



November 14, 2007

**VIA HAND DELIVERY**

The Honorable Kimberly D. Bose  
Federal Energy Regulatory Commission  
888 First Street, N.E.  
Washington, D.C. 20426

**Re: ISO New England Inc., Docket No. ER07-1289-\_\_\_\_; Informational Report on Revision to Loss Component Calculation at Graham Node**

Dear Secretary Bose:

ISO New England Inc. (the “ISO”)<sup>1</sup> hereby submits an original and fourteen copies of this informational report updating the Commission on changes being made today to the Loss Component calculation for the Graham node (the “Graham Node”) in the Maine Load Zone on the New England market system (the “Loss Component Revision”).

This information is being supplied because the Loss Component Revision relates to the findings made and the compliance requirements imposed by the Commission’s October 29, 2007 order in the referenced docket.<sup>2</sup> The October 29 Order conditionally accepted the “MEPCO Roll-In Proposal” to treat the transmission facilities of the Maine Electric Power Company (“MEPCO”) as Pool Transmission Facilities (“PTF”). The MEPCO Roll-In Proposal was filed by the ISO, MEPCO and the Participating Transmission Owners Administrative Committee (collectively, the “Filing Parties”).

Specifically, as part of the ISO’s revision of its network system model to reflect the addition of the Northeast Reliability Interconnect (“NRI”) – the second intertie between the New England and Maritimes Control Areas – the ISO today modified the current Loss Component calculation for the Graham Node. The Graham Node is the PTF

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<sup>1</sup> Capitalized terms used but not otherwise defined in this filing have the meanings ascribed thereto in the ISO’s Transmission, Markets and Services Tariff, FERC Electric Tariff No. 3 (the “Tariff”).

<sup>2</sup> *ISO New England Inc.*, 121 FERC ¶ 61,097 (2007) (“October 29 Order”).

node at which the locational marginal prices (“LMP”) payable to the Maine Independence Station (“MIS”) are calculated. The MIS is owned by Casco Bay Energy Company, L.L.C. (“Casco Bay”).

This informational report explains why the ISO today made the change and how it relates to the October 29 Order and the associated filing due on November 28, 2007.

## **I. BACKGROUND**

In conditionally accepting the MEPCO Roll-In Proposal, the October 29 Order found that the transmission service agreement (“TSA”) Casco Bay entered into with MEPCO (the “Casco Bay TSA”) as an internal MEPCO customer impliedly provides a “hedge” against congestion and losses (with respect to the treatment of the MIS’s output for purposes of the New England market system).<sup>3</sup> Neither Casco Bay nor the October 29 Order is clear with respect to the nature or source of these “hedgies.” The ISO and MEPCO believe that this finding is not supported by the record and may be substantively incorrect, and are considering seeking rehearing on this point.

The Filing Parties will also be making a filing on or before November 28, either in compliance with the October 29 Order or explaining that the conditions contained in that Order are not acceptable to MEPCO, in which case the roll-in will not presently go forward.<sup>4</sup> If the roll-in does not go forward, it will be necessary for the ISO to limit the transfer capabilities of the dual MEPCO/NRI interconnection to the transfer capabilities that are currently in place for the New Brunswick external interface, namely, up to a maximum of 700 MW for imports from New Brunswick and 280 MW for exports to New Brunswick. This is a result of the fact that, as described in the August 16 filing, the ISO does not have an alternate mechanism that will provide for the administration of transmission service across two parallel external ties (one of which is PTF and the other of which is non-PTF) where both ties have a single external (*i.e.*, New England/New Brunswick) interface.

The ISO believes that Casco Bay’s arguments and the findings in the October 29 Order regarding a loss “hedge” could stem from the existing Loss Component treatment for the MIS, which in turn reflects the unique issues arising from the location and original interconnection of the MIS, explained below. The distinctive Loss Component

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<sup>3</sup> October 29 Order at P 40.

<sup>4</sup> As explained in the August 16 filing of the MEPCO Roll-In Proposal, the Filing Parties requested the Commission to accept the filing “without modification.” MEPCO is considering whether the conditions imposed in the October 29 Order are acceptable.

calculation at the Graham Node is what is being revised by the ISO today, for the reasons described herein.<sup>5</sup>

## **II. EXPLANATION OF THE LOSS COMPONENT REVISION**

### **A. The Interconnection of the MIS and Related Transmission Upgrades**

The MIS, completed in 2000, is interconnected to a PTF facility (the Graham 115 kV PTF substation) by a non-PTF line. Based on system impact studies performed at the time of the interconnection, and given the location of the new generator at the far corner of the New England Transmission System and the close proximity between the Graham substation and the Orrington 345 kV substation on the MEPCO transmission facility – which extends from the U.S.-Canadian border southward to the Maine Yankee substation – it was evident that the entire output of the new generator could not be physically distributed (through the existing 115-kv PTF system in the vicinity of Orrington and Bucksport) to New England-wide loads.<sup>6</sup> Instead, it was clear that some of the MIS output would be flowing over the MEPCO line as well as the PTF, and that upgrades would be required for the PTF system and the MEPCO system. The ISO understands that the MEPCO upgrades maintained, rather than increased, the transfer capability across MEPCO facilities.

### **B. The Casco Bay-MEPCO Transmission Service Agreement and the Responsibility for Losses Thereunder**

As the owner of the MIS, Casco Bay entered into a 25-year firm point-to-point transmission service agreement with MEPCO that was accepted by the Commission with a commencement date of April 1, 2000.<sup>7</sup> Under the Casco Bay TSA, Casco Bay pays MEPCO's embedded mileage-based rate (as do all other MEPCO firm service customers). The Casco Bay TSA specifies a point of receipt (in the north) at the Orrington 345 kV interconnection between MEPCO and the PTF, and a delivery point at the Maine Yankee 345 kV substation (in the south) where the MEPCO line also interconnects with the PTF.

Casco Bay's responsibility for real power transmission losses was addressed in Section 15.7 of the MEPCO Open Access Transmission Tariff ("MEPCO OATT") in

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<sup>5</sup> As the network system model and the loss calculations resulting therefrom at particular Nodes are not specified in filed rates, the explanation of the Loss Component Revision is being provided to the Commission as an informational report.

<sup>6</sup> Such New England-wide distribution was mandated by the "full integration" standard for interconnection in effect in New England at the time.

<sup>7</sup> Form of Service Agreement for Firm Point-To-Point Transmission Service Between Maine Electric Power Company and Casco Bay L.L.C., Docket No. ER00-872-000.

effect at that time of execution of the Casco Bay TSA. These MEPCO OATT provisions were carried forward as Section 26 of Schedule 20B, which provides:

MEPCO is not obligated to provide Real Power Losses. Real power losses across the MEPCO Transmission System shall be allocated solely to Transmission Customers that use the MEPCO Transmission System. *The Transmission Customer will be responsible for the losses associated with MEPCO Transmission Service*, in addition to any losses associated with other transmission service under the OATT. The applicable Real Power Losses will be calculated according to procedures set by the Control Area Operator [*i.e.*, the ISO]. *In cases where the Control Area Operator does not allocate MEPCO losses, such losses shall be set at 2.8 percent in the direction of predominant power flow.*<sup>8</sup>

In retrospect, and as described in more detail below, neither ISO nor MEPCO was allocating any losses under the Casco Bay TSA to MIS or Casco Bay.

**C. Losses Under the New England Market System; Genesis of the Existing Loss Component Calculation at the Graham Node**

One of the core features of the “SMD” markets in New England that commenced on March 1, 2003 is the utilization of LMPs. LMPs are calculated for Nodes and Load Zones on the New England system. Zonal prices are paid by load, and nodal prices are paid to Resources. Nodes and Load Zones are defined by the ISO pursuant to criteria set forth in Market Rule 1. The nodal price paid to a Resource at a Node has three components: an Energy Component, a Congestion Component and a marginal Loss Component (*i.e.*, not average or real power losses).

Market Rule 1 defines “Loss Component,” in relevant part, as:

...the component of the nodal LMP at a given Node or External Node on the PTF that reflects the cost of losses at that Node or External Node relative to the reference point.<sup>9</sup>

As shown in the attached diagram (Attachment 1), the Graham 115 kV PTF substation is part of the Bangor Hydro transmission system, and is connected to the Orrington substation via the PTF. For purposes of the New England Markets, the Graham Node is located at the Graham 115 kV PTF substation. The PTF portion of the

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<sup>8</sup> Emphasis added.

<sup>9</sup> Section III.1 of the Tariff.

Orrington 345 kV substation is in turn connected to the MEPCO transmission facility at the MEPCO portion of the Orrington 345 kV substation.

In preparation for the commencement of the SMD markets, it was necessary for ISO staff to develop a network system model reflecting the Nodes and Load Zones so that LMPs could be calculated and paid to resources on a nodal basis and by load on a zonal basis. At the time of network system model preparation, ISO staff was aware of the Casco Bay TSA, its genesis as a recognition that a significant portion of MIS's output flowed over the MEPCO lines as well as 115-kV PTF, and Casco Bay's liability under the Casco Bay TSA for losses over the MEPCO line. In addition, the ISO was aware that Market Rule 1's definition of "Loss Component" also contained the following language, designed to prevent double collection of losses from Resources that are already paying losses on a non-PTF system:

The Loss Component of the nodal LMP at a given Node on the non-PTF system reflects the relative cost of losses at that Node adjusted as required to account for losses on the non-PTF system already accounted for through tariffs associated with the non-PTF.<sup>10</sup>

The Graham Node (at which MIS is paid for the Energy and Ancillary services it produces) is on the PTF system. However, given the electrical flow "realities" stemming from the proximity of the MIS to the MEPCO system (a "non-PTF system"), the transmission service provided under the Casco Bay TSA, and Casco Bay's obligation to pay real power losses across the MEPCO line under "tariffs associated with the non-PTF" (in this case, the MEPCO OATT), ISO staff preparing the network system model believed that it was appropriate to take into account the anti-double-collection provision of the "Loss Component" definition by treating Graham as though it were a non-PTF Node.

This adjustment, deemed consistent with the spirit and intent of the Loss Component definition, was implemented by the "mapping" – in the network system model – of the Loss Component price calculated for the Maine Yankee Node to the Loss Component for the Graham Node. With this adjustment, the MIS output would be deemed for Loss Component calculation purposes to be delivered into the PTF system only at the Maine Yankee substation, which is the southern end of the MEPCO line (the Point of Delivery under the Casco Bay TSA), rather than to the 115-kV PTF system in the vicinity of Graham substation. This adjustment was intended to avoid double collection of losses, that is, over both the MEPCO and parallel 115-kV PTF systems.

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<sup>10</sup> Tariff Section III.1.

#### **D. Re-examination of the Loss Component Mapping**

Other ISO personnel responsible for developing the MEPCO Roll-In Proposal earlier this year became aware of the foregoing loss mapping through discussions in the stakeholder process and review of the methodology for implementing the October 29 Order. Thereafter, the ISO investigated the pertinent facts, circumstances and governing documents. As part of this investigation, the ISO and MEPCO each recently learned that the other had not been collecting losses from Casco Bay; therefore, no “double collection” was at issue. Moreover, as a matter of electrical location and given the proximity of the MIS to the MEPCO system, the ISO assumed that the Graham Node is *analogous* to a node on a non-PTF (*i.e.*, MEPCO) system. However, the Graham Node is *in fact* a Node on the PTF system; therefore, the double-counting limitation of Market Rule 1, strictly speaking, does not apply to that Node.<sup>11</sup>

In practical terms, the prior treatment of Casco Bay had three relevant impacts on the New England markets, which the ISO assumes to be the loss “hedge” referred to by Casco Bay and in the October 29 Order. First, since neither the ISO nor MEPCO were charging Casco Bay for losses, the MIS was getting more favorable treatment than other generators on the system as it was not paying anything for losses over either the PTF system or the MEPCO facilities for the transmission of power from the Graham substation to the Maine Yankee substation. Second, load in the energy market throughout New England has paid for this favorable treatment for Casco Bay/MIS via reconciliation within the loss revenue fund.<sup>12</sup> Third, the Maine zonal price paid by load has been slightly higher than it would have been if such losses had been reflected in the system model.

To illustrate the foregoing, the following example describes the pre-existing treatment of MIS and the associated consequences. Assume that the energy component of the LMP at both Maine Yankee and Graham Station is \$60/MWh and that there is no congestion. If the loss factor at Maine Yankee is -\$1/MWh and at Graham is -\$3/MWh, then Casco Bay has been paid \$59/MWh, rather than the \$57/MWh that would have reflected the true LMP at the Graham node. Assuming hypothetically that MIS ran at 500 MW during that hour, then Casco would have retained an incremental \$1,000 that hour. Because the Maine zonal price is a summation of all Maine nodal prices, the Maine zonal price could have increased roughly one quarter of one percent (or about \$.15/MWh, assuming the \$60 LMP). It must be emphasized that all these numbers are purely hypothetical and, other than showing the directional impacts, cannot be relied upon for estimating actual impact. Indeed, since the Graham losses have not been calculated in the network model, the ISO cannot recreate the actual impacts. Further, since the Maine

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<sup>11</sup> Further, on a going-forward basis under the MEPCO roll-in proposal, the MEPCO lines would no longer be non-PTF.

<sup>12</sup> See Sections III.3.1.7.7 and III.3.2.1 of Market Rule 1 in the Tariff.

Yankee losses have been mapped to the Graham Node in the network model since the start of SMD, the ISO cannot recreate the actual impacts.

#### **E. The Revised Network System Model and Modification**

On or very shortly after December 1, 2007, the NRI will be released for commercial operation, added to the New England Transmission System, and classified as PTF. The NRI will connect the Orrington 345 kV substation in Maine with the Pointe Lepreau substation in New Brunswick, and will operate in parallel with the existing MEPCO transmission line connecting New England and New Brunswick. In order for the NRI to be integrated into the New England market and transmission systems, a revision to the network system model was required and is being implemented today.

As a result of the investigation and conclusions discussed above, the revised system model includes the Loss Component Revision. The revision means that the Loss Component calculated at the Graham Node will be consistent with its physical location on the PTF system, rather than being mapped to the Loss Component calculation made at the Maine Yankee Node. The ISO sent a notice yesterday to Market Participants informing them of the change being made today. This change will slightly reduce Maine zonal prices.

Given the finding in the October 29 Order that Casco Bay has a “hedge” against losses in the New England market system, the ISO is developing a mechanism (to be effective today) to hold Casco Bay “harmless” from such losses, pending the Commission’s consideration of and action on any potential rehearing request.<sup>13</sup> The ISO and MEPCO will be consulting with the New England market participants, consistent with the provisions of Section 11.5 of the Participants Agreement, regarding the development of the mechanism.<sup>14</sup> This mechanism will either be included as a part of the compliance filing to be made in this proceeding on or before November 28, 2007, or simultaneously with a filing noting that MEPCO is unwilling to accept the conditions in the October 29 Order.

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<sup>13</sup> This mechanism, as currently envisioned, would seek to hold Casco Bay/MIS harmless against marginal losses over the transmission path from Maine Yankee to Orrington (on the MEPCO-owned lines) while maintaining Casco Bay’s liability for real power losses on those lines.

<sup>14</sup> The ISO will discuss this matter at the November 16 meeting of the NEPOOL Transmission Committee. Section 11.5 of the Participants Agreement states that “If the time required for ... [a] compliance filing does not permit ISO to undertake the entire stakeholder process contemplated by this Section 11, ISO will consult with the Chair or Vice Chair of the Participants Committee or the Vice Chair of the appropriate Technical Committee on appropriate procedures for receiving Governance Participant input under the circumstances.”

### III. CONCLUSION

For the foregoing reasons, the ISO respectfully requests the Commission to review the information in this report.

Please acknowledge receipt of the foregoing by date-stamping and returning to our messenger the enclosed extra copies of this filing.

Respectfully submitted,

#### ISO NEW ENGLAND INC.

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#### Attachments

cc : Governance Participants (electronically) and Non-Market Participant  
Transmission Customers listed in Attachment 2

Governors and energy regulatory agencies of the New England states, and New  
England Conference of Public Utilities Commissioners, Inc., as listed in  
Attachment 3

**CERTIFICATE OF SERVICE**

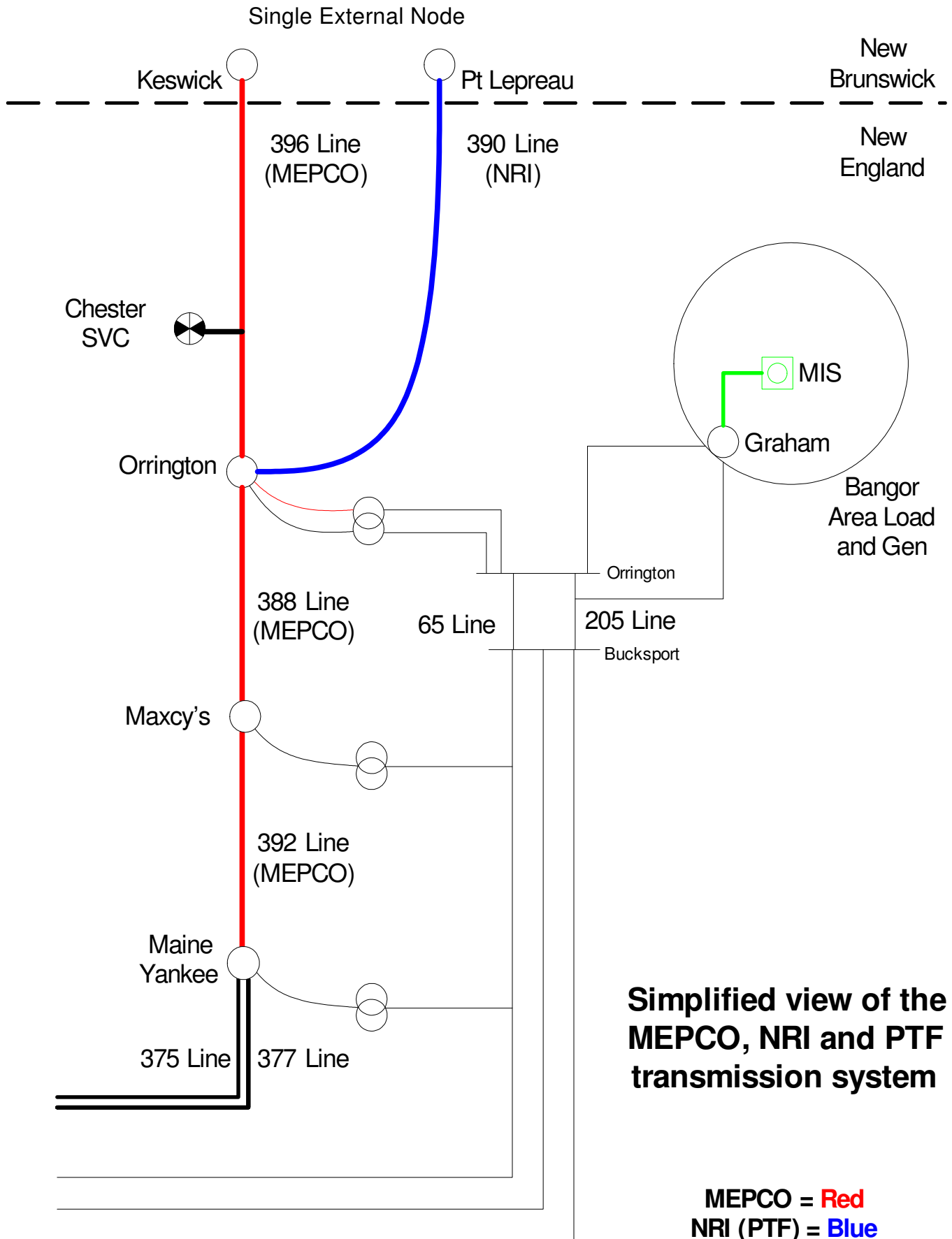
I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in these proceedings.

Dated at Washington, D.C. this 14th day of November, 2007.

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601 13th Street, N.W., Suite 1000 South  
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## **Attachment 1**



## Attachment 2

**Non-Market Participant Transmission Customers**

Miller Hydro Group  
P.O. Box 97  
Lisbon Falls, ME 04252-0097

Town of Wolfeboro Municipal Electric  
Department  
84 S. Main St.  
Wolfeboro, NH 03894

## Attachment 3

**New England Governors  
and Utility Regulatory  
and Related Agencies**

Connecticut

The Honorable M. Jodi Rell  
State Capitol  
210 Capitol Ave.  
Hartford, CT 06106

Connecticut Department of Public Utility Control  
10 Franklin Square  
New Britain, CT 06051-2605

Maine

The Honorable John E. Baldacci  
One State House Station  
Rm. 236  
Augusta, ME 04333-0001

Maine Public Utilities Commission  
State House, Station 18  
242 State Street  
Augusta, ME 04333-0018

Massachusetts

The Honorable Deval Patrick  
Office of the Governor  
Rm. 360 State House  
Boston, MA 02133

Massachusetts Department of Public Utilities  
One South Station  
Boston, MA 02110

New Hampshire

The Honorable John H. Lynch  
State House  
25 Capitol Street  
Concord, NH 03301

New Hampshire Public Utilities Commission  
21 South Fruit Street  
Suite 10  
Concord, NH 03301-2429

Rhode Island

The Honorable Donald L. Carcieri  
State House Room 115  
Providence, RI 02903

Rhode Island Public Utilities Commission  
89 Jefferson Boulevard  
Warwick, RI 02888

Vermont

The Honorable James H. Douglas  
109 State Street, Pavilion  
Montpelier, VT 05609

Vermont Public Service Board  
112 State Street, Drawer 20  
Montpelier, VT 05620-2701

**New England Governors  
and Utility Regulatory  
and Related Agencies**

**October 26, 2007**

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