of energy in order to decrease the residential, commercial and industrial demand for electricity.

ARGUMENT

CMP has characterized its proposed MPRP project as one that is principally motivated by a need to address reliability concerns associated with its transmission system. However, it has become abundantly clear in these CPCN proceedings that the nature and extent of the investment and infrastructure proposed by CMP makes this case as much about Maine's effort to achieve energy independence, develop a clean energy economy and combat climate change as it is about the present reliability of the CMP system. For this reason, it is critical that the Commission give substantial consideration to the means by which non-transmission alternatives and renewable energy can be incorporated into this project, such that demand for electricity can be reduced and opportunities for clean, renewable electrical generation can be enhanced.

I. The Solution Ordered by This Commission Must Be Consistent with Maine's Goals for Renewable Energy Development.

The Commission's decision in this case can, and likely will, serve to provide direction to Maine's energy future on both the transmission and generation fronts. As such, this project presents a once-in-a-planning-period opportunity for this Commission to steer a course that promotes the development of new renewable energy projects. Such an approach would be consistent with Maine's laws and stated goals associated with renewable development and would ensure that Maine can benefit from the energy independence and economic development potential associated with clean energy resources.

A. Maine Law and Public Policy Both Direct This Commission to Facilitate the Development of Renewable Energy Resources.

The impetus and authority for this Commission to act now to help increase the amount of energy that Maine and the region obtain from renewable resources is virtually ubiquitous in Maine law. Principal among these is Maine's statutory goal to reduce its greenhouse gas emissions to 1990 levels by 2010 and to 10% below 1990 levels by 2020, which includes a recognition that it may be necessary in the long term to reduce levels even further to as much as 75% to 80% of 2003 levels. 38 M.R.S. §576. As part of its comprehensive effort to achieve these goals, Maine and this Commission have adopted a Renewable Portfolio Standard (RPS), 35-A M.R.S. §3210(3), requiring that 30% of the supply sources for retail electricity sales must be renewable resources that are "deliverable" to the ISO-NE control region.¹ Maine's participation in the Regional Greenhouse Gas Initiative (RGGI), 38 M.R.S. §§ 580-580-C, a regional effort that establishes a carbon dioxide cap-and-trade program, creates further incentives to decrease the amount of carbon dioxide emitted within the region, and enhances the development of renewable resources by creating a market for renewable energy credits or certificate. Maine law provides further potential financial incentives for renewables development by authorizing this Commission to order transmission and distribution utilities to enter into long-term supply contracts with renewable generators. 35-A M.R.S. §3210-C.

This Commission can perpetuate these renewables goals by ordering the inclusion of clean energy non-transmission alternatives in any CPCN issued in this case and by ensuring that

¹ In 2007, the state adopted a renewable portfolio mandate to increase new renewable energy capacity by 10 percent by 2017, with 1% annual increases between 2007-2017. "New" renewable energy sources include those placed into service after September 1, 2005. Resources that satisfy the new capacity requirement cannot also be used to satisfy the 30 percent portfolio requirement.

adequate and appropriate transmission facilities are authorized to accommodate and create an incentive for the development of wind and other renewables.

1. Non-Transmission Alternatives Must be Considered in This Proceeding.

Maine law requires that this Commission determine whether a need exists for the transmission system additions and upgrades that are being proposed as part of the MPRP. 35-A M.R.S. §3132(6). In performing this assessment of need, the PUC must consider whether the proposed transmission line is reasonable compared to “alternatives to construction of the transmission line, including energy conservation, distributed generation, or load management.” 35-A M.R.S. § 3132(6); see also 65-407 CMR 330(9)(B). It is incumbent upon the petitioner in this process to compare the transmission solution with these non-transmission alternatives. 35-A M.R.S. § 3132(2-C)(C) and 65-407 CMR 330(6)(I). Chapter 330(6)(I) requires that petitioners must “state whether alternatives including conservation, distributed generation or load management to the proposed transmission line project were investigated” and include in its application “all studies, reports, or other data relied upon in the investigation of such alternatives and shall clearly state the process by which Petitioner decided upon the proposed construction, rebuilding, or relocation project.” 65-407 CMR 330(6)(I).

This Commission’s responsibility for ensuring that NTAs are adequately explored and appropriately incorporated into this project is all the more amplified by the complete failure of the ISO planning process to consider any approach other than transmission. Despite the fact that the earliest system design and planning phases of a project such as the MPRP begin at the ISO, neither the ISO planning phase, nor the ISO PPA or TCA processes, involves consideration of non-transmission alternatives. (2/2/10 Testimony of Stephen Rourke, p. 126, L. 17-25, p. 127, L.1-25; p. 130, L. 15-25). Indeed, were it not for the PUC requirement that alternatives to

transmission must be studied and considered, the process of planning and siting electrical transmission facilities in Maine would be entirely devoid of an analysis of a potential role for NTAs.

a. The Record Contains Ample Evidence of the Benefits of NTAs.

As required by Maine law and regulation, CMP submitted with its Petition a study entitled “Non-Transmission Assessment and Economic Evaluation of the Maine Power Reliability Project.” (CPCN, Exhibit I-3). This study made significant and meaningful findings as to the potential of demand side management (DSM) and energy efficiency to save ratepayers money, reduce the costs of the transmission system upgrade and meet reliability standards. It concluded that:

1) if the MPRP transmission solution proposed by CMP were to include a program of maximum achievable cost-effective energy efficiency (MACE), the overall cost of the combined transmission and energy efficiency solution would have a lower societal cost to Maine ratepayers than the stand-alone transmission solution being proposed by CMP (CPCN, Exhibit I-3, p.7);

2) the potential net present value of savings to ratepayers from implementation of MACE energy efficiency programs over a ten year period is approximately \$1.35 billion, with a cost/benefit ratio of 4.30 (CPCN, Exhibit I-3, p.233); and

3) the potential net present value of cost-effective demand response over a ten-year period is approximately \$206.3 million, with a cost/benefit ratio of 3.31 (CPCN, Exhibit I-3, p.233).

In spite of the tangible benefits of DSM identified in CMP's NTA Assessment, the proposal contained in CMP's Petition fails to incorporate any DSM component. Moreover, CMP's analysis did not attempt to discern whether a combined transmission, DSM and generation-based NTA (e.g. renewable distributed generation) could collectively address the reliability concern at a lower cost to ratepayers than the purely transmission-oriented solution. Instead, the NTA analysis essentially compares the cost to Maine ratepayers (after subsidy by the other ISO states) of its proposed transmission solution against the unsubsidized cost of alternative NTA solutions, an economic juxtaposition that is guaranteed to prejudice NTAs.

Further support for the role that NTAs can play in resolving aspects of CMP's transmission problems can be found in the testimony of Grid Solar and the Office of Public Advocate (OPA). Despite a CPCN review process that affords no clear opportunity for third parties to analyze the transmission proposal and to offer alternatives, this proceeding has benefitted from the aggressive and steadfast advocacy of the Grid Solar intervenors. Grid Solar has helped demonstrate the role that non-transmission alternatives can serve in addressing peak load problems. The Grid Solar model, deploying Smart Grid technology to manage and dispatch demand resources and clean, renewable distributed generation, should be used to supplant the components of CMP's transmission solution in at least the Mid-Coast area and should serve to address reliability problems in the South Portland area. The OPA has provided expert testimony supportive of the use of NTAs in the Mid-Coast and generally advocating for the incorporation of solar PV NTAs as a component of the solution in this case. (Lanzalotta Surrebuttal, p.22, L.19-21 and p.23, L.1-4 and Fagan Surrebuttal, p.55, L.1-13).

Because CMP has failed to craft a comprehensive proposal that will solve Maine’s transmission problems with a combination of transmission, clean distributed generation, energy efficiency and demand response programs² that would result in avoided generation, transmission and distribution and fossil fuel costs, a reduction in emissions of CO2 and other air pollutants and a decrease in overall load that would extend the longevity of the transmission solution, it is the responsibility of this Commission to craft such a solution.

2. The Commission must Give Weight to Any Benefit that Wind and Other Renewables Derive from Elements of the MPRP.

Among eligible renewable resources, wind is one of the most abundant in Maine. Maine ranks 19th in wind energy potential among all states – higher than any other state in New England- and with a maximum wind energy potential of over 6300 MW, Maine has more onshore wind energy potential than the rest of New England combined (with less than 4500 MW). (Tilghman Direct, p. 9, L. 24 through p.10, L.2). Indeed, a wind power study commissioned by Governor John Baldacci concluded that 55-80% of the onshore wind potential in New England exists within Maine. (Id. at p.12, L.20).

Recognizing the extent and value of this wind resource³, Maine has codified specific goals for developing wind energy generation of at least 2000MW of installed capacity by 2015 and 3000MW by 2020. 35-A M.R.S. §3404(2). Because it understood the urgency of the need to replace Maine’s and the region’s fossil-fueled generation with clean wind energy⁴, the

² CLF recognizes that jurisdiction over Maine’s efficiency and demand response programs rests largely with Efficiency Maine and the new Efficiency Maine Trust, but would urge that this Commission can use its oversight powers to ensure that such programs are financed sufficiently to achieve their maximum potential.

³ “Wind energy is an economically feasible, large-scale energy resource that does not rely on fossil fuel combustion or nuclear fission, thereby displacing electrical energy provided by these other sources and avoiding air pollution, waste disposal problems and hazards to human health from emissions, waste and by-products; consequently, wind energy development may address energy needs while making a significant contribution to achievement of the State’s renewable energy and greenhouse gas reduction objectives, including those in Title 38, section 576.” 35-A M.R.S. §3402(1)(A).

⁴ As stated in 35-A M.R.S. §3402(1)(B), “at present and increasingly in the future with anticipated technological advances that promise to increase the number of places in the State where grid-scale wind energy development is economically viable, and

Legislature also enacted Maine's Expedited Permitting of Grid-Scale Development law, by which the state has identified areas of the state that are more conducive to wind development and provided for faster-track permitting for those projects. 38 M.R.S. §§3451-3457.

The PUC's own statutes and rules urge that the Commission, in a transmission case such as this, consider the public health and environmental implications of a project. See 35-A M.R.S. §§3132(2-C)(A) and 3132(6); 65-407 CMR 330(9)(B). As a consequence, this Commission must take into consideration the environmental and public health benefits of developing and upgrading transmission lines that have the potential to enhance Maine's renewables portfolio and Maine and the region's ability to access and rely upon clean energy.

The Commission's statutes also provide that it is state policy that, Maine's "political subdivisions, agencies and public officials take every reasonable action to encourage the attraction of appropriately sited development related to wind energy consistent with all state environmental standards; the permitting and financing of wind energy projects; and the siting, permitting, financing and construction of wind energy research and manufacturing facilities." 35-A M.R.S. §3404(1). Components of the MPRP will serve to attract wind and renewable energy development which will decrease Maine's reliance on carbon-based fuels, enhance economic development in Maine's energy sector and help Maine achieve its greenhouse gas emission reduction goals. These substantial benefits, which must be considered by this Commission in addition to the reliability and transmission system related attributes of this project, should weigh heavily in favor of approval of those components of the project.

changes in the electrical power market that favor clean power sources, wind energy may be used to displace electrical power that is generated from fossil fuel combustion and thus reduce our citizens' dependence on imported oil and natural gas and improve environmental quality and state and regional energy security."

a. Components of the MPRP Will Provide Tangible Benefits to Renewable Energy Development in Maine.

The record in this proceeding demonstrates that not only will Commission approval of the physical lines that would serve to transmit renewable energy to market enhance the potential for renewable development in Maine, but so too will the signal that such an approval sends to the financial markets upon which the renewable industry relies.

The Commission has before it testimony from the wind development community (Direct Testimony of Jeremy Payne, Maine Renewable Energy Association) and from wind development consultant Henry Tilghman. This testimony supports the following propositions as to the relationship between wind development and the MPRP:

- In order to achieve Maine and New England's greenhouse gas reduction goals, Maine will need to develop 4500 – 4800 MW's of wind power over the next 10-20 years (Tilghman Direct, p. 12, L. 14 through p.13, L.9).
- Failure to increase the transfer limits at Surowiec-South and the ME-NH interfaces could limit wind development in ME over the next ten years due to the risk that existing limits could prevent the delivery of wind energy to market, result in wind generation curtailments and cause a reduction in locational marginal prices in Maine, which individually and collectively could so limit energy, Forward Capacity Market, REC and production tax credit income as to create a disincentive for development of wind and other renewables in Maine. (*Id.* at p.17, L. 21-22; p.18, L. 4-17; p.19, L.1-9; p.20, L. 1-10). Additionally, risk of curtailment can limit the willingness of parties to enter into long-term contracts for wind or other renewables, as no party wants to bear the risk of loss associated with an idle facility. (Tilghman Surrebuttal, p.6, L.1-18).

- The recent ISO NEWIS study supports the need for substantial increases in the transfer limit at the Maine interfaces, as it found that, in order to support a New England-wide increase in wind generation of 2000 MWs, the transfer limits would need to be as follows: Orrington-South-2500 (current-1200), Surowiec-South-2100 (current-1650) and ME-NH-2700 (current-1625). (Tilghman Surrebuttal, p.7, L.9-11; Tilghman Direct, p.16, L.21-25 and p. 17, L.1-4).
- The variability of wind requires that there be geographic diversity of the available wind resource. In order for Maine to benefit from wind resources in other regions and for other regions to benefit from Maine wind resources, transmission upgrades are necessary to ensure the transferability of the wind energy to and from Maine. (Tilghman Surrebuttal, p.4, L.13-32).

Maine has demonstrated a clear intent to utilize every legal and regulatory avenue available to substantially increase renewable energy generation within the state over the next ten years, while adhering to applicable protective standards. In order to achieve this goal, Maine law requires that its regulatory authorities must seize every reasonable opportunity to advance projects that further this objective. The linkages between elements of the MPRP and clean energy development are indisputable, however difficult they may be to quantify with precision. This project presents an opportunity for this Commission to progressively direct Maine's energy future; this state cannot afford to wait another ten years for the next substantial transmission project to come along.

II. CLF's Recommendations for a Final CPCN.

Based upon the principles and concepts outlined above, CLF would urge this Commission to issue a CPCN to CMP that is comprised of the following transmission and non-transmission components:

Transmission

1. Northern/Central Portion

- i. 345 kV line from Orrington to Larrabee, via Detroit and Maxcy's
- ii. Sub Station work at Orrington
- iii. Albion Rd Sub Station (with auto transformer)
- iv. Larrabee Rd Sub Station (with auto transformer)
- v. 345 kV line from Surrowiec to Larrabee Rd
- vi. Sub Station work at Surrowiec
- vii. 115 kV line from Larrabee to Rumford (Western spur)
- viii. 115 kV line rebuilds
 1. Section 86 Bucksport – Belfast 115 kV line (9.2 miles)
 2. Orrington to Albion via Detroit (Sections 203, 67 and 66)
 3. Albion to Maxcy's (Section 258/84 and 257/67)
- ix. 115kV line (254) from Maxcy's to Orrington
- x. Re-rate Maine Yankee to Mason as necessary
- xi. DCT Separations: Kennebec River (345 kV DCT 375/377); Maine Yankee (345 kV DCT 375/392); Bucksport (115 kV DCT 65/205)

2. Southern Portion

- i. Surrowiec to a West Falmouth tap on line 386
 1. 345 Kv line from Surowiec to line 386 tap (CMP Section 3020); no new Raven Farm Sub Station; no new line to Elm St. Yarmouth area. Rebuild 115kV lines as necessary to build Surowiec to Section 386 line.

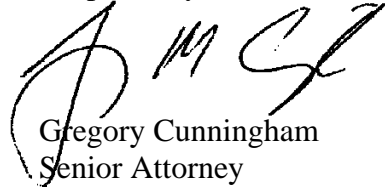
- ii. 345 kV from Soouth Gorham to Three Rivers, including Maguire Rd. autotransformer
 - iii. Second autotransformer at South Gorham Sub Station
3. Capacitor installations in the Augusta and Lewiston areas to resolve voltage issues, if necessary
4. Removal of all existing MPRP-related SPSs , however, other SPSs may remain in place within Maine and new SPSs may be required to address specific operational concerns.
5. Establish Smart Grid Platform and Assign Independent (Non-CMP) Operator-Commission either contracts with Grid Solar for this service or issues RFP.

Non-Transmission

1. Smart Grid Platform Pilot projects will be developed in the Midcoast and South Portland regions-Commission issues RFP for clean non-transmission alternative to provide additional reliability to the distribution and transmission systems of Maine's electric utilities during peak and non peak load periods, as well as enable the Commission to evaluate the value of the Smart Grid Platform to customers in their use of electricity and participation in electricity markets. Pilot project program to facilitate the increased use of hybrid and electric cars in Maine, and to promote the storage of renewable and other energy generated off-peak to replace fuels with greater climate impacts.

Dated at Portland, Maine this 12th day of March, 2010.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'G M C', written over the printed name 'Gregory Cunningham'.

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