



February 2, 2010

**VIA HAND DELIVERY**

The Honorable Kimberly D. Bose, Secretary  
The Honorable Nathaniel J. Davis, Sr., Deputy Secretary  
Federal Energy Regulatory Commission  
888 First Street, N.E.  
Washington, D.C. 20426

Re: *ISO New England Inc. and New England Power Pool*, Docket No. ER10-\_\_\_\_-000,  
Filing of Installed Capacity Requirement, Hydro Quebec Interconnection  
Capability Credits and Related Values for the 2011/2012 Capability Year

Dear Secretary Bose and Deputy Secretary Davis:

Pursuant to Section 205 of the Federal Power Act (“FPA”),<sup>1</sup> ISO New England Inc. (the “ISO”) and the New England Power Pool (“NEPOOL”) Participants Committee (collectively, the “Filing Parties”) hereby submit an original and six (6) copies of this transmittal letter and related materials, which identify the Installed Capacity Requirement,<sup>2</sup> Local Sourcing Requirements and Maximum Capacity Limits (collectively, the “ICR-Related Values”) and Hydro Quebec Interconnection Capability Credits (“HQICCs”) for the 2011/2012 Capability Year second annual reconfiguration auction to be held in May 2010.<sup>3</sup>

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<sup>1</sup> 16 U.S.C. § 824d (2006).

<sup>2</sup> Capitalized terms used but not defined in this filing are intended to have the meaning given to such terms in the ISO New England Inc. Transmission, Markets and Services Tariff, FERC Electric Tariff No. 3 (“ISO Tariff” or “the Tariff”), the Second Restated New England Power Pool Agreement, and the Participants Agreement. Market Rule 1 is Section III of the ISO Tariff.

<sup>3</sup> The 2011/2012 Capability Year runs from June 1, 2011 to May 31, 2012. Pursuant to Section III.12.3 of Market Rule 1, the Installed Capacity Requirement must be filed 90 days prior to the applicable Forward Capacity Auction.

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*The 2011/2012 ICR-Related Values*

Pursuant to Section III.13.4.5 of Market Rule 1, the ISO is to conduct three annual reconfiguration auctions between the primary Forward Capacity Auction for a Capability Year and the commencement of the applicable Capacity Commitment Period.<sup>4</sup> Reconfiguration auctions permit the ISO to recalculate the Installed Capacity Requirement and related values using more up-to-date data than that available for the primary Forward Capacity Auction. The updated ICR-Related Values are used in reconfiguration auctions to help ensure that resources are procured in the auctions to satisfy the amount of capacity required to meet the one day in 10 years disconnection of firm load resource adequacy planning criterion. Using these updated values in the reconfiguration auction process, the ISO will have an opportunity to adjust capacity needs for the Capability Year of interest. Reconfiguration auctions also permit Market Participants, if they desire, to adjust their Capacity Supply Obligations through bilateral trades.

As detailed below, the Filing Parties propose an Installed Capacity Requirement value of 32,652 MW for the 2011/2012 second annual reconfiguration auction. The 32,652 MW Installed Capacity Requirement value includes the HQICCs that are allocated to the Interconnection Rights Holders, as required by Market Rule 1. Those HQICCs are 911 MW per month.<sup>5</sup> Thus, the net Installed Capacity Requirement for use in the 2011/2012 second annual reconfiguration auction will be 31,741 MW.<sup>6</sup>

This net Installed Capacity Requirement reflects two offsetting changes that produce an Installed Capacity Requirement for the 2011/2012 second annual reconfiguration auction that is

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<sup>4</sup> However, pursuant to Section III.13.4.5.1 of Market Rule 1, the first annual reconfiguration auction is not to be conducted for the first five Capability Years – a total of two annual reconfiguration auctions will be held for each of those Capability Years. Therefore, while the Installed Capacity Requirement and related values addressed in the instant filing are for the first annual reconfiguration auction to be held for the 2011/2012 Capability Year, under the terminology used in Section III.13 of Market Rule 1 (which contains the rules for the Forward Capacity Market), this reconfiguration auction is technically the “second” annual reconfiguration auction for the 2011/2012 Capability Year and is being referred to as such for purposes of this filing.

<sup>5</sup> The HQICC is a monthly value. The HQICC values for the 2011/2012 Capability Year were approved by the Commission in a prior order, *ISO New England Inc*, 125 FERC ¶ 61,154 (2008) (“2011/2012 ICR Order”). As explained below, the ISO, in consultation with stakeholders and in accordance with the proposed changes to Section III.12.9 of Market Rule 1, is assuming the same HQICC values used to determine the ICR and Related Values for the 2011/2012 Forward Capacity Auction for determining ICR and Related Values for the second annual reconfiguration auction of the 2011/2012 Capability Year.

<sup>6</sup> Prepared Testimony of Mr. Peter K. Wong on Behalf of ISO New England Inc. (“PKW Testimony”) (Attachment 1) at p. 12. Mr. Wong’s testimony is offered by the ISO in support of this filing.

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787 MW less than the Installed Capacity Requirement approved by the Commission for the 2011/2012 Capability Year primary Forward Capacity Auction.<sup>7</sup> The principal change is a decrease of 830 MW in the forecasted peak loads in New England for the 2011/2012 Capability Year.<sup>8</sup> In addition, there is an increase of 316 MW from the Installed Capacity Requirement used in the 2011/2012 primary Forward Capacity Auction in order to account for the underprocurement of Capacity resulting from the application of a reserve margin gross-up in determining the Capacity Value of Demand Resources and certain New York Power Authority (“NYPA”) import capacity contracts.<sup>9</sup> Because the Installed Capacity Requirement for the second annual configuration auction is less than what was actually purchased and committed in the primary Forward Capacity Auction, no additional resources will be procured in the second annual reconfiguration auction.

The Forward Capacity Auction process requires the modeling of certain constraints, including Local Sourcing Requirements and Maximum Capacity Limits for Load Zones that may be import- or export-constrained.<sup>10</sup> For the 2011/2012 second annual reconfiguration auction, Local Sourcing Requirements for the Connecticut and Northeast Massachusetts/Boston (“NEMA/Boston”) Load Zones are 5,666 MW and 1,956 MW, respectively, which are 1,151 MW and 60 MW less than the values used in the primary Forward Capacity Auction. For the 2011/2012 second annual reconfiguration auction, the Maximum Capacity Limit for the Maine export-constrained Load Zone is 3,140 MW, which is 255 MW less than the value used in the primary Forward Capacity Auction.<sup>11</sup> These values reflect an adjustment to the Local Sourcing

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<sup>7</sup> 2011/2012 ICR Order at PP 26, 41.

<sup>8</sup> PKW Testimony at p. 15.

<sup>9</sup> Without this adjustment, the Installed Capacity Requirement is 32,336 MW. The application of the reserve margin gross-up will be discontinued beginning with the 2012/2013 Capability Year. *See ISO New England Inc. and New England Power Pool*, 125 FERC ¶ 61,355 at P 34 (2008) (“Reserve Margin Gross-up Order”); *Connecticut Municipal Electric Energy Cooperative et al., v. ISO New England Inc.*, Order Denying Complaint, 128 FERC ¶ 61,270 at P 36 (2009). For the 2010/2011 and 2011/2012 Capability Years, Section III.12.7.2.1 of Market Rule 1 requires the adjustment of the Installed Capacity Requirement, Local Sourcing Requirement and Maximum Capacity Limit values to account for the overrating of the capacity values of Demand Resources resulting from the application of the gross-up.

<sup>10</sup> The Local Sourcing Requirement and Maximum Capacity Limit values are used to determine whether separate zones must be modeled in a primary Forward Capacity Auction. The analysis of whether to model separate zones is performed only in the primary Forward Capacity Auction, and the determination for that auction is carried through to reconfigurations auctions for the same Capability Year.

<sup>11</sup> The reduction in the Local Sourcing Requirement and Maximum Capacity Limit values is primarily a result of a decrease in loads forecasted for 2011/2012. In addition, under Section III.12.2.2 of Market Rule 1, Local Sourcing Requirement and Maximum Capacity Limit values are calculated using “as-is”

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Requirements for Connecticut, and NEMA/Boston Load Zones and the Maximum Capacity Limit for the Maine Load Zone of +95 MW, +59 MW and +36 MW, respectively, to account for the under-procurement of resources in these Load Zones due to the overrating of the capacity values of Demand Resources as the result of applying a reserve margin gross-up.<sup>12</sup> Because the updated Local Sourcing Requirement values are less than the values used and procured in the primary Forward Capacity Auction, no additional capacity needs to be procured to meet these requirements in the upcoming reconfiguration auction.

In accordance with the Code of Federal Regulations, the Filing Parties request that the Federal Energy Regulatory Commission (“Commission”) accept the values reflected herein effective April 5, 2010, which is more than 60 days from the filing date.<sup>13</sup>

## **I. COMMUNICATIONS**

The ISO is the private, non-profit entity that serves as the regional transmission organization (“RTO”) for New England. The ISO operates the New England bulk power system and administers New England’s organized wholesale electricity market pursuant to the Tariff and the Transmission Operating Agreement with the New England Participating Transmission Owners. In its capacity as an RTO, the ISO has the responsibility to protect the short-term reliability of the New England Control Area and to operate the system according to reliability standards established by the Northeast Power Coordinating Council, Inc. and the North American Electric Reliability Corporation.

NEPOOL is a voluntary association organized in 1971 pursuant to the New England Power Pool Agreement, and has grown to include more than 420 members. The Participants include all of the electric utilities rendering or receiving service under the Tariff, as well as independent power generators, marketers, load aggregators, brokers, consumer-owned utility systems, end users, demand resource providers, developers and a merchant transmission provider. Pursuant to revised governance provisions accepted by the Commission,<sup>14</sup> the

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system conditions. The surplus capacity that is reflected in the modeling of the system under “as-is” conditions lowers the Local Sourcing Requirement and Maximum Capacity Limit values.

<sup>12</sup> See Section III.12.7.2.1 of Market Rule 1. The application of the reserve margin gross-up will be discontinued beginning with the 2012/2013 Capability Year. See Reserve Margin Gross-up Order at P 34. For the 2010/2011 and 2011/2012 Capability Years, Section III.12.7.2.1 requires the adjustment of the Installed Capacity Requirement, Local Sourcing Requirement and Maximum Capacity Limit values to account for the overrating of the capacity values of Demand Resources resulting from the application of the gross-up.

<sup>13</sup> 18 C.F.R. § 35.3 (2009).

<sup>14</sup> *ISO New England Inc. et al.*, 109 FERC ¶ 61,147 (2004).

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Participants act through the NEPOOL Participants Committee. The Participants Committee is authorized by Section 6.1 of the Second Restated NEPOOL Agreement and Section 8.1.3(c) of the Participants Agreement to represent NEPOOL in proceedings before the Commission. Pursuant to Section 2.2 of the Participants Agreement, "NEPOOL provide[s] the sole Participant Processes for advisory voting on ISO matters and the selection of ISO Board members, except for input from state regulatory authorities and as otherwise may be provided in the Tariff, TOA and the Market Participant Services Agreement included in the Tariff."

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<sup>15</sup> Due to the joint nature of this filing, the Filing Parties respectfully request a waiver of Section 385.203(b)(3) of the Commission's regulations to allow the inclusion of more than two persons on the service list in this proceeding.

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## **II. BACKGROUND AND OVERVIEW**

Pursuant to Section III.13 of Market Rule 1, the ISO administers the Forward Capacity Auction for a Capability Year “to procure the amount of capacity needed in the New England Control Area” for that Capability Year. As part of the Forward Capacity Market, the ISO is preparing to conduct an annual reconfiguration auction for the 2011/2012 Capability Year. The ISO anticipates conducting the auction in May 2010. In this filing, the Filing Parties are submitting updated ICR-Related Values for approval, which are key inputs in the annual reconfiguration auction. The Filing Parties are also reporting the HQICC values, which are a key input into the calculation of the ICR-Related Values.

The ISO uses the reconfiguration auction process: (1) to balance changes in the amount of the Installed Capacity Requirement that must be procured for a Capability Year due to changes in system conditions that have occurred since the calculation of the Installed Capacity Requirement for purposes of the primary Forward Capacity Auction; (2) to provide Market Participants that have procured Capacity Supply Obligations in the primary Forward Capacity Auction for a Capability Year the opportunity to modify those obligations; and (3) to provide Market Participants with Qualified Capacity not already subject to a Capacity Supply Obligation the opportunity to acquire such an obligation. To complete a reconfiguration auction, the ISO must re-calculate the ICR-Related Values for the Capability Year for which the reconfiguration auction is being held to reflect updated data and information regarding load forecast and resource availability. In the event the Installed Capacity Requirement shows the need for the procurement of additional capacity over that procured during the primary Forward Capacity Auction (or a previous reconfiguration auction) for the Capability Year, that additional capacity can be procured in the reconfiguration auction.

### **A. Installed Capacity Requirement**

The Installed Capacity Requirement is a measure of the installed capacity resources that are projected to be necessary to meet reliability standards in light of total forecasted load requirements for the New England Control Area and to maintain sufficient reserve capacity. More specifically, the Installed Capacity Requirement is the amount of resources needed to meet the reliability requirements defined for the New England Control Area of disconnecting non-interruptible customers (a loss of load expectation or “LOLE”) no more than once every ten years (an LOLE of 0.1 days per year). The methodology for calculating the Installed Capacity Requirement is set forth in Section III.12 of Market Rule 1.

The Installed Capacity Requirement for the 2011/2012 second annual reconfiguration auction establishes the amount of additional installed capacity, if any, to be procured for the 2011/2012 Capability Year. The values for the Installed Capacity Requirement filed herewith

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have been calculated using the same methodologies and assumptions that were used in calculating the Installed Capacity Requirement for the 2011/2012 primary Forward Capacity Auction, with adjustments as noted in this filing.<sup>16</sup> As in past years, the ISO developed the Installed Capacity Requirement recommendation with stakeholder and New England Regulator input, which is provided in part through the NEPOOL committee processes through review by NEPOOL's Power Supply Planning Committee ("PSPC"), Reliability Committee and Participants Committee. All of the load and resource assumptions needed for the Westinghouse/ABB Capacity Model Program were reviewed by the PSPC, a subcommittee of the NEPOOL Reliability Committee.

Also as in previous years, the Installed Capacity Requirement was calculated based on three primary components: the load forecast, unit availability, and tie benefits. Section IV of this transmittal letter below describes each of these components. The methodologies for determining projected load and resource outage rates were the same as those used in calculating the Installed Capacity Requirement for the primary Forward Capacity Auction.<sup>17</sup>

With respect to tie benefit values, as more fully explained in Section IV.D, below, the Filing Parties support a value of 1,800 MW.

## **B. Local Sourcing Requirement and Maximum Capacity Limit**

Under the Forward Capacity Market, the ISO must also calculate Local Sourcing Requirements and Maximum Capacity Limits to be used, if necessary, in each Forward Capacity Auction and the reconfiguration auctions for a Capability Year. A Local Sourcing Requirement is "the minimum amount of capacity that must be electrically located within an import-constrained Load Zone."<sup>18</sup> A Maximum Capacity Limit is "the maximum amount of capacity that can be procured in an export-constrained Load Zone [to meet the Installed Capacity Requirement]."<sup>19</sup> The general purpose of Local Sourcing Requirements and Maximum Capacity Limits is to provide that capacity resources, when considered in combination with the transfer capability of the transmission system, are electrically distributed within the New England Control Area in a manner that ensures that the minimum amount of resources purchased in the Forward Capacity Auction will meet the Northeast Power Coordinating Council's and Market

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<sup>16</sup> *ISO New England Inc.*, Docket No. ER08-1512-000, Filing of Installed Capacity Requirement, Hydro Quebec Interconnection Capability Credits and Related Values for the 2011/2012 Capability Year (filed September 9, 2008) (the "2011/2012 Primary FCA ICR Filing").

<sup>17</sup> *Id.* at pp. 9-12 of the transmittal letter.

<sup>18</sup> Section III.12.2 of Market Rule 1.

<sup>19</sup> *Id.*

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Rule 1, Section III.12's one day in 10 years (0.1 days per year) disconnection of firm load resource adequacy planning criterion.

For the 2011/2012 second annual reconfiguration auction, the ISO calculated the Local Sourcing Requirements for Connecticut and NEMA/Boston Load Zones and the Maximum Capacity Limit for the Maine Load Zone. The Local Sourcing Requirements and Maximum Capacity Limit were calculated using the same general methodology used when these values were calculated for the 2011/2012 primary Forward Capacity Auction. The assumptions of forecasted load, resources, and tie benefits were the same as those used in the calculation of the Installed Capacity Requirement as discussed above.

### **C. HQICCs**

HQICCs are capacity credits that are allocated to the Interconnection Rights Holders, which are entities that hold certain rights over the HQ Interconnection. The HQICC values used for the calculation of the ICR-Related Values for the second annual reconfiguration for the 2011/2012 Capability Year are the same values used in the primary Forward Capacity Auction for the 2011/2012 Capability Year, which were approved by the Commission in the 2011/2012 ICR Order.

### **D. Process for Developing Installed Capacity Requirement and Related Values**

The ISO, in consultation with NEPOOL and other interested parties, developed the proposed ICR-Related Values and HQICCs for the 2011/2012 second annual reconfiguration auction through a stakeholder process that involved 6 meetings over a period of 7 months. The ISO used the methodologies and assumptions for determining the ICR-Related Values as described above. With the exception addressed below regarding tie benefits, the methodology and assumptions used to calculate the proposed Installed Capacity Requirement for the 2011/2012 second annual reconfiguration auction are consistent with the approach used to calculate the Installed Capacity Requirement for the primary Forward Capacity Auction for the 2011/2012 Capability Year.<sup>20</sup> There was broad agreement among stakeholders regarding many of the assumptions, inputs and projections for calculating these values for the 2011/2012 second annual reconfiguration auction.

The specific ICR-Related Values and HQICC values proposed in this submittal, and the derivation of those values, is discussed further in Sections IV-V of this filing letter and in the Testimony of Peter K. Wong, which is sponsored by the ISO alone.

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<sup>20</sup> See 2011/2012 Primary FCA ICR Filing at pp. 9-17 of the transmittal letter.

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## **E. Proposed Values**

### *i. The ICR-Related Values.*

The ISO is proposing an Installed Capacity Value of 32,652 MW for the 2011/2012 second annual reconfiguration auction.<sup>21</sup> The 32,652 MW Installed Capacity Requirement value does not reflect a reduction in capacity requirements relating to the HQICC value of 911 MW per month that are allocated to the Interconnection Rights Holders. Thus, after deducting the HQICC value, the Installed Capacity Requirement for the 2011/2012 second annual reconfiguration auction is 31,741 MW.

The 2011/2012 Capability Year Local Sourcing Requirements for the Connecticut and NEMA/Boston Load Zones for the 2011/2012 second annual reconfiguration auction are 5,666 MW and 1,956 MW, respectively. The Maximum Capacity Limit for the Maine export-constrained Load Zone is 3,140 MW.<sup>22</sup>

### *ii. HQICCs*

The 911 MW of HQICCs assumed for the calculation of the ICR-Related Values for the second annual reconfiguration auction for the 2011/2012 Capability year are the same values assumed for the calculation of the ICR-Related Values for the primary Forward Capacity Auction for the 2011/2012 Capability Year.

## **III. STANDARD OF REVIEW**

The ISO submits the proposed ICR-Related Values and HQICC values for the 2011/2012 second annual reconfiguration auction pursuant to Section 205 of the Federal Power Act, which

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<sup>21</sup> Pursuant to Section III.12.7.2.1 of Market Rule 1, this value accounts for the under-procurement of the Installed Capacity Requirement in the 2011/2012 primary Forward Capacity Auction as the result of the application of a reserve margin gross-up in determining the Capacity Value of Demand Resources and certain NYPA import contracts. Without this 316 MW adjustment, the Installed Capacity Requirement is 32,336 MW.

<sup>22</sup> Pursuant to Section III.12.7.2.1 of Market Rule 1, these values incorporate an adjustment to the Local Source Requirements of Connecticut and NEMA/Boston import-constrained Load Zones and the Maximum Capacity Limit of the Main export-constrained Load Zone of +95 MW, +59 MW and +36 MW, respectively, to account for the application of the reserve margin gross-up to Capacity Value determinations for Demand Resources that are electrically connected to these respective Load Zones. The application of the reserve margin gross-up to the NYPA import contracts does not impact Local Sourcing Requirement values or Maximum Capacity Limit values. Therefore, no adjustments are made to these values relating to the NYPA import contracts.

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“gives a utility the right to file rates and terms for services rendered with its assets.”<sup>23</sup> Under Section 205, the Commission “plays ‘an essentially passive and reactive’ role”<sup>24</sup> whereby it “can reject [a filing] only if it finds that the changes proposed by the public utility are not ‘just and reasonable.’”<sup>25</sup> The Commission limits this inquiry “into whether the rates proposed by a utility are reasonable – and [this inquiry does not] extend to determining whether a proposed rate schedule is more or less reasonable than alternative rate designs.”<sup>26</sup> The ICR-Related Values and HQICCs submitted herein “need not be the only reasonable methodology, or even the most accurate.”<sup>27</sup> As a result, even if an intervenor or the Commission develops an alternative proposal, the Commission must accept this Section 205 filing if it is just and reasonable.<sup>28</sup>

#### **IV. DEVELOPMENT OF THE INSTALLED CAPACITY REQUIREMENT FOR THE 2011/2012 SECOND ANNUAL RECONFIGURATION AUCTION**

The proposed Installed Capacity Requirement value for the 2011/2012 second annual reconfiguration auction was determined using the established calculation methodology and updated system modeling data regarding factors such as forecast load, resource availability and relief assumed obtainable by implementation of operator actions during a capacity deficiency (with the exceptions addressed herein regarding the calculation of tie benefits from neighboring Control Areas). The calculation methodology and the methodology used to develop the assumptions generally are the same as those used to calculate the Installed Capacity Requirement for the 2011/2012 primary Forward Capacity Auction, with the important qualifications noted below. Most of the modeling assumptions have been updated to reflect changed system conditions since the development of the Installed Capacity Requirement for the 2011/2012 primary Forward Capacity Auction.

##### **A. Load Forecast**

The forecasted peak loads of the entire New England Control Area for the 2011/2012

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<sup>23</sup> *Atlantic City Elec. Co. v. FERC*, 295 F.3d 1, 9 (D.C. Cir. 2002).

<sup>24</sup> *Id.* at 10 (quoting *City of Winnfield v. FERC*, 744 F.2d 871, 876 (D.C. Cir. 1984)).

<sup>25</sup> *Id.* at 9.

<sup>26</sup> *Cities of Bethany, et al. v. FERC*, 727 F.2d 1131, 1136 (D.C. Cir. 1984), *cert. denied*, 469 U.S. 917 (1984).

<sup>27</sup> *OXY USA, Inc. v. FERC*, 64 F.3d 679, 692 (D.C. Cir. 1995).

<sup>28</sup> *Cf. Southern California Edison Co., et al.*, 73 FERC ¶ 61,219 at 61,608 n.73 (1995) (“Having found the plan to be just and reasonable, there is no need to consider in any detail the alternative plans proposed by the Joint Protesters.” (citing *Cities of Bethany*, 727 F.2d at 1136)).

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Capability Year are one major input into the calculation of the Installed Capacity Requirement detailed in this filing, and the forecasted peak loads for the individual Load Zones are used to develop the associated Local Sourcing Requirements and Maximum Capacity Limit. For the purpose of calculating the Installed Capacity Requirement for the 2011/2012 second reconfiguration auction, the ISO used the ten-year load forecast covering the years 2009 through 2018 published in April 2009 in the ISO New England “2009 – 2018 Forecast Report of Capacity, Energy, Loads, And Transmission” (“2009 CELT Report”).<sup>29</sup> The 2009 CELT Report forecast was developed by the ISO using the same methodology that the ISO has used for determining load forecasts in previous years and to develop the peak load assumptions reflected in the Commission-approved Installed Capacity Requirement in previous years.<sup>30</sup> This methodology reflects economic and demographic assumptions as reviewed and supported by the NEPOOL Load Forecast Committee.<sup>31</sup>

The projected New England Control Area summer 50/50 peak load<sup>32</sup> for the 2011/2012 Capability Year is 28,575 MW. In determining the Installed Capacity Requirement, the load forecast is represented by a weekly probability distribution of daily peak loads. This probability distribution is meant to quantify the New England weekly system peak load’s relationship to weather. The 50/50 peak load is used solely for reference purposes. In the Installed Capacity Requirement calculations, the methodology determines the amount of capacity resources needed

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<sup>29</sup> For purposes of calculating the Installed Capacity Requirement for the 2011/2012 primary Forward Capacity Auction, the ISO used a similar CELT report covering the years 2008 through 2017 published in April 2008. In addition, two locations on the ISO website contain more detailed information on the following: short-run and long-run forecast methodologies; models and inputs; weather normalization; regional, state, and subarea annual electric energy and peak-load forecasts; high- and low-forecast bandwidths; and retail electricity prices. See “CELT Forecasting Details 2009,” [http://www.iso-ne.com/trans/celt/fsct\\_detail/2009/index.html](http://www.iso-ne.com/trans/celt/fsct_detail/2009/index.html) and “CELT Report 2009,” <http://www.iso-ne.com/trans/celt/report/2009/index.html> (CELT stands for “capacity, energy, loads, and transmission.”).

<sup>30</sup> See, e.g., *ISO New England Inc. and New England Power Pool Participants Committee*, Letter order accepting filing of Installed Capacity Requirement, Hydro Quebec Interconnection Capability Credits and Related Values for the 2010/2011 Capability Year and Related Market Rule Revisions, Docket No. ER09-640-000 (2009); *ISO New England Inc. and New England Power Pool Participants Committee*, 127 FERC ¶ 61,142 (2009) (accepting ISO-proposed Installed Capacity Requirements for the 2009/2010 Power Year).

<sup>31</sup> The methodology is reviewed periodically and updated when deemed necessary in consultation with the NEPOOL Load Forecasting Committee.

<sup>32</sup> The New England Control Area is a summer-peaking system, meaning that the highest load occurs during the summer. The 50/50 peak refers to the peak load having a 50% chance of being exceeded, and is expected to occur at a weighted New England-wide temperature of 90.4 °F.

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to meet every expected peak load of the weekly distribution given the probability of occurrence associated with that load level.<sup>33</sup>

## **B. Resource Capacity Ratings**

The Installed Capability Requirement for the 2011/2012 second annual reconfiguration auction is based on ratings of Qualified Existing Capacity Resources that have cleared the Forward Capacity Auction for the 2011/2012 Capability Year. In addition, the capacity value of Existing Demand Resources and NYPA import contracts has been reduced by the amount of the reserve margin gross-up.<sup>34</sup> These resource ratings (excluding the adjustment of the capacity values for Existing Demand Resources and NYPA import contracts) were presented to the Commission in the Informational Filing for Qualification in the Forward Capacity Market filed with the Commission on September 9, 2008.<sup>35</sup> They represent the closest data set to resources that will be qualified as Existing Capacity Resources for the 2011/2012 second annual reconfiguration auction.<sup>36</sup>

Resource additions and attritions are not assumed in the calculation of the Installed Capacity Requirement for the 2011/2012 second annual reconfiguration auction, pursuant to Market Rule 1, because there is no certainty that new resource additions or existing resource attritions will clear the auction. Not modeling undetermined resource additions and attritions will not have a significant effect on the calculated Installed Capacity Requirement since the availability characteristics and sizes of these resources are expected to be similar to those of the Existing Resources. The additional load carrying capability (“ALCC”) adjustments, discussed in Mr. Wong’s testimony, are designed to compensate for these uncertainties.<sup>37</sup>

## **C. Unit Availability**

The proposed Installed Capacity Requirement value for the 2011/2012 second annual

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<sup>33</sup> See PKW Testimony at pp. 13-14.

<sup>34</sup> In the Forward Capacity Market, capacity resources can be generation (Generating Capacity or Intermittent Power Capacity) or demand resources (On-Peak, Seasonal Peak, Critical Peak, Real-Time Demand Response and Real-Time Emergency Generation).

<sup>35</sup> *ISO New England Inc.*, Docket No. ER08-1513-000, Informational Filing for Qualification in the Forward Capacity Market, (filed September 9, 2008).

<sup>36</sup> The resource qualification process for the 2011/2012 second annual reconfiguration auction is currently underway and therefore was not finalized at the time the Installed Capacity Requirement and related values were calculated for the reconfiguration auction.

<sup>37</sup> PKW Testimony at pp. 8-9.

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reconfiguration auction reflects unit availability assumptions based on historical scheduled maintenance and forced outages of the capacity resources. These assumptions have been changed from the assumptions used for calculating the Installed Capacity Requirement for the 2011/2012 primary Forward Capacity Auction to reflect more current outage data.<sup>38</sup> For Generating Resources, individual unit scheduled maintenance assumptions are based on each unit's most recent historical five-year average of scheduled maintenance. If the individual resource has not been operational for five years, then NERC class average data is used to substitute for the missing annual data. The individual Generating Resource's forced outage assumptions are based on the generator's five-year historical equivalent forced outage rate data submitted to the ISO database. If the resource has been in commercial operation less than five years, the NERC class average data for the same class of units is used to substitute for the missing annual data.

The Qualified Capacity of an Intermittent Power Resource is the resource's median output during the Reliability Hours averaged over a period of five years. Based on the Intermittent Power Resources rating methodology, these resources are assumed to be 100% available because the outages are already incorporated into the resource ratings.

In the Installed Capacity Requirement calculations, performance assumptions for the Passive Demand Response Resources, and the Active Demand Resources in the Real-Time Demand Response, Critical Peak and Real-Time Emergency Generator categories are based on presumed or actual responses during all historical OP 4 events and ISO performance audits.

#### **D. Tie Benefits**

New England's Commission-approved method for establishing the Installed Capacity Requirement requires that assumptions be made regarding the tie benefits value to be used as an input in the formula. Tie benefits from neighboring control areas reduce the Installed Capacity Requirement and the need to buy capacity to meet the New England resource adequacy criterion. The tie benefits from neighboring Control Areas reflect the amount of emergency assistance that is assumed to be available to New England from its neighboring control areas in the event of a capacity shortage in New England, without jeopardizing reliability in New England or its neighboring control areas.

The tie benefits value assumed for the ICR-Related Values for the 2011/2012 second annual reconfiguration auction is 1,800 MW. The Filing Parties agree that this value is appropriate under Section III.12.9 of Market Rule 1, although they do not necessarily reach this

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<sup>38</sup> See PKW Testimony at pp. 18-19 for an explanation of the outage data used in calculating the availability assumptions.

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conclusion for the same reasons. Consequently, the Filing Parties respectfully request that the Commission accept the ICR-Related Values jointly filed by the ISO and NEPOOL in this filing.

The 1,800 MW of tie benefits were in turn allocated to the three individual directly interconnected neighboring Control Areas as follows: 911 MW from Quebec (HQICCs), 716 MW from New Brunswick (Maritimes) and 173 MW from New York.

#### **E. HQICC Values**

The Filing Parties are proposing to utilize in the 2011/2012 second annual reconfiguration auction the same HQICC values utilized in determining the Installed Capacity Requirement for the 2011/2012 primary Forward Capacity Auction: 911 MW for each month in the 2011/2012 Capability Year.

### **V. DEVELOPMENT OF THE LOCAL SOURCING REQUIREMENTS AND MAXIMUM CAPACITY LIMIT**

Under the Forward Capacity Market, the ISO must also calculate Local Sourcing Requirements and Maximum Capacity Limits to be used, if necessary, in each Forward Capacity Auction and reconfiguration auction. A Local Sourcing Requirement is the minimum amount of capacity that must be electrically located within an import-constrained Load Zone, and a Maximum Capacity Limit is the maximum amount of capacity that can be procured in an export-constrained Load Zone to meet the Installed Capacity Requirement. Local Sourcing Requirements and Maximum Capacity Limits are calculated using the same load and resource assumptions as those used in calculating the Installed Capacity Requirement.

These values will determine the amount of capacity that is needed in each Load Zone. Local Sourcing Requirements and Maximum Capacity Limits help to ensure that capacity resources are distributed geographically within the New England Control Area in a manner that ensures compliance with reliability criteria. The amount of Existing Resources in each Load Zone, which are used in the calculation of the Installed Capacity Requirement, Local Sourcing Requirement and Maximum Capacity Limit, are presented in the attached testimony of Peter K. Wong (Attachment 1).<sup>39</sup> The calculation of the Local Sourcing Requirements and the Maximum Capacity Limits proposed herein used the same load and resource assumptions that were used to calculate the Installed Capacity Requirement for the 2011/2012 second annual reconfiguration auction, except that they are distributed to the Load Zones according to their electrical connection.

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<sup>39</sup> PKW Testimony at pp. 16-17, Table Nos. 1-4.

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The Local Sourcing Requirements for the Connecticut and NEMA/Boston Load Zones for the 2011/2012 second annual reconfiguration auction are 5,666 MW and 1,956 MW, respectively. The Maximum Capacity Limit for the Maine export-constrained Load Zone is 3,140 MW.<sup>40</sup> This is the maximum amount of capacity resources that the 2011/2012 second annual reconfiguration auction can procure from the Maine Capacity Zone, including capacity resource imports over the New Brunswick ties. This number also reflects the tie benefits assumed available over the New Brunswick ties.<sup>41</sup>

## **VI. STAKEHOLDER PROCESS**

At its December 15, 2009 meeting, the Reliability Committee reviewed and considered the outcome of the PSPC's efforts with respect to the development of the ICR-Related Values and HQICCs for the 2011/2012 second annual reconfiguration auction. A motion that the Reliability Committee recommend that the Participants Committee support the ISO's proposed ICR-Related Values passed by a show of hands with 1 opposition and 5 abstentions. A motion that the Reliability Committee recommend that the Participants Committee support the ISO's proposed HQICC values passed by a show of hands with 1 opposition and 6 abstentions. At its January 8, 2010 meeting, the Participants Committee voted to support these proposed ICR-Related Values and HQICC Values with oppositions registered by Caithness New England Services Company, LLC, Cross Sound Cable Company, LLC, Long Island Lighting Company d/b/a LIPA, and NAEA Energy Massachusetts, LLC, and with GDF SUEZ Energy Marketing NA, Inc. abstaining on this item.

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<sup>40</sup> Pursuant to Section III.12.7.2.1 of Market Rule 1, the Local Sourcing Requirements for the Connecticut and NEMA/Boston Load Zones and the Maximum Capacity Limit for the Maine Load Zone for the 2011/2012 second reconfiguration auction incorporate an adjustment of +95 MW, +59 MW and +36 MW, respectively, to account for the application of the reserve margin gross-up to Capacity Value determinations for Demand Resources. The application of the reserve margin gross-up resulted in an over-rating of the Capacity Values of Demand Resources and the corresponding under-procurement of the Installed Capacity Requirement in the 2011/2012 primary Forward Capacity Auction. That under-procurement carries over into the procurement of Local Sourcing Requirements and the Maximum Capacity Limit in the applicable Load Zones. An adjustment is therefore necessary to account for this under-procurement of resources in these Load Zones. The application of the reserve margin gross-up to the NYPA import contracts does not impact Local Sourcing Requirement values or Maximum Capacity Limit values.

<sup>41</sup> That is, the Maximum Capacity Limit is reduced to reflect the flows required to receive the assumed tie benefits from New Brunswick to assist the New England Control Area at times of capacity shortage. Allowing more purchases of capacity from Maine could preclude the energy flows required to realize these tie benefits.

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## **VII. REQUESTED EFFECTIVE DATE**

The Filing Parties request that the Commission accept the proposed ICR-Related Values and HQICCs for the 2011/2012 second annual reconfiguration auction to be effective on April 5, 2010,<sup>42</sup> so that the proposed values and market rule changes can be used as part of the second annual reconfiguration auction to be conducted in May 2010.

## **VIII. ADDITIONAL SUPPORTING INFORMATION**

This filing identifies ICR-Related Values and HQICC Values for the 2011/2012 Capability Year and is made pursuant to Section 205 of the FPA. Section 35.13 of the Commission's regulations generally requires public utilities to file certain cost and other information related to an examination of cost-of-service rates.<sup>43</sup> However, the proposed ICR-Related Values and HQICC Values are not traditional "rates." Furthermore, the ISO is not a traditional investor-owned utility. Therefore, to the extent necessary, the ISO requests waiver of Section 35.13 of the Commission's regulations. Notwithstanding its request for waiver, the ISO submits the following additional information in compliance with the identified filing regulations of the Commission applicable to Section 205 filings.

35.13(b)(1) - Materials included herewith are as follows:

- ◆ This transmittal letter;
- ◆ Attachment 1: Testimony of Peter K. Wong, proffered by the ISO alone;
- ◆ Attachment 2: List of governors and utility regulatory agencies in Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont to which a copy of this filing has been sent.

35.13(b)(2) – the ISO respectfully requests that the Commission accept this filing to become effective on April 5, 2010.

35.13(b)(3) – Pursuant to Section 17.11(e) of the Participants Agreement, Governance Participants are being served electronically rather than by paper copy. The names and addresses of the Governance Participants are posted on the ISO's website at [http://www.iso-ne.com/regulatory/ferc/nepool/gov\\_ptcpts\\_eserved.pdf](http://www.iso-ne.com/regulatory/ferc/nepool/gov_ptcpts_eserved.pdf). A paper copy of this transmittal letter and the accompanying materials have also been sent to the governors and electric utility

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<sup>42</sup> 18 C.F.R. § 35.3 (2009).

<sup>43</sup> 18 C.F.R. § 35.13.

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regulatory agencies for the six New England states which comprise the New England Control Area, and to the New England Conference of Public Utility Commissioners, Inc. The names and addresses of these governors and regulatory agencies are shown in Attachment 2. In accordance with Commission rules and practice, there is no need for the entities identified on Attachment 2 to be included on the Commission's official service list in the captioned proceedings unless such entities become intervenors in this proceeding.

35.13(b)(4) - A description of the materials submitted pursuant to this filing is contained in this transmittal letter.

35.13(b)(5) - The reasons for this filing are discussed in the background section to this transmittal letter.

35.13(b)(6) - As explained above, the ISO has sought the advisory input from Governance Participants pursuant to Section 11.4 of the Participants Agreement.

35.13(b)(7) - The ISO has no knowledge of any relevant expenses or costs of service that have been alleged or judged in any administrative or judicial proceeding to be illegal, duplicative, or unnecessary costs that are demonstrably the product of discriminatory employment practices.

35.13(c)(2) - The ISO does not provide services under other rate schedules that are similar to the sale for resale and transmission services it provides under the ISO Tariff.

35.13(c)(3) - No specifically assignable facilities have been or will be installed or modified in order to supply service with respect to the proposed Installed Capacity Requirement and related values.

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## IX. CONCLUSION

The ISO and NEPOOL request that the Commission accept the proposed ICR-Related Values and HQICC Values reflected in this submission for filing without change to become effective April 5, 2010.

Please acknowledge receipt of the foregoing by date-stamping the enclosed extra copies of this filing and returning them to the courier delivering the filing.

Respectfully submitted,

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### Attachments

cc : Entities listed in Attachment 2

**ATTACHMENT 1**

Testimony of Peter K. Wong

On behalf of the ISO



1 England Power Pool (“NEPOOL“), and for the ISO after the staff of NEPOOL was  
2 transferred to the ISO.

3  
4 I have worked with NEPOOL and the ISO for more than 35 years. During this time, in  
5 addition to my most recent duties described above, I have held various positions in the  
6 Power Supply Planning department of New England Power Planning (“NEPLAN”), the  
7 planning arm of NEPOOL. My last position at NEPLAN was Manager of Power Supply  
8 Planning. During my 15 years with NEPLAN Power Supply Planning, I was involved in  
9 all matters related to NEPOOL Objective Capability (which is now referred to as the  
10 “Installed Capacity Requirement”) and resource adequacy. I currently serve as the Chair  
11 of the NEPOOL Power Supply Planning Committee (“PSPC”), the NEPOOL technical  
12 committee that assists the ISO in the review and development of all assumptions used for  
13 the calculation and development of Installed Capacity Requirements,<sup>1</sup> Local Sourcing  
14 Requirements and Maximum Capacity Limits for New England.

15  
16 **I. BACKGROUND**

17 **Q: WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

18 **A.** My testimony discusses the derivation of the Installed Capacity Requirement, Local  
19 Sourcing Requirements and Maximum Capacity Limit (collectively, the “ICR-Related  
20 Values”) and Hydro-Quebec Interconnection Capability Credits (“HQICCs”) for the  
21 2011/2012 Capability Year’s second annual reconfiguration auction to be conducted in

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<sup>1</sup> Capitalized terms used but not defined in this testimony are intended to have the meaning given to such terms in the ISO New England Inc. Transmission, Markets and Services Tariff, FERC Electric Tariff No. 3 (“ISO Tariff”), the Second Restated New England Power Pool Agreement, and the Participants Agreement. Market Rule 1 is Section III of the ISO Tariff.

1 May 2010. The 2011/2012 Capability Year starts on June 1, 2011 and ends on May 31,  
2 2012.

3  
4 My testimony addresses the general process and methodology for developing  
5 assumptions for calculating the Installed Capacity Requirement and the assumptions  
6 utilized in calculating the Installed Capacity Requirement, including assumptions about  
7 load, resource capacity values and availability, and transmission interface transfer  
8 capabilities. I also address the calculation of Local Sourcing Requirements for Import-  
9 Constrained Load Zones and Maximum Capacity Limits for Export-Constrained Load  
10 Zones.

11  
12  
13 **Q: WHAT IS AN ANNUAL RECONFIGURATION AUCTION?**

14 **A.** An annual reconfiguration auction is an auction conducted after the primary Forward  
15 Capacity Auction for a Capability Year and before the start of that Capability Year. The  
16 purposes of the reconfiguration auction are: (1) to balance changes in the amount of the  
17 Installed Capacity Requirement that must be procured for that Capability Year due to  
18 changes in system conditions that have occurred since the calculation of the Installed  
19 Capacity Requirement for the primary Forward Capacity Auction for that Capability  
20 Year, (2) to provide Market Participants that have procured Capacity Supply Obligations  
21 in the primary Forward Capacity Auction for a Capability Year the opportunity to modify  
22 those obligations, and (3) to provide Market Participants with Qualified Capacity that is

1 not already subject to a Capacity Supply Obligation the opportunity to acquire an  
2 obligation in a Capability Year.

3  
4 **Q: IS THIS THE FIRST ANNUAL RECONFIGURATION AUCTION BEING**  
5 **CONDUCTED FOR THE 2011/2012 CAPABILITY YEAR?**

6 **A.** Yes. Numerically, this is only the first annual reconfiguration auction being conducted  
7 for the 2011/2012 Capability Year. Pursuant to Section III.13.4.5 of Market Rule 1, the  
8 ISO is to conduct three annual reconfiguration auctions between the time of the Forward  
9 Capacity Auction for a Capability Year and the commencement of that Capability Year.  
10 However, pursuant to Section III.13.4.5.1 of Market Rule 1, for the first five Capability  
11 Years, the first of the three annual reconfiguration auctions will not be conducted.  
12 Therefore, the Installed Capacity Requirement and related values addressed in the instant  
13 filing are for the first annual reconfiguration auction to be held for the 2011/2012  
14 Capability Year. Under Section III.13 of Market Rule 1 (which contains the rules for the  
15 Forward Capacity Market), this reconfiguration auction is technically defined as the  
16 “second” annual reconfiguration auction for the 2011/2012 Capability Year and is  
17 referred to in my testimony and throughout the ISO’s filing as such.

18  
19 **II. CALCULATION OF THE INSTALLED CAPACITY REQUIREMENT**

20 **Q: WHAT IS THE “INSTALLED CAPACITY REQUIREMENT”?**

21 **A.** The Installed Capacity Requirement is the minimum level of capacity required to meet  
22 the reliability requirements defined for the New England Control Area. This requirement

1 is documented in Section 2 of ISO New England Planning Procedure No. 3, Reliability  
2 Standards for the New England Area Bulk Power Supply System, which states:

3 **Resources** will be planned and installed in such a manner that, after due  
4 allowance for the factors enumerated below, the probability of  
5 disconnecting noninterruptible customers due to **resource** deficiency, on  
6 the average, will be no more than once in ten years. Compliance with this  
7 criteria shall be evaluated probabilistically, such that the loss of load  
8 expectation [LOLE] of disconnecting noninterruptible customers due to  
9 resource deficiencies shall be, on average, no more than 0.1 day per year.

- 10
- 11 a. The possibility that load forecasts may be exceeded as a result of
  - 12 weather variations.
  - 13 b. Immature and mature **equivalent forced outage rates** appropriate for
  - 14 generating units of various sizes and types, recognizing partial and full
  - 15 outages.
  - 16 c. Due allowance for scheduled outages and deratings.
  - 17 d. Seasonal adjustment of **resource** capability.
  - 18 e. Proper maintenance requirements.
  - 19 f. Available operating procedures.
  - 20 g. The reliability benefits of interconnections with systems that are not
  - 21 Governance Participants.
  - 22 h. Such other factors as may from time-to-time be appropriate.<sup>2</sup>
- 23

24 The Installed Capacity Requirement reflects estimated tie benefits, and is calculated  
25 along with associated Local Sourcing Requirements and Maximum Capacity Limits. As  
26 discussed in more detail below, Local Sourcing Requirements and Maximum Capacity  
27 Limits are calculated to ensure that capacity resources, when considered in combination  
28 with the transfer capability of the transmission system, are electrically distributed within  
29 the New England Control Area in a manner that ensures that the minimum amount of  
30 resources purchased in the Forward Capacity Auction will meet the Northeast Power  
31 Coordinating Council's 1 day in 10 years (0.1 days per year) disconnection of firm load

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<sup>2</sup> Copy available at [http://www.iso-ne.com/rules\\_proceeds/isone\\_plan/PP3\\_R3.doc](http://www.iso-ne.com/rules_proceeds/isone_plan/PP3_R3.doc) (emphasis in original).

1 resource adequacy planning criterion, which is incorporated in Section III.12 of Market  
2 Rule 1.

3  
4 **Q: PLEASE EXPLAIN THE GENERAL PROCESS FOR ESTABLISHING THE**  
5 **INSTALLED CAPACITY REQUIREMENT.**

6 **A.** The Installed Capacity Requirement for the 2011/2012 Capability Year's upcoming  
7 reconfiguration auction was established through a stakeholder process and, except as  
8 specifically noted below, in accordance with the calculation methodology as prescribed in  
9 Section III.12 of Market Rule 1. The stakeholder process consisted of NEPOOL PSPC  
10 review and comment on the ISO's development of load and resource assumptions and the  
11 ISO's calculation of the ICR-Related Values for the 2011/2012 Capability Year's second  
12 annual reconfiguration auction. The PSPC is a technical committee under the NEPOOL  
13 Reliability Committee that assists the ISO with review and development of the Installed  
14 Capacity Requirement, Local Sourcing Requirements and Maximum Capacity Limits,  
15 including appropriate load and resource assumptions for modeling the expected system  
16 conditions. The PSPC is a non-voting technical subcommittee chaired by the ISO whose  
17 members are representatives of the NEPOOL Participants. Representatives of the six  
18 New England States' public utilities regulatory commissions are also invited to attend  
19 and participate in the PSPC meetings, and were present for the meetings at which the  
20 ICR-Related Values and HQICCs for the 2011/2012 second annual reconfiguration  
21 auction were discussed and considered. After the PSPC's review and comment, the ISO  
22 developed a recommendation regarding the ICR-Related Values and HQICCs for the  
23 2011/2012 Capability Year and presented this recommendation, along with the associated  
24 load and resource assumptions, to the Reliability Committee for its review, comment and

1 action. The ISO then presented the ICR-Related Values and HQICCs and the results of  
2 the Reliability Committee action to the Participants Committee for its review and action.  
3 The Installed Capacity Requirement recommendation was also presented to the New  
4 England State Committee on Electricity (“NESCOE”) for their review and comment.  
5 After taking the comments received from the Participants Committee and NESCOE into  
6 consideration, the ISO is filing with the Commission the ICR-Related Values and  
7 HQICCs for the 2011/2012 second annual reconfiguration auction.

8  
9 **Q: PLEASE EXPLAIN THE CALCULATION METHODOLOGY FOR**  
10 **ESTABLISHING THE INSTALLED CAPACITY REQUIREMENT.**

11 **A.** The Installed Capacity Requirement was established using the Westinghouse/ABB  
12 Capacity Model Program (“Capacity Model”) developed by Westinghouse Electric  
13 Corporation. The Capacity Model is a computer program that uses probabilistic  
14 mathematics to simulate the random behavior of load and resources of a power system  
15 and calculates the expected days per year that the electric system would not have  
16 adequate resources to meet the daily peak loads. Inputs to the Capacity Model are  
17 various assumptions regarding load and capacity resources. The Capacity Model is a one  
18 bus model and the New England transmission system is assumed to have no constraints in  
19 this simulation. In other words, all the modeled resources are assumed to be deliverable  
20 to meet forecasted load. The program compares, on a weekly basis, the available  
21 capacity resources with the range of expected daily loads to determine the weekly Loss of  
22 Load Probability (“LOLP”). Summation of the weekly LOLP over the Capability Year  
23 (June 2011 – May 2012) gives the Loss of Load Expectation (“LOLE”). The calculation  
24 process starts with the determination of the system LOLE with existing and known

1 resource additions to meet the expected load. If the system is more reliable than the  
2 resource-adequacy criterion (*i.e.*, the system LOLE is less than or equal to 0.1 days per  
3 year), additional resources are not required. However, if the system is less reliable than  
4 the resource-adequacy criterion (*i.e.*, the system LOLE is greater than 0.1 days per year),  
5 additional resources are needed to meet the criterion. Under the condition where New  
6 England is forecasted to be less reliable than the resource-adequacy criterion, proxy  
7 resources are used within the model to meet this additional need. The methodology calls  
8 for adding proxy units until the New England LOLE is less than 0.1 days per year. Once  
9 the LOLE is less than 0.1 days per year, then the Installed Capacity Requirement is  
10 determined by increasing loads (additional load carrying capability or “ALCC”) so that  
11 New England’s LOLE is exactly at 0.1 days per year. That is how the single number  
12 called Installed Capacity Requirement is established. The modeled New England system  
13 must meet the reliability criterion.

14  
15 The use of proxy resources avoids an unjustified increase or decrease in the system  
16 LOLE that may result from assuming a specific type of unit addition. Proxy resources  
17 reflect the New England system’s average availability characteristics and are determined  
18 based on the average availability and size of all New England resources.<sup>3</sup> Specifically,  
19 each proxy resource has size and availability characteristics such that when proxy  
20 resources are used in place of all the resources assumed to be available to the system, the  
21 resulting LOLE is unchanged. The use of proxy resources for calculating the Installed

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<sup>3</sup> A presentation made to the Installed Capacity Working Group on this topic can be found at:  
[http://www.iso-ne.com/committees/comm\\_wkgrps/othr/icsp/mtrls/2006/apr132006/expansion\\_units.pdf](http://www.iso-ne.com/committees/comm_wkgrps/othr/icsp/mtrls/2006/apr132006/expansion_units.pdf)

1 Capacity Requirement is a methodology supported by New England stakeholders since  
2 the establishment of a regional installed capacity/reserve requirement in the 1970s.

3  
4 Once the annual system LOLE is calculated to be equal to or less than the resource  
5 adequacy criterion, the Installed Capacity Requirement is determined based on the  
6 amount of capacity resources needed to exactly meet the criterion.

7  
8 In accordance with Section III.12.7.2.1 of Market Rule 1, the Installed Capacity  
9 Requirement as calculated by the simulation model is then adjusted to account for the  
10 possible under purchase of capacity due to the application of this reserve margin gross up  
11 to the Capacity Values for Demand Resources and certain New York Power Authority  
12 (“NYPA”) import contracts.

13  
14 **Q: HAVE ANY MODIFICATIONS BEEN MADE TO THE METHODOLOGIES**  
15 **PRESCRIBED IN MARKET RULE 1 FOR DETERMINING THE INSTALLED**  
16 **CAPACITY REQUIREMENT AND RELATED VALUES FOR THE 2011/2012**  
17 **SECOND ANNUAL RECONFIGURATION AUCTION?**

18 **A.** Yes. A modification was made to the methodology prescribed in Market Rule 1 for  
19 determining the tie benefits assumptions to be used to calculate the Installed Capacity  
20 Requirement and associated values. This modification is described below in Section III  
21 of my testimony.

1 **Q: PLEASE DESCRIBE THE ADJUSTMENT TO THE INSTALLED CAPACITY**  
2 **REQUIREMENT TO ACCOUNT FOR THE APPLICATION OF THE RESERVE**  
3 **MARGIN GROSS-UP IN DETERMINING THE CAPACITY VALUE OF**  
4 **CERTAIN RESOURCES FOR THE 2011/2012 CAPABILITY YEAR'S SECOND**  
5 **ANNUAL RECONFIGURATION AUCTION.**

6 **A.** In accordance with Section III.12.7.2.1 of Market Rule 1, an increase of 316 MW in the  
7 Installed Capacity Requirement has been applied to account for the application of the  
8 reserve margin gross-up in determining the capacity value of Demand Resources and  
9 NYPA capacity imports. The Installed Capacity Requirement is being increased by 302  
10 MW to account for the reserve margin gross-up afforded to Demand Resources that are  
11 non-Real Time Emergency Generation and by 14 MW to account for the reserve margin  
12 gross-up afforded to the NYPA capacity import contracts. The adjustment to the  
13 Installed Capacity Requirement does not include the reserve margin gross-up of  
14 approximately 97 MW that was applied in determining the Capacity Value for Real Time  
15 Emergency Generation Demand Resources in the 2011/2012 primary Forward Capacity  
16 Auction. Under Section III.13.2.3.3(f) of Market Rule 1, the Forward Capacity Auction  
17 for the 2011/2012 Capability Year only counted 600 MW of Real Time Emergency  
18 Generation toward meeting the Installed Capacity Requirement, even though 759 MW of  
19 Real Time Emergency Generation cleared the Forward Capacity Auction. The amount of  
20 Real Time Emergency Generation above 600 MW that cleared the auction is more than  
21 sufficient to account for the under-procurement of the Installed Capacity Requirement  
22 associated with these resources.

1 **Q: IN CALCULATING THE ICR-RELATED VALUES AND HQICCS FOR THE**  
2 **2011/2012 SECOND ANNUAL RECONFIGURATION AUCTION, WAS THE**  
3 **STAKEHOLDER PROCESS AND CALCULATION METHODOLOGY THE**  
4 **SAME AS THE PROCESS AND METHODOLOGY USED PREVIOUSLY TO**  
5 **DETERMINE THESE VALUES IN NEW ENGLAND?**

6 **A.** Yes, the same stakeholder process that has been used for several years to develop the  
7 New England Installed Capacity Requirements was used for establishing the Installed  
8 Capacity Requirement for the 2011/2012 second annual configuration auction. The  
9 methodology for calculating the Installed Capacity Requirement is consistent with those  
10 used in prior years, with the exceptions discussed below.

11

12 **Q: PLEASE IDENTIFY THE INSTALLED CAPACITY REQUIREMENT VALUE**  
13 **ESTABLISHED BY THE ISO FOR THE 2011/2012 CAPABILITY YEAR'S**  
14 **SECOND ANNUAL RECONFIGURATION AUCTION AND COMPARE THIS**  
15 **REQUIREMENT WITH THE VALUE ESTABLISHED FOR THE PRIMARY**  
16 **FORWARD CAPACITY AUCTION FOR 2011/2012.**

17 **A.** The Installed Capacity Requirement value for the 2011/2012 Capability Year's second  
18 annual reconfiguration auction is 32,652 MW. This value is 787 MW lower than the  
19 33,439 MW value established for the primary Forward Capacity Auction.

1 **Q: IS THIS THE AMOUNT OF INSTALLED CAPACITY THAT WILL BE RELIED**  
2 **UPON FOR PURPOSES OF CONDUCTING THE 2011/2012 SECOND ANNUAL**  
3 **RECONFIGURATION AUCTION?**

4 **A.** No. The 32,652 MW Installed Capacity Requirement value does not reflect a reduction  
5 in capacity requirements relating to HQICCs that are allocated to the Interconnection  
6 Rights Holders, as required by Market Rule 1. After deducting the HQICC value of 911  
7 MW per month,<sup>4</sup> the net Installed Capacity Requirement for use in the 2011/2012 second  
8 annual reconfiguration auction is 31,741 MW.

9  
10 **Q: WHAT ARE THE MAIN ASSUMPTIONS UPON WHICH THE INSTALLED**  
11 **CAPACITY REQUIREMENT VALUE FOR THE 2011/2012 CAPABILITY**  
12 **YEAR'S SECOND ANNUAL RECONFIGURATION AUCTION IS BASED?**

13 **A.** One of the first steps in the process of determining the Installed Capacity Requirement is  
14 for the ISO to identify reasonable assumptions relating to expected system conditions for  
15 the 2011/2012 Capability Year. These assumptions include the expected daily peak  
16 loads; the available capacity resources; the expected performance of these capacity  
17 resources (such as forced and scheduled outage rates); changes in system resource  
18 capacity due to expected additions and attritions; and the amount of load and/or capacity  
19 relief obtainable from certain actions specified in Operating Procedure No. 4, Action

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<sup>4</sup> The HQICC is a monthly value. The HQICC values for the 2011/2012 Capability Year were approved by the Commission in a prior order, *ISO New England Inc. and New England Power Pool Participants Committee*, 125 FERC ¶ 61,154 (2008) (“2011/2012 ICR Order”). As explained below, the ISO, in consultation with stakeholders and in accordance with the proposed changes to Section III.12.9 of Market Rule 1, is assuming the same HQICC values used to determine the Installed Capacity Requirement and Related Values for the 2011/2012 Forward Capacity Auction for determining the Installed Capacity Requirement and Related Values for the second annual reconfiguration auction of the 2011/2012 Capability Year.

1 During a Capacity Deficiency (“Operating Procedure No. 4” and “Operating Procedure  
2 No. 4 Actions”), which system operators invoke in real time to balance system supply  
3 with demand at expected capacity shortage conditions. Relief from Operating Procedure  
4 No. 4 Actions includes the amount of possible emergency assistance obtainable from  
5 New England’s interconnections with neighboring Control Areas.

6  
7 **Q: PLEASE EXPLAIN HOW THE ISO DERIVED THE LOAD DATA USED IN**  
8 **DEVELOPING THE INSTALLED CAPACITY REQUIREMENT AND**  
9 **RELATED VALUES FOR THE 2011/2012 CAPABILITY YEAR.**

10 **A.** The ISO develops, for each state, a forecasted distribution of typical daily peak loads for  
11 each week of the year based on each week’s historical weather distribution, and an  
12 econometrically estimated monthly model of typical daily peak loads. Each weekly  
13 distribution of typical daily peak loads includes the full range of daily peaks that could  
14 occur over the full range of weather experienced in that week and their associated  
15 probabilities.

16  
17 The models, for each of the six New England states, were estimated using 15 years of  
18 weekday daily peaks, the weather conditions at the time of the daily peak, a seasonal  
19 relationship that captures the change in peak load response to weather over time, and a  
20 seasonal relationship that captures the change in peak load response to base load energy  
21 (and therefore economic and demographic factors) over time. The weather response  
22 relationships are forecasted to grow at their historical rates but are adjusted for expected  
23 changes in appliance saturations. The base load relationships are forecasted to grow at

1 the same rate as the energy forecast. The weather is represented by over 35 years of  
2 historically-based weekly weather.

3  
4 The energy forecast for each state is econometrically estimated using forecasts of the real  
5 price of electricity and either real income or real gross state product.

6  
7 For purposes of determining the load forecast, the New England Control Area's load is  
8 defined as the sum of the load of each of the six New England states calculated as  
9 described above.

10  
11 **Q: PLEASE DESCRIBE THE FORECASTED LOAD WITHIN LOAD ZONES FOR**  
12 **THE 2011/2012 CAPABILITY YEAR.**

13 **A.** There are three Load Zones of interest for the 2011/2012 Capability Year. They are the  
14 Connecticut ("CT") and Northeast Massachusetts/Boston ("NEMA/Boston") Load Zones  
15 for minimum Local Sourcing Requirement calculations and the Maine ("ME") Load  
16 Zone for Maximum Capacity Limit calculations. The forecasted loads for the CT and  
17 ME Load Zones are the forecasted loads for the states of Connecticut and Maine. The  
18 forecasted load for the NEMA/Boston Load Zone is developed using a load share ratio of  
19 the NEMA/Boston load to the forecasted load for the entire state of Massachusetts. The  
20 load share ratio is based on detailed bus load data from the network model for  
21 NEMA/Boston as compared to all of Massachusetts.

1 **Q: PLEASE DESCRIBE THE PROJECTED PEAK LOADS FOR THE 2011/2012**  
2 **CAPABILITY YEAR.**

3 **A.** The projected New England Control Area 50/50 peak load (summer) for the 2011/2012  
4 Capability Year is 28,575 MW as published in the April 2009 Capacity Energy Loads  
5 and Transmission (CELT) Report, and is 2.8% lower (830 MW lower) than forecasted in  
6 the April 2008 CELT Report. The corresponding 90/10 peak load for the 2011/2012  
7 Capability Year is 30,580 MW, and is 3.0% lower (945 MW lower) than forecasted in the  
8 April 2008 CELT Report. The April 2009 CELT forecast was estimated based on an  
9 economic forecast (December 2009) that included the current recession, while the April  
10 2008 CELT forecast was estimated based on an economic forecast that predates the  
11 recession.

12  
13 **Q: PLEASE DESCRIBE THE RESOURCE DATA USED TO DEVELOP THE**  
14 **INSTALLED CAPACITY REQUIREMENT AND RELATED VALUES FOR THE**  
15 **SECOND ANNUAL RECONFIGURATION AUCTION FOR THE 2011/2012**  
16 **CAPABILITY YEAR.**

17 **A.** The ICR-Related Values for the 2011/2012 Capability Year's second annual  
18 reconfiguration auction are based on those resources that have cleared the Forward  
19 Capacity Auction for the 2011/2012 Capability Year . Using resources that cleared the  
20 2011/2012 Forward Capacity Auction in the Installed Capacity Requirement calculation  
21 captures the best estimate of the amount of resources that have an obligation to provide  
22 capacity to the New England system for the 2011/2012 Capacity Commitment Period.

1 **Q: WHAT ARE THE RESOURCE CAPACITY VALUES FOR 2011/2012?**

2 **A.** The following tables show the 37,020 MW of Capacity Resources assumed in the  
3 Installed Capacity Requirement calculations.

4 **Table 1 - Generating Capacity by Load Zone (MW)**  
5

<b>Load Zone</b>	<b>Summer</b>
MAINE	2,983.388
NEW HAMPSHIRE	4,027.701
VERMONT	874.193
CONNECTICUT	7,792.439
RHODE ISLAND	2,600.221
SOUTH EAST MASSACHUSETTS	5,912.665
WEST CENTRAL MASSACHUSETTS	3,714.415
NORTH EAST MASSACHUSETTS & BOSTON	3,217.104
<b>Total New England</b>	<b>31,122.126</b>

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**Table 2 - Intermittent Power Resources with CSO by Load Zone (MW)**

<b>Load Zone</b>	<b>Summer</b>	<b>Winter</b>
MAINE	260.316	348.529
NEW HAMPSHIRE	150.154	187.158
VERMONT	66.403	58.429
CONNECTICUT	414.624	432.795
RHODE ISLAND	4.855	8.565
SOUTH EAST MASSACHUSETTS	80.523	85.007
WEST CENTRAL MASSACHUSETTS	40.877	44.956
NORTH EAST MASSACHUSETTS & BOSTON	67.385	70.546
<b>Total New England</b>	<b>1,085.137</b>	<b>1,235.985</b>

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**Table 3 - Import Capacity Resources with CSO (MW)**

<b>Resource Name</b>	<b>Interface</b>	<b>MW</b>
NYPA - CMR	NY AC Ties	68.800
NYPA - VT	NY AC Ties	15.300
VJO - Highgate	HQ Highgate	200.000
VJO - Phase I/II	Phase I/II HQ Excess	70.000
Lievre River Project - Import	NY AC Ties	108.320
Erie Boulevard Hydropower - Import	NY AC Ties	292.966
Hydro-Québec Control Area	NB	284.000
Hydro-Québec Control Area - Phase I/II HQ Excess	Phase I/II HQ Excess	391.930
Hydro-Québec Control Area - NY AC Ties	NY AC Ties	54.845
Constellation Energy New York Import Project	NY AC Ties	422.767
BEMI Ontario Assets	NY AC Ties	375.462
<b>Total Imports</b>		<b>2,284.390</b>

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4  
5

**Table 4 - Demand Resources with CSO by Load Zone (MW)**

<b>Load Zone</b>	<b>MW</b>
MAINE	253.101
NEW HAMPSHIRE	91.337
VERMONT	88.417
CONNECTICUT	819.941
RHODE ISLAND	160.347
SOUTH EAST MASSACHUSETTS	292.537
WEST CENTRAL MASSACHUSETTS	308.606
NORTH EAST MASSACHUSETTS & BOSTON	515.118
<b>Total New England</b>	<b>2,529.404</b>

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Please note that although capacity resource data are tabulated under the eight settlement Load Zones, only the Load Zones of CT, NEMA/Boston and ME are relevant for the Forward Capacity Market.

1 **Q: WHAT ARE THE DATA RESULTS FOR RESOURCE ADDITIONS AND**  
2 **ATTRITIONS?**

3 **A.** Resource additions and attritions are not assumed in the calculation of the Installed  
4 Capacity Requirement for the 2011/2012 second annual reconfiguration auction because  
5 there is no certainty that new resource additions or resource attritions will clear the  
6 auction.

7  
8 **Q: PLEASE EXPLAIN THE RESOURCE AVAILABILITY ASSUMPTIONS**  
9 **UNDERLYING THE INSTALLED CAPACITY REQUIREMENT AND**  
10 **RELATED VALUES FOR THE 2011/2012 CAPABILITY YEAR.**

11 **A.** Unit availability modeling reflects the projected scheduled maintenance and forced  
12 outages of capacity resources. For Generating Resources, scheduled maintenance  
13 assumptions are based on each unit's historical five-year average of scheduled  
14 maintenance. If the individual resource has not been operational for 5 years, then North  
15 American Electric Reliability Corporation ("NERC") class average data is used to  
16 substitute for the missing annual data. An individual Generating Resource's forced  
17 outage assumptions are based on the resource's historical data from the ISO's database.  
18 If the individual resource has not been operational for 5 years, then "NERC" class  
19 average data is also used.

20  
21 The Capacity of an Intermittent Power Resource is based on the resource's historical  
22 median output during the Reliability Hours averaged over a period of four years. The  
23 Reliability Hours are specific, defined hours during the summer and the winter, and hours

1 during the year in which the ISO has declared a system-wide or a Load Zone specific  
2 shortage event. Since this method already takes into account the resource's availability,  
3 Intermittent Power Resources are assumed to be 100% available in the models at their  
4 "Qualified Capacity" and not based on "nameplate" ratings. "Qualified Capacity" is the  
5 amount of capacity a New Capacity Resource, Existing Capacity Resource, Import  
6 Capacity Resource, or Demand Resource may provide in the summer or winter in a  
7 Capacity Commitment Period, as determined in the Forward Capacity Market  
8 qualification process.

9  
10 Performance of Demand Resources in the Real-Time Demand Response and Critical  
11 Peak categories is measured by actual response during performance audits and Operating  
12 Procedure No. 4 events occurring in 2006 through 2008. To calculate historical  
13 availability, the actual load curtailed or generation provided during such events is divided  
14 by the megawatts of resources enrolled within the program.

15  
16 Demand Resources in the Real-Time Emergency Generator category are assumed at 74%  
17 availability. This assumption is based on an average of 2006-2008 performance audit  
18 results and Operating Procedure No. 4 event response of these resources.

19  
20 Demand Resources in the On-Peak Demand and Seasonal Peak Demand categories are  
21 non-dispatchable resources that reduce load across pre-defined hours, typically by means  
22 of energy efficiency. These types of Demand Resources are assumed 100% available.

1 **Q: PLEASE EXPLAIN THE ROLE OF EXTERNAL TRANSMISSION IMPORT**  
2 **TRANSFER CAPABILITIES IN DEVELOPING THE INSTALLED CAPACITY**  
3 **REQUIREMENT AND RELATED VALUES FOR THE 2011/2012 CAPABILITY**  
4 **YEAR.**

5 **A.** External transmission import transfer capabilities are not an input to the Installed  
6 Capacity Requirement calculations. However, they do impact the tie benefit assumptions  
7 used in the Installed Capacity Requirement calculations. Tie benefits represent the  
8 possible emergency energy assistance from the interconnected neighboring Control Areas  
9 when a capacity shortage occurs. The external transmission import transfer capabilities  
10 would impact the amount of emergency energy, if available, that could be imported into  
11 New England. In modeling the import transfer capabilities for tie benefits calculations,  
12 the total interface import limit with each neighboring Control Area is adjusted to reflect  
13 grandfathered Existing Import Capacity Resources. A grandfathered Existing Import  
14 Capacity Resource is an existing capacity resource offered to provide capacity in the New  
15 England Control Area from an external Control Area. The other use of the external  
16 transmission import transfer capabilities in the Forward Capacity Market is to limit the  
17 amount of total capacity that can be imported into New England from the neighboring  
18 Control Areas.

1 **Q: PLEASE DESCRIBE THE ROLE OF INTERNAL TRANSMISSION INTERFACE**  
2 **TRANSFER CAPABILITIES IN DEVELOPING INSTALLED CAPACITY**  
3 **REQUIREMENT AND RELATED VALUES FOR THE 2011/2012 CAPABILITY**  
4 **YEAR.**

5 **A.** Internal transmission interface transfer capabilities are not used to develop the 2011/2012  
6 Capability Year Installed Capacity Requirement since the methodology used assumes no  
7 internal transmission constraints in New England. However, internal transmission  
8 interface import transfer capabilities for the Connecticut and NEMA/Boston Load Zones  
9 are used to calculate the Local Sourcing Requirements for these two Load Zones.  
10 Internal transmission interface export transfer capabilities for the Maine Load Zone are  
11 used to calculate its Maximum Capacity Limit.

12  
13 **Q: PLEASE DISCUSS THE ISO'S ASSUMPTIONS REGARDING OPERATING**  
14 **PROCEDURE NO. 4 ACTIONS IN DEVELOPING INSTALLED CAPACITY**  
15 **REQUIREMENT AND RELATED VALUES FOR THE 2011/2012 CAPABILITY**  
16 **YEAR.**

17 **A.** Under the Forward Capacity Market, assumed emergency assistance (tie benefits)  
18 available from neighboring Control Areas, load reduction from implementation of 5%  
19 voltage reductions and capacity available from dispatch of Real-Time Emergency  
20 Generation are used in developing the Installed Capacity Requirement for the 2011/2012  
21 Capability Year. These all constitute actions that system operators invoke under ISO  
22 Operating Procedure No. 4 in real time to balance system demand with supply under  
23 expected capacity shortage conditions. The amount of load relief assumed obtainable

1 from invoking 5% voltage reductions is based on the 5-year average of all available  
2 spring and fall voltage reduction test results. The assumed voltage reduction load relief  
3 values are 654 MW for June through September 2011 and 503 MW for October 2011  
4 through May 2012. The details of the tie benefit assumptions are described below.

5  
6 **III. TIE BENEFITS**

7 **Q: PLEASE EXPLAIN HOW TIE BENEFITS WITH NEIGHBORING CONTROL**  
8 **AREAS ARE ACCOUNTED FOR IN DETERMINING THE INSTALLED**  
9 **CAPACITY REQUIREMENT.**

10 **A.** The New England resource planning reliability criterion requires that adequate capacity  
11 resources be planned and installed such that disconnection of firm load would not occur  
12 more often than once in 10 years due to a capacity deficiency after taking into account the  
13 load and capacity relief obtainable from implementing Operating Procedure No. 4. In  
14 other words, load and capacity relief assumed obtainable from implementing Operating  
15 Procedure No. 4 actions are direct substitutes for capacity resources for meeting the once  
16 in 10 years disconnection of firm load criterion. Calling on neighboring Control Areas to  
17 provide emergency energy assistance (tie benefits) is one of the actions of Operating  
18 Procedure No. 4. Therefore, the amount of tie benefits assumed obtainable from the  
19 interconnected neighboring Control Areas directly displaces that amount of installed  
20 capacity resources needed to meet the resource planning reliability criterion. When  
21 determining the amount of tie benefits to assume in Installed Capacity Requirement  
22 calculations, it is necessary to recognize that while reliance on tie benefits can reduce  
23 capacity resource needs, over-reliance on tie benefits decreases system reliability.

1 System reliability would decrease because each time emergency assistance is requested,  
2 there is a possibility that the available assistance will not be sufficient to meet the  
3 capacity deficiency. The more tie benefits are relied upon to meet the resource reliability  
4 criterion, and the greater the amount of assistance requested, the greater the possibility  
5 that it will not be available or sufficient to avoid implementing deeper actions of  
6 Operating Procedure No. 4, including interrupting firm load. For example, some of the  
7 resources that New York has available to provide tie benefits are demand response  
8 resources which have limits on the number of times they can be activated.  
9

10 **Q: PLEASE DESCRIBE THE TIE BENEFITS ASSUMPTIONS UNDERLYING THE**  
11 **INSTALLED CAPACITY REQUIREMENT AND ASSOCIATED VALUES FOR**  
12 **THE 2011/2012 CAPABILITY YEAR.**

13 **A.** Under Section III.12.9 of Market Rule 1, the ISO is required to perform a tie reliability  
14 benefits study at least once every three years, which provides the total overall tie benefit  
15 value available from all interconnections with adjacent Control Areas and the  
16 contribution of tie benefits from each of these adjacent Control Areas.  
17

18 In lieu of using the tie benefits value calculated for the 2011/2012 Capability Year, the  
19 ISO is proposing to use the same 1,800 MW of tie benefits that was used in the  
20 2011/2012 Capability Year Installed Capacity Requirement calculations for the primary  
21 Forward Capacity Auction. The development of the tie benefits assumptions for the  
22 second annual reconfiguration auction for the 2011/2012 Capability Year is consistent

1 with the market rule changes proposed by the ISO and filed with the Commission on  
2 December 15, 2009 in Docket No. ER10-438-000.

3  
4 **IV. HQICCs AND ALLOCATION OF TIE BENEFITS TO INDIVIDUAL CONTROL**  
5 **AREAS**

6  
7 **Q: PLEASE EXPLAIN HYDRO-QUEBEC INTERCONNECTION CAPABILITY**  
8 **CREDIT(“HQICC”) VALUES.**

9 **A.** Hydro Quebec Interconnection Capability Credits, or “HQICCs” are credits in the form  
10 of reduced capacity requirements that are allocated to the Interconnection Rights Holders,  
11 which are entities that hold certain rights over the Hydro-Quebec Interconnection.

12  
13 **Q: PLEASE EXPLAIN HOW HQICC VALUES FOR THE 2011/2012 CAPABILITY**  
14 **YEAR ARE CALCULATED FOR THE UPCOMING RECONFIGURATION**  
15 **AUCTION.**

16 **A.** The HQICC values for the 2011/2012 second annual reconfiguration auction were  
17 assumed to be the same values used for the 2011/2012 primary Forward Capacity  
18 Auction. At its January 8, 2010 meeting, the NEPOOL Participants Committee voted to  
19 support these HQICC values.

1 **Q: WHAT ARE THE PROPOSED HQICC VALUES AND THE TIE BENEFIT**  
2 **VALUES ASSUMED AVAILABLE FROM THE NEW BRUNSWICK AND NEW**  
3 **YORK CONTROL AREAS?**

4 **A.** The proposed HQICC values are 911 MW for every month of the 2011/2012 Capability  
5 Year. The tie benefits assumed available from the New Brunswick and New York  
6 Control Areas are 716 MW and 173 MW, respectively.

7  
8 **V. LOCAL SOURCING REQUIREMENTS FOR IMPORT-CONSTRAINED LOAD**  
9 **ZONES AND MAXIMUM CAPACITY LIMIT FOR EXPORT-CONSTRAINED**  
10 **LOAD ZONES**

11  
12 **Q: WHAT ARE IMPORT-CONSTRAINED LOAD ZONES?**

13 **A.** Import-constrained Load Zones are areas within New England that, due to transmission  
14 constraints, may not have enough local resources and transmission import capability to  
15 reliably serve local demand. The Load Zones to be modeled as import-constrained zones  
16 were discussed as part of the stakeholder process and any change to the Load Zones  
17 would be made in accordance with Section III.2.7(g) of Market Rule 1.

18  
19 **Q: WHAT IS THE LOCAL SOURCING REQUIREMENT?**

20 **A.** The Local Sourcing Requirement is the minimum amount of capacity that must be  
21 electrically located within an import-constrained Load Zone. The Local Sourcing  
22 Requirement is the mechanism used to assist in valuing capacity appropriately in  
23 constrained areas.

1 **Q: WHAT ARE EXPORT-CONSTRAINED LOAD ZONES?**

2 **A.** Export-constrained Load Zones are areas within New England where the available  
3 resources, after serving local load, may exceed the areas' transmission capability to  
4 export excess resource capacity. The Load Zones to be modeled as export-constrained  
5 zones were discussed as part of the stakeholder process and any change to the Load  
6 Zones would be made in accordance with Section III.2.7(g) of Market Rule 1.

7  
8 **Q: WHAT IS THE MAXIMUM CAPACITY LIMIT?**

9 **A.** The Maximum Capacity Limit is the maximum amount of resources that can be procured  
10 from an export-constrained Load Zone to meet the Installed Capacity Requirement.  
11 Generally speaking, this is the amount of capacity that can be used to fully meet the  
12 needs within the export-constrained Load Zone plus that amount which can reasonably be  
13 expected to be exported from the Load Zone to meet regional needs. The Maximum  
14 Capacity Limit is applied to export-constrained Load Zones within New England.

15  
16 **Q: PLEASE DESCRIBE THE METHODOLOGY FOR CALCULATING THE**  
17 **LOCAL SOURCING REQUIREMENTS.**

18 **A.** The Local Sourcing Requirements are calculated using the same assumptions of  
19 forecasted load and resources as those used in the calculation of the Installed Capacity  
20 Requirement. In order to determine the locational requirements of the system, the Local  
21 Sourcing Requirements are calculated using a multi-area reliability model according to  
22 the methodology specified in Section III.12.2 of Market Rule 1.

1 For each import-constrained zone, the Local Sourcing Requirement is determined by  
2 modeling the zone under study vis-à-vis the rest of New England. This, in effect, turns  
3 the modeling effort into a two-area reliability simulation. The reliability target of this  
4 analysis is a system-wide LOLE of 0.105 days per year when the transmission constraints  
5 between the two zones are included in the model. Because the Local Sourcing  
6 Requirement is the minimum amount of resources that must be located in a zone to meet  
7 the system-reliability requirements for a zone with excess capacity, the process to  
8 calculate this value involves shifting capacity out of the zone under study until the  
9 reliability threshold, or target LOLE, is achieved. If a zone has insufficient capacity,  
10 capacity would be shifted into that zone. Shifting capacity, however, may lead to skewed  
11 results, as capacity is not homogeneous. For example, one megawatt of capacity from a  
12 nuclear plant is not necessarily the same as one megawatt of capacity from a wind  
13 turbine. Consequently, in order to model the effect of shifting capacity, firm load is  
14 shifted. Specifically, as one megawatt of load is added to an import-constrained zone, a  
15 megawatt of load is subtracted from the rest of New England, thus keeping the entire  
16 system load constant. If a zone has insufficient capacity, load is shifted out of that  
17 import-constrained zone. This process continues until the LOLE of the New England  
18 Control Area is equal to 0.105 days per year. At this point, if additional capacity were to  
19 be shifted out of the zone (or additional load were added), the LOLE criterion would not  
20 be met.

21  
22 The Local Sourcing Requirement is calculated using the value of shifted load and the  
23 existing resources in the zone, including any proxy units that were added as a result of the

1 total system not meeting the LOLE criteria. The load that was shifted must be subtracted  
2 from the total resources (including proxy units) to determine the minimum amount of  
3 resources that are required in that zone. Before the shifted load is subtracted, it is first  
4 converted to equivalent capacity by using the average resource-unavailability rate in the  
5 zone. Thus, the Local Sourcing Requirement is the existing resources in the zone, plus  
6 proxy units in the zone, minus the unavailability-adjusted, load-shift amount.

7  
8 As this load shift test is being performed over a transmission interface internal to the New  
9 England Control Area, an allowance for transmission-related LOLE must be applied.  
10 This allowance is 0.005 days per year and is only applied when determining the Local  
11 Sourcing Requirements of a zone. An LOLE of 0.105 days per year is the point at which  
12 it becomes clear that the resources within the zone under study are becoming sufficient.  
13 Further reduction in local sources would cause the LOLE in New England to rapidly  
14 increase above the criterion.

15  
16 **Q: PLEASE DESCRIBE THE METHODOLOGY FOR CALCULATING THE**  
17 **MAXIMUM CAPACITY LIMIT.**

18 **A.** Another aspect of the Forward Capacity Market is a method to model export-constrained  
19 zones. Because of transmission constraints out of these zones, not all potentially  
20 available resources can simultaneously supply capacity to the export-constrained zone  
21 and to the “Rest of New England.” Rest of New England refers to all areas except the  
22 export-constrained Load Zone under study. Export-constrained zones are incorporated

1 into the Forward Capacity Market through the calculation of the Maximum Capacity  
2 Limit.

3  
4 In order to determine the Maximum Capacity Limit, the New England total Installed  
5 Capacity Requirement and the Local Sourcing Requirement of the Rest of New England  
6 are needed. Given that the Installed Capacity Requirement is the total amount of  
7 resources that need to be purchased in New England, and the Local Sourcing  
8 Requirement for the Rest of New England is the minimum amount of resources required  
9 for that area to satisfy its reliability criterion, the difference between the two is the  
10 maximum amount of resources that can be purchased within the export-constrained zone.

11  
12 **Q: DO THE LOCAL SOURCING REQUIREMENT AND MAXIMUM CAPACITY**  
13 **LIMIT VALUES NEED TO BE ADJUSTED TO ACCOUNT FOR THE RESERVE**  
14 **MARGIN GROSS-UP AFFORDED TO NON-REAL TIME EMERGENCY**  
15 **GENERATOR DEMAND RESOURCES?**

16 **A.** Yes, Local Sourcing Requirement and Maximum Capacity Limit values need to be  
17 adjusted to account for the reserve margin gross-up afforded to non-Real Time  
18 Emergency Generation Demand Resources. The level of adjustment required to account  
19 for the reserve margin gross-up is based on the amount of Demand Resources located in  
20 each applicable Load Zone that have obligations to supply installed capacity during the  
21 2011/2012 Capability Year. In the Connecticut, NEMA/Boston and Maine Load Zones,  
22 the reserve margin adjustments relating to Demand Resources are +95 MW, + 59 MW  
23 and + 36 MW, respectively.

1 **Q: DO THE LOCAL SOURCING REQUIREMENT AND MAXIMUM CAPACITY**  
2 **LIMIT VALUES NEED TO BE ADJUSTED TO ACCOUNT FOR THE RESERVE**  
3 **MARGIN GROSS-UP AFFORDED TO NYPA CAPACITY IMPORTS?**

4 **A.** No, Local Sourcing Requirement and Maximum Capacity Limit values do not need to be  
5 adjusted to account for the reserve margin gross-up afforded to NYPA capacity imports  
6 because these capacity imports are not located within the Connecticut, NEMA/Boston or  
7 Maine Load Zones.

8  
9 **Q: PLEASE DESCRIBE THE LOCAL SOURCING REQUIREMENTS FOR THE**  
10 **2011/2012 CAPABILITY YEAR.**

11 **A.** For the 2011/2012 Capability Year second annual reconfiguration auction, Local  
12 Sourcing Requirements for the Connecticut and NEMA/Boston Load Zones are 5,666  
13 MW (5,571 MW calculated by model plus an additional 95 MW to account for the  
14 reserve margin gross-up) and 1,956 MW (1,897 MW calculated by model plus an  
15 additional 59 MW to account for the reserve margin gross-up), respectively.

16  
17 **Q: PLEASE DESCRIBE THE MAXIMUM CAPACITY LIMIT FOR THE MAINE**  
18 **LOAD ZONE FOR THE SECOND ANNUAL RECONFIGURATION AUCTION**  
19 **FOR THE 2011/2012 CAPABILITY YEAR.**

20 **A.** For the 2011/2012 Capability Year second annual reconfiguration auction, the Maximum  
21 Capacity Limit for the Maine Load Zone is 3,140 MW (3,104 MW calculated by model  
22 plus an additional 36 MW to account for the reserve margin gross-up). This is the  
23 amount of capacity resources that the annual reconfiguration auction can procure from

1 the Maine Capacity Zone, including capacity resource imports from the New Brunswick  
2 ties.

3

4 **Q: DOES THIS CONCLUDE YOUR TESTIMONY?**

5 **A.** Yes.

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I declare under penalty of perjury that the foregoing is true and correct.

Executed on: FEBRUARY 2, 2010.

A handwritten signature in black ink, appearing to read "J. Wang", is written over a horizontal line. The signature is stylized with a large, sweeping initial "J" and a long, horizontal stroke extending to the right.

**ATTACHMENT 2**

List of New England Governors and Utility Regulatory Agencies

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

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

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

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

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

Massachusetts Dept. of Public Utilities  
One South Station  
Boston, MA 02110

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

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

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

Rhode Island Public Utilities Commission  
89 Jefferson Blvd.  
Warwick, RI 02888

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

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William M. Nugent, Executive Director  
New England Conference of Public  
Utilities Commissioners  
50 Forest Falls Drive, Suite 6  
Yarmouth, ME 04096-6937

Heather Hunt  
Executive Director  
NESCOE  
242 Whippoorwill Lane  
Stratford, CT 06614

John Shea  
Power Planning Committee  
New England Governors' Conference Inc.  
76 Summer Street, 2<sup>nd</sup> floor  
Boston, MA 02110-1226