



**Northeast
Utilities System**

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March 31, 2008

Mr. Stephen J. Rourke
Vice President, System Planning

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Director, Resource Adequacy and Chief Economist

ISO-New England
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Régie de l'énergie
DOSSIER: 12-3669-2008 Phox 2
DÉPOSÉE EN AUDIENCE
Date: 4/05/2011
Pièces n°: C-6-111 EBT

Dear Steve and Bob,

As you are aware, Northeast Utilities (NU) has done extensive analysis of New England's future energy and environmental needs and has been an active participant in trying to find solutions that provide benefits to the region. Our analysis has indicated sizeable future gaps for New England in meeting state-based renewable portfolio standards and the Regional Greenhouse Gas Initiative requirements. We believe that the best way to help meet these future requirements will be through a portfolio approach that includes aggressive utility-based demand side management, New England-based renewable generation development, and new low or non-carbon emitting resources from Canada. We also would note, as evidenced by all of the projects presented before the Planning Advisory Committee (PAC) on December 18th, the common theme of the need to develop increased transfer capability to deliver power to load centers in southern New England, resulting from new renewable and low-carbon emissions resources in northern New England and Canada.

Study Request:

Accordingly, as part of the economic studies that will be undertaken by ISO-NE in accordance with Attachment K of FERC Order 890, we are formally requesting an analysis of increases to the North-South New England (Vermont and New Hampshire into Massachusetts) transfer capability. We would request that this analysis study the best ways to increase the New England North-South transfer capability by 1,500-2,500 MW. Our proposal before the PAC for enhancing the North-South transfer capability included a new 660 MW HVDC undersea tie-line from a converter station near the NU Newington Substation in Newington, New Hampshire to a to-be-determined connection point in the Boston, Massachusetts area. We are currently working jointly with NSTAR to refine our analysis for the best configuration and termination points for that new DC tie line. We also believe that other 345 kV AC transmission line upgrades in New Hampshire and Massachusetts may be required or could be complementary (for example: new 345 kV from Vermont Yankee to Ludlow, new 345 kV from Scobie Pond to Tewksbury).

Study Assumptions:

Northern Supply – With respect to the type and location of new resources in northern New England that require additional North-South transfer capability, we request a portion of the resources include both a new HVDC connection to Canada as described to the PAC and the development of new renewable generation resources in New Hampshire.

With respect to Canadian imports, our initial project scope presented before the PAC described a 1,200 MW overhead HVDC tie-line from the Hydro-Québec system to a termination point in the vicinity of Webster Substation in Franklin, New Hampshire. This project would provide a new connection to substantial clean and non-emitting resources via an additional transmission corridor, thereby providing added energy security for the region. For the purpose of this analysis, ISO should assume that the development of the northern DC line would be accompanied by a long-term power purchase agreement that will enable the line to be reliably operated at up to 1,200 MW base loaded (i.e., flow would not be contingent on market pricing of power).

We believe this new connection with the Hydro-Québec system will provide substantial benefits including:

- Regional economic benefits through reduced locational marginal prices.
- A more diversified system fuel mix – up to an 8% reduction in reliance on natural gas.
- Substantial reductions in regional CO₂ emissions of 5-6 million tons per year – about 1/3 of the projected gap in 2020.
- Improved reliability by interconnecting with the Hydro-Québec system (i.e., on a non-unit contingent basis).

With respect to New Hampshire renewable generation, we request another portion of northern New England resources include renewable generation in northern New Hampshire in the form of wind (300 MW) and biomass (100 MW) power, along with associated upgrades to the northern New Hampshire 115 kV loop. These renewable resources represent a key component for meeting New England's energy and environmental challenges and an important complement to imports from the Hydro-Québec system.

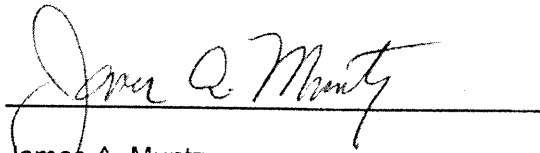
Reliability Projects – We believe that the Northern Supply projects coupled with reliability upgrades currently being planned for northern New England will provide the reliability, operational, economic, environmental and fuel diversity benefits we have discussed in multiple public forums. Although not contingent upon, we request that the North-South transfer capability be studied with the inclusion of two important reliability upgrades currently in the planning phase for northern New England:

- The Maine Power Reliability Program (MPRP) which will enhance greater Maine's reliability and allow expanded renewable resource development in northern and western Maine.
- The addition of new 345 kV transmission facilities connecting Deerfield, NH, Webster, NH and Coolidge, VT. This reliability project is in the current Regional System Plan and NU is actively conducting the studies required to advance it from conceptual status to proposed status. Our initial studies have indicated that in addition to its reliability and operational benefits, this extension of the 345 kV bulk power grid in New Hampshire and Vermont is highly complementary with the injection of clean and renewable energy from the Hydro-Québec system, via its US subsidiary HQ Energy Services US, at Webster Substation.

* * *

Over the past six months NU has reached out extensively to ISO-New England and to the other stakeholders in the New England energy marketplace with the goal of promoting a common view and unified approach toward finding the best energy and environmental solutions for our region. Though it would overstate that we have established a consensus on our vision for New England's energy future, multiple stakeholders have indicated they believe we are moving in the right direction and that our portfolio of solutions (aggressive DSM, New England renewable resource development, and increased interconnectivity with Hydro-Québec) will go along way for creating appropriate bridges between our regions economic, reliability, and environmental goals. In addition to the solutions referenced in this study request, NU continues to work collaboratively with regional stakeholders on ideas and concepts that might provide additional value for consumers in the region.

If you have any questions on this request, require clarifications or additional data for performing the studies, please let us know.



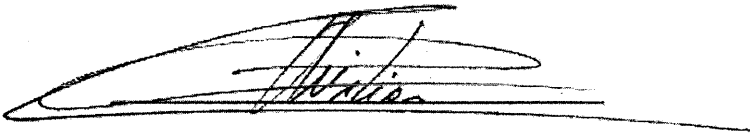
James A. Muntz
Senior VP, Transmission, Northeast Utilities



James B. Robb
Senior VP, Enterprise Planning and Development, Northeast Utilities

Hydro-Québec Energy Services US supports the Northeast Utilities request for the above described study in accordance with Attachment K of FERC Order 890.

For HQ Energy Services US

A handwritten signature in black ink, appearing to read "Christian G. Brosseau", is written over a horizontal line. The signature is stylized and cursive.

Christian G. Brosseau
President, HQ Energy Services US