



April 6, 2015

**VIA ELECTRONIC FILING**

The Honorable Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
888 First Street, NE  
Washington, DC 20426

**Re: ISO New England Inc., Docket No. ER15-\_\_\_\_-000; Identification of Potential New Capacity Zone Boundaries**

Dear Secretary Bose:

Pursuant to Section 205 of the Federal Power Act (“FPA”),<sup>1</sup> ISO New England Inc. (the “ISO”) hereby electronically submits this transmittal letter identifying two potential new boundaries for Capacity Zones<sup>2</sup> for the tenth Forward Capacity Auction (“FCA”). This letter is accompanied by explanatory testimony of Alan McBride, the ISO’s Director, Transmission Strategy and Services (the “McBride Testimony”). In order for the changes to be in effect before the June 1, 2015 Existing Qualification Deadline for the tenth FCA, the ISO also requests herein a waiver of the 60-day prior notice requirement and a Federal Energy Regulatory Commission (“Commission”) ruling accepting the filing by May 29, 2015.

As explained in more detail below and in the McBride Testimony, the ISO has identified two potential new boundaries for Capacity Zones for the tenth FCA. One of the new potential Capacity Zones is a combination of the existing Northeastern Massachusetts/Boston (“NEMA/Boston”) Capacity Zone and the Southeastern Massachusetts/Rhode Island (“SEMA/RI”) Capacity Zone (collectively, the “Southeastern New England Capacity Zone” or “SENE Capacity Zone”).<sup>3</sup> The other new potential Capacity Zone is a combination of the existing Maine, New Hampshire and Vermont Load Zones (referred to as the “Northern New England Capacity Zone” or “NNE Capacity Zone”). No changes are proposed to the boundaries associated with the West/Central Massachusetts or Connecticut portions of the system. The potential SENE Capacity Zone is proposed to be an import-constrained capacity zone, while the proposed NNE Capacity Zone is proposed to be an export-constrained Capacity Zone.

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<sup>1</sup> 16 U.S.C. § 824d (2012).

<sup>2</sup> Capitalized terms not otherwise defined herein have the meanings ascribed to them in the ISO New England Inc. Transmission, Markets and Services Tariff (the “ISO Tariff”). The ISO’s Open Access Transmission Tariff (the “ISO OATT”) is Section II of the ISO Tariff, and Market Rule 1 is Section III of the ISO Tariff.

<sup>3</sup> NEMA/Boston and SEMA/RI were modeled as separate Capacity Zones in the ninth FCA.

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This filing represents “step one” of a two-step process for modeling a new Capacity Zone in an FCA (“step two” entails another filing to the Commission later this year). If the Commission approves the identified boundaries, then, in “step two,” the objective criteria specified in ISO Tariff Section III.12.4 (b) will be used to determine whether the potential zones will actually be modeled as separate Capacity Zones in the tenth FCA. The outcome of that determination will be addressed in the pre-FCA informational filing made by the ISO pursuant to ISO Tariff Section III.13.8.1(a). The ISO will make that filing with the Commission in early November 2015.

The ISO respectfully requests that the Commission accept identification of the new zonal boundaries on or before May 29, 2015 without condition, suspension or hearing, so that the new Capacity Zone boundaries may, subject to further analysis under ISO Tariff Section III.12.4(b), be modeled in the tenth FCA.

## **I. DESCRIPTION OF THE ISO; 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 markets pursuant to the ISO 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 (“NPCC”) and the North American Electric Reliability Corporation (“NERC”).

All correspondence and communications in this proceeding should be addressed to the undersigned as follows:

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## **II. STANDARD OF REVIEW**

This filing is made pursuant to Section 205 of the FPA, which “gives a utility the right to file rates and terms for services rendered with its assets.”<sup>4</sup> Under Section 205, the Commission “plays ‘an essentially passive and reactive’ role”<sup>5</sup> whereby it “can reject [a filing] only if it finds

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<sup>4</sup> *Atlantic City Elec. Co. v. FERC*, 295 F.3d 1, 9 (D.C. Cir. 2002).

<sup>5</sup> *Id.* at 10 (quoting *City of Winnfield v. FERC*, 744 F.2d 871, 876 (D.C. Cir. 1984).

that the changes proposed by the public utility are not ‘just and reasonable.’”<sup>6</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>7</sup> The proposed zonal boundaries “need not be the only reasonable methodology, or even the most accurate.”<sup>8</sup> As a result, even if an intervenor or the Commission develops an alternative proposal, the Commission must accept the ISO’s Section 205 filing if it is just and reasonable.<sup>9</sup>

### III. BACKGROUND ON CAPACITY ZONE BOUNDARIES

The McBride Testimony explains the system changes in New England and how those changes impact the evolution of zonal formation.<sup>10</sup> The New England transmission system has undergone significant improvements over the past several years. Since 2002, over \$7 billion in transmission system upgrades to maintain system reliability have been placed in-service. These projects impact all six New England states and have been designed to address potential violations of NERC, NPCC and ISO reliability standards in order to continue to reliably serve customer load across the region. The transmission system, including these recent upgrades, provides the foundation on which the ISO can establish zonal boundaries that reflect actual and anticipated limitations on the New England system.<sup>11</sup>

While transmission upgrades have increased transfer limits in a number of areas, resource retirements and a relative shortage of resources in a portion of the system that has a constrained ability to import power can lead to the need to a defined import-constrained boundary. The continued addition of new resources in such an area would have the opposite effect: lessening the need to form an import-constrained boundary. As discussed in Mr. McBride’s Testimony, the retirement of the large 1,535 MW Brayton Point Station was a major driver that led to the identification of SEMA/RI as import-constrained for the ninth FCA.<sup>12</sup> In addition, both NEMA/Boston and SEMA/RI have, to date, experienced relatively small amounts of new capacity additions. In NEMA/Boston, the retirement of the 748 MW Salem Harbor generating station was offset in large part by the addition of the new Footprint Power generating station. In contrast, Connecticut has experienced the addition of a significant number of new resources since the advent of the first FCA. This has led to the Connecticut portion of the system becoming relatively less constrained.<sup>13</sup>

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<sup>6</sup> *Id.* at 9.

<sup>7</sup> *Cities of Bethany, et al. v. FERC*, 727 F.2d 1131, 1136 (D.C. Cir. 1984).

<sup>8</sup> *Oxy USA, Inc. v. FERC*, 64 F.3d 679, 692 (D.C. Cir. 1995).

<sup>9</sup> *Cf. Southern California Edison Co., et al.*, 73 FERC ¶ 61,219 at p. 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)).

<sup>10</sup> McBride Testimony at 3-8.

<sup>11</sup> *Id.* at 3-4.

<sup>12</sup> *Id.* at 6.

<sup>13</sup> *Id.* at 4.

Significant transmission changes to the New England system have also had an impact on the constraints observed and expected to be observed in the future.<sup>14</sup> Transmission upgrades in Maine, Western Massachusetts, and Connecticut have reduced the constraints previously experienced in those portions of the system. The addition of the Stoughton 345 kV cables reduced constraints on transmitting power from the SEMA area into NEMA/Boston. The retirement of Brayton Point Station has further unconstrained the flows from SEMA to NEMA/Boston. However, constraints remain on the ability to flow power into Eastern Massachusetts and Rhode Island.<sup>15</sup>

For the eighth FCA, there were four modeled Capacity Zones. The Connecticut and NEMA/Boston zones were modeled as import-constrained zones. On the other hand, Maine was modeled as an export- constrained zone. The modeling of these zones was “hardwired” in the ISO Tariff and there was no objective criteria modeling trigger test before that FCA to determine whether or not these zones were constrained or potentially constrained. Finally, the Rest-Of-Pool Capacity Zone (including New Hampshire, Vermont, Rhode Island, and all of Massachusetts outside NEMA/Boston) was modeled as a single Capacity Zone.<sup>16</sup>

In an Order issued on May 31, 2013, the Commission directed the ISO to consider:

(1) the appropriate level of zonal modeling going forward; (2) the appropriate rules to govern intra- and inter-zonal transactions; and (3) whether objective criteria by which zones may automatically be created in response to rejected delist bids, generation retirements or other changes in system conditions would be appropriate in New England, or if not, why not.<sup>17</sup>

And to

(i) develop and file with the Commission revisions to the [ISO] [T]ariff that articulate appropriate objective criteria to revise the number and boundaries of capacity zones automatically as the relevant conditions change, or (ii) file with the Commission an explanation of why such criteria is unnecessary.<sup>18</sup>

On January 31, 2014, the ISO submitted a compliance filing that met the directives of the May 31 Compliance Order. Instead of having Capacity Zones “hardwired” in the ISO Tariff, the compliance filing proposed that the ISO will annually identify and evaluate all of the boundaries and interface transfer capabilities that could be relevant to Capacity Zone modeling. The review of system capabilities will consider submitted retirements and rejected de-list bids so it will be responsive to these and other system changes. In the compliance filing, the ISO stated that the proposal will consider objective criteria to revise the number and boundaries of Capacity Zones

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<sup>14</sup> McBride Testimony at 4.

<sup>15</sup> *Id.* at 4.

<sup>16</sup> *Id.* at 5.

<sup>17</sup> *ISO New England Inc.* 143 FERC ¶ 61,107 (2013) at P 35.

<sup>18</sup> *Id.*

automatically as relevant conditions change. The Commission accepted the ISO's compliance filing on zonal changes on April 28, 2014.<sup>19</sup> The approved zonal changes were first applied to the ninth FCA.

#### **IV. PROCESS USED TO DEVELOP POTENTIAL CAPACITY ZONE BOUNDARIES**

Section III.12.3 of the ISO Tariff, as approved in the Zones Order, requires the ISO to file with the Commission, pursuant to Section 205 of the FPA, the proposed identification of potential new Capacity Zones when the boundaries of the potential new Capacity Zones differ from the boundaries of existing Load Zones or Capacity Zones. In order to be used in a given FCA, any new potential Capacity Zone boundary must have been accepted by the Commission prior to the Existing Capacity Qualification Deadline of the applicable FCA. For the upcoming tenth FCA, the Existing Capacity Qualification Deadline is June 1, 2015. As explained herein, this filing represents "step one" of a two-step process (which entails another filing later this year) for modeling a new Capacity Zone in an FCA.

The process used by the ISO to identify potential new Capacity Zones and boundaries is specified in Section 3.1 of Attachment K to the ISO OATT. As explained in Section 3.1, the ISO conducts an annual assessment of transmission transfer capability pursuant to applicable NERC, NPCC and ISO standards and criteria, in order to identify potential future transmission system weaknesses and limiting facilities that could impact the transmission system's ability to reliably transfer energy in the planning horizon. The assessment is conducted pursuant to NERC Reliability Standard FAC-013-2 - Assessment of Transfer Capability for the Near-term Transmission Planning Horizon. Section III.12.4 (b) of the ISO Tariff states that: "[e]ach assessment will model out-of-service all Non-Price Retirement Requests (including any received for the current FCA at the time of this calculation) and Permanent De-List Bids as well as rejected for reliability Static De-List Bids from the most recent previous [FCA] and rejected for reliability Dynamic De-List Bids from the most recent previous [FCA]."<sup>20</sup>

Each annual assessment is included in the corresponding annual New England Regional System Plan ("RSP"). The RSP is an annual compilation (using a ten-year planning horizon) of the regional system planning activities conducted by the ISO pursuant to Attachment K of the ISO OATT. The inclusion of the transfer capability assessment in the RSP facilitates future potential Capacity Zone boundaries being presented not only for the upcoming FCA, but also for FCAs associated with Capacity Commitment Periods further into the future.<sup>21</sup>

#### **V. IDENTIFICATION OF PROPOSED CAPACITY ZONE BOUNDARIES**

For the tenth FCA, the ISO used the Capacity Zones from the ninth FCA as the starting point for the assessment of transmission transfer capabilities. The Capacity Zones from the ninth FCA are: NEMA/Boston, SEMA/RI, Connecticut and Rest-of-Pool. The Rest-of-Pool Capacity Zone includes West-Central Massachusetts, Vermont, and New Hampshire.

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<sup>19</sup> *ISO New England Inc., Order Accepting Compliance Filing*, 147 FERC ¶ 61,071 (2014) ("Zones Order").

<sup>20</sup> McBride Testimony at 9.

<sup>21</sup> *Id.* at 10.

To perform the transmission transfer capability assessment in relation to the tenth FCA, the ISO used a variety of inputs and assumptions. For example, the power flow model used to identify the transfer capability utilized the forecast 90/10 peak load conditions for 2019.<sup>22</sup> In addition, consistent with the requirements of Section III.12.4(b) of the ISO Tariff, the ISO took into account any rejected Static and Dynamic De-List Bids from the ninth FCA, and submitted Permanent De-List Bids and Non-Price Retirement Requests (“NPRRs”). The generation units associated with these de-list bids and NPRRs were modeled for purposes of the analysis as “out-of-service.”<sup>23</sup> In addition, the assessment modeled as “in service” all certified transmission upgrades accepted by the ISO, and considered both first contingency (N-1) and second contingency (N-1-1) conditions in accordance with NERC, NPCC and ISO criteria.<sup>24</sup>

The core of a transmission transfer capability assessment involves modeling the movement of power from a source to a sink, by increasing the output of resources at the source, and reducing the output of resources at the sink.<sup>25</sup> With respect to the SENE area, through modeling, the output of source resources was increased in Western New England (*i.e.*, remote from the SENE area), and the output of sink resources was decreased in the eastern portion of Massachusetts and Rhode Island. Under those conditions, a scenario analysis was performed with different sets of generation resources modeled as offline in the NEMA/Boston and SEMA/RI areas. The scenario analyses enabled the identification of certain transmission constraints and associated transfer limits.<sup>26</sup>

As explained in the McBride Testimony, the constraints observed in the transfer of power into the SENE area were found to be on or near the interface of the boundary formed by the combined existing SEMA/RI and NEMA/Boston Capacity Zones.<sup>27</sup> These constraints were observed for the contingency loss of other transmission elements on or near the boundary formed by the combination of the two Capacity Zones. Put differently, power can generally flow freely within this new zone, but imports into the zone remain constrained. These constraints are such that new, qualified resources located in either zone would be helpful in addressing the overall constraints. That is, new resources in SEMA/RI would be helpful in unloading the constraints expected on the northern border of NEMA/Boston and new resources in NEMA/Boston would unload the west-to-east constraints that also limit SEMA/RI import. Similarly, the removal of capacity (through retirements or de-list bids) in either zone would exacerbate the import constraints into both zones. In summary, the relevant transmission constraints form a coherent single zone defined by the outer borders of the combined eastern Massachusetts and Rhode Island system, which is encompassed within the existing NEMA/Boston and SEMA/RI Load Zones.<sup>28</sup>

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<sup>22</sup> McBride Testimony at 10.

<sup>23</sup> *Id.* at 10-11.

<sup>24</sup> *Id.* at 12.

<sup>25</sup> *Id.* at 12.

<sup>26</sup> *Id.* at 13.

<sup>27</sup> *Id.* at 13.

<sup>28</sup> *Id.* at 7.

With respect to the identification of the NNE Capacity Zone boundary, the North-South interface has been an evaluated interface in planning and operating studies of the New England system for many years.<sup>29</sup> The interface is approximately located along the combined southern borders of New Hampshire and Vermont and the northern border of Massachusetts. Planning studies conducted in accordance with Attachment K, Section 3 identified that the pattern of North-South flows had changed following the retirement of the Brayton Point Station and the earlier retirement of the Vermont Yankee nuclear facility. After these retirements, the North-South flows are now forecast to be more concentrated along the lines connecting southeastern New Hampshire with eastern Massachusetts. The existing capacity resources north of the North-South boundary all contribute to the transfer over the interface. In addition, the ISO has reviewed the Show of Interest applications that have been submitted for FCA 10. The objective criteria for the modeling of an export-constrained capacity zone includes the quantity of existing resources behind the potential export constraint and the quantity of new resources that could qualify. The Show of Interest submittals for new resources are not made public. The ISO's review of the Show of Interest submittals is supportive of the evaluation of the North-South interface as a potential boundary for an export-constrained zone.<sup>30</sup> As discussed in Section VII below, the development of the transfer capability assessment was presented to stakeholders – both at PAC and Reliability Committee meetings.

If the Commission approves the identified boundaries, then, in “step two” – as described in the McBride Testimony and reflected in ISO Tariff Section III.12.4(b) – the objective criteria specified in ISO Tariff Section III.12.4(b) will be used to determine whether the potential zones will actually be modeled as separate Capacity Zones in the tenth FCA.<sup>31</sup> The outcome of that determination will be addressed in the pre-FCA informational filing made by the ISO pursuant to ISO Tariff Section III.13.8.1(a). The ISO will make that filing with the Commission in early November 2015.

## **VI. REQUESTED EFFECTIVE DATE**

Pursuant to Section 35.11 of the Commission's rules and regulations,<sup>32</sup> the ISO respectfully requests that the Commission waive the 60-day notice period of 18 C.F.R. § 35.3 and accept the identification of potential Capacity Zone boundaries on or prior to May 29, 2015, without condition, suspension or hearing. Section III.12.3 of the ISO Tariff requires that, in order to be used in a given FCA, any potential new Capacity Zones must have received approval from the Commission prior to the Existing Capacity Qualification Deadline of the applicable FCA. To be implementable with sufficient lead time for FCM preparatory activities of the ISO and Market Participants, it is important to have Commission approval for the identification of the new Capacity Zone boundaries prior to the Existing Capacity Qualification Deadline. Among other things, the Existing Capacity Qualification Deadline includes the deadline for submission of de-list bids. For FCA 10, the Existing Capacity Qualification Deadline is June 1, 2015. May 29

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<sup>29</sup> McBride Testimony at 15.

<sup>30</sup> *Id.* at 16-17.

<sup>31</sup> *Id.* at 17.

<sup>32</sup> 18 C.F.R. § 35.11.



is the last business day prior to June 1. Therefore, good cause exists to grant the waiver of the 60-day notice period.

## **VII. INPUT FROM STAKEHOLDERS**

On March 24, 2015, the annual transfer capability assessment was presented to the PAC – a group that is open to all interested stakeholders – as part of the annual regional system planning process.<sup>33</sup> The ISO received input and answered questions from PAC meeting participants.

Although not required by the governing documents, the ISO sought additional input from stakeholders by presenting the transfer capability assessment at a Reliability Committee meeting on April 2, 2015. At the full day meeting, the Reliability Committee provided input and the ISO answered questions. Also at the meeting, the Reliability Committee voted as to whether the ISO's identification of the NNE and SENE boundaries had been performed in accordance with the ISO Tariff requirements. The vote was 34.25 percent in favor. The NEPOOL Participants Committee does not provide an advisory vote on the zonal boundaries.

## **VIII. ADDITIONAL SUPPORTING INFORMATION**

Section 35.13 of the Commission's regulations generally requires public utilities to file certain cost and other information related to an examination of traditional cost-of-service rates. However, the identification of boundaries does not constitute a traditional "rate" and 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 substantial compliance with relevant provisions of Section 35.13 of the Commission's regulations:

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

- This transmittal letter;
- Testimony of Alan McBride; and
- 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 issue an order prior to May 29, 2015 accepting the proposed boundaries.

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/committees/nepool\\_part/index.html](http://www.iso-ne.com/committees/nepool_part/index.html). A copy of this transmittal letter and the

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<sup>33</sup> The ISO also presented the transfer capability assessment's assumptions at the PAC meetings held on December 18, 2014; January 21, 2015; and January 28, 2015.



accompanying materials have also been sent to the governors and electric utility regulatory agencies for the six New England states that comprise the New England Control Area, the New England Conference of Public Utility Commissioners, Inc., and the New England States Committee on Electricity. Their names and addresses are shown in the attached listing. In accordance with Commission rules and practice, there is no need for the Governance Participants or the entities identified in the listing to be included on the Commission's official service list in the captioned proceeding 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 Section VII of this transmittal letter.

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

35.13(b)(6) - The ISO's approval of the identification of boundaries is evidenced by this filing.

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)(1) - The proposed identification of boundaries does not modify a traditional "rate," and the statement required under this Commission regulation is not applicable to the instant filing.

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 connection with the action for which approval is sought.

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## **IX. CONCLUSION**

For the reasons stated herein, the ISO respectfully requests that the Commission waive the 60-day notice period and accept the identification of the potential Capacity Zone boundaries, without condition, modification or hearing by May 29, 2015.

Respectfully submitted,

/s/ Kevin W. Flynn

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1 **I. PURPOSE OF THE TESTIMONY; REASON FOR THE FILING**

2

3 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

4 A. My testimony explains: (i) the process used by the ISO, with input from the ISO  
5 New England Planning Advisory Committee (“PAC”) and the Reliability  
6 Committee, to identify potential boundaries for Capacity Zones<sup>1</sup> to be modeled  
7 for a Forward Capacity Auction (“FCA”), and (ii) the transmission transfer  
8 capability assessment that has resulted in the ISO’s identification of two potential  
9 new Capacity Zone boundaries for the tenth FCA (“FCA 10”).

10

11 **Q. WHAT IS THE REASON FOR THIS FILING?**

12 A. Section III.12.3 of the ISO Tariff requires the ISO to file with the Commission,  
13 pursuant to Section 205 of the Federal Power Act, the proposed identification of a  
14 potential new Capacity Zone when the boundary of the potential new Capacity  
15 Zone differs from the boundaries of existing Load Zones or Capacity Zones. In  
16 order to be used in a given FCA, any new Capacity Zone must have received  
17 approval from the Commission prior to the Existing Capacity Qualification  
18 Deadline of the applicable FCA. For FCA 10, the Existing Capacity Qualification  
19 Deadline is June 1, 2015. As explained further herein, this filing represents “step  
20 one” of a two-step process for modeling a new Capacity Zone in an FCA (“step  
21 two” entails another filing to the Commission later this year). If the Commission  
22 approves the identified boundaries, then, in “step two,” the objective criteria  
23 specified in ISO Tariff Section III.12.4 (b) will be used to determine whether the  
24 potential zones will actually be modeled as separate Capacity Zones in FCA 10.  
25 The outcome of that determination will be addressed in the pre-FCA  
26 informational filing made by the ISO pursuant to ISO Tariff Section III.13.8.1 (a).  
27 The ISO will make that filing with the Commission in early November 2015.

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<sup>1</sup> Capitalized terms not otherwise defined herein have the meanings ascribed to them in the ISO New England Inc. Transmission, Markets and Services Tariff (the “ISO Tariff”). The ISO’s Open Access Transmission Tariff (the “ISO OATT”) is Section II of the ISO Tariff, and Market Rule 1 is Section III of the ISO Tariff.

1 **Q. WHY DO YOU SAY THAT THESE ARE “POTENTIAL” NEW CAPACITY**  
2 **ZONES?**

3 A. At this phase of the zonal development process, the appropriate boundaries are  
4 simply being defined so that if these Capacity Zones are needed, they can be  
5 modeled in the auction.

6

7 **Q. WHAT ARE THE TWO NEW POTENTIAL CAPACITY ZONES FOR**  
8 **FCA 10?**

9 A. One of the new potential Capacity Zone boundaries is a combination of the  
10 existing Northeastern Massachusetts/Boston (“NEMA/Boston”) Capacity Zone  
11 and the Southeastern Massachusetts/Rhode Island (“SEMA/RI”) Capacity Zone  
12 (collectively, the “Southeastern New England Capacity Zone” or “SENE Capacity  
13 Zone”).<sup>2</sup>

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15 The other new potential Capacity Zone is a combination of the existing Maine,  
16 New Hampshire and Vermont Load Zones (referred to as the “Northern New  
17 England Capacity Zone” or “NNE Capacity Zone”). No changes are proposed to  
18 the boundaries associated with the West/Central Massachusetts or Connecticut  
19 portions of the system. The potential SENE Capacity Zone is proposed to be an  
20 import-constrained capacity zone, while the potential NNE Capacity Zone is  
21 proposed to be an export-constrained Capacity Zone.

22

23 **Q. PLEASE DESCRIBE THE CHANGES TO THE SYSTEM THAT HAVE**  
24 **BEEN EXPERIENCED IN NEW ENGLAND AND HOW THOSE**  
25 **CHANGES IMPACT THE RECENT EVOLUTION OF CAPACITY ZONE**  
26 **FORMATION.**

27 A. The New England transmission system has undergone significant improvements  
28 over the past several years. Since 2002, over \$7 billion in transmission system  
29 upgrades to maintain system reliability have been placed in-service. These

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<sup>2</sup> Both NEMA/Boston and SEMA/RI were modeled Capacity Zones in the ninth FCA (“FCA 9”).

1 projects impact all six New England states and have been designed to address  
2 potential violations of North American Electricity Reliability Corporation  
3 (“NERC”), Northeast Power Coordinating Council (“NPCC”) and ISO reliability  
4 standards in order to continue to reliably serve customer load across the region.  
5 The transmission system, including these recent upgrades, provides the  
6 foundation on which the ISO can establish zonal boundaries that reflect actual and  
7 anticipated limitations on the New England system.

8  
9 While the transmission upgrades have increased transfer limits in a number of  
10 areas, resource retirements and a shortage of resources in a portion of the system  
11 that has a constrained ability to import power can lead to a defined import-  
12 constrained boundary. The continued addition of new resources in such an area  
13 would have the opposite effect: lessening the need to form an import-constrained  
14 boundary. As discussed below, the retirement of the large 1,535 MW Brayton  
15 Point Station was a major driver that led to the identification of SEMA/RI as  
16 import-constrained for FCA 9. In addition, both NEMA/Boston and SEMA/RI  
17 have, to date, experienced relatively small amounts of new capacity additions.

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19 In NEMA/Boston, the addition of the new Footprint Power generating station was  
20 offset in large part by the retirement of the 748 MW Salem Harbor generating  
21 station. In contrast, Connecticut has experienced the addition of a significant  
22 number of new resources since the advent of the first FCA. This has led to the  
23 Connecticut portion of the system becoming relatively less constrained.

24 Significant transmission changes to the New England system have also had an  
25 impact on the constraints observed and expected to be observed in the future.  
26 Transmission upgrades in Maine, Western Massachusetts, and Connecticut have  
27 reduced the constraints previously experienced in those portions of the system.  
28 The Stoughton 345 kV cables, which went into service in 2009, reduced  
29 constraints on transmitting power from the SEMA area into NEMA/Boston. The  
30 retirement of Brayton Point Station has further unconstrained the flows from  
31 SEMA to NEMA/Boston. However constraints remain on the ability to flow  
32 power into Eastern Massachusetts and Rhode Island.

1 **Q. WHAT WERE THE CAPACITY ZONES USED IN THE EIGHTH**  
2 **FORWARD CAPACITY AUCTION (“FCA 8”)?**

3 A. For FCA 8, there were four modeled Capacity Zones. The Connecticut and  
4 NEMA/Boston Capacity Zones were modeled as import-constrained zones. On  
5 the other hand, Maine was modeled as an export- constrained Capacity Zone. The  
6 modeling of these zones was “hardwired” in the Tariff and there was no objective  
7 criteria test before the FCA to determine whether or not these zones were  
8 constrained or potentially constrained. Finally, the Rest-Of-Pool Capacity Zone  
9 (including New Hampshire, Vermont, Rhode Island, and all of Massachusetts  
10 outside NEMA/Boston) was modeled as a single Capacity Zone.

11  
12 **Q. PLEASE BRIEFLY DESCRIBE THE CHANGES TO THE ZONAL**  
13 **METHODOLOGY THAT TOOK PLACE BEGINNING WITH FCA 9.**

14 A. In an Order issued on May 31, 2013, the Commission directed the ISO to  
15 consider:

16  
17 (1) the appropriate level of zonal modeling going forward; (2) the  
18 appropriate rules to govern intra- and inter-zonal transactions; and (3)  
19 whether objective criteria by which zones may automatically be created in  
20 response to rejected delist bids, generation retirements or other changes in  
21 system conditions would be appropriate in New England, or if not, why  
22 not.<sup>3</sup>

23  
24 In the May 31 Compliance Order, the Commission also required the ISO to:

25 (i) develop and file with the Commission revisions to the [ISO] [T]ariff  
26 that articulate appropriate objective criteria to revise the number and  
27 boundaries of capacity zones automatically as the relevant conditions  
28 change, or (ii) file with the Commission an explanation of why such  
29 criteria is unnecessary.<sup>4</sup>  
30

---

<sup>3</sup> *ISO New England Inc.*, 143 FERC ¶ 61,198 (2013) at P 35 (“May 31 Compliance Order”).

<sup>4</sup> *Id.*



1 On January 31, 2014, the ISO submitted a compliance filing that met the  
2 directives of the May 31 Compliance Order.<sup>5</sup> Instead of having Capacity Zones  
3 “hardwired” in the ISO Tariff, the compliance filing proposed that the ISO will  
4 annually identify and evaluate all of the boundaries and interface transfer  
5 capabilities that could be relevant to Capacity Zone modeling. The review of  
6 system capabilities will consider submitted retirements and rejected de-list bids so  
7 it will be responsive to these and other system changes. In the compliance filing,  
8 the ISO stated that the proposal will consider objective criteria to revise the  
9 number and boundaries of Capacity Zones automatically as relevant conditions  
10 change.<sup>6</sup> The Commission accepted the ISO’s compliance filing on zonal changes  
11 on April 28, 2014.<sup>7</sup>

12  
13 **Q. PLEASE DESCRIBE THE CHANGES TO THE SYSTEM THAT TOOK**  
14 **PLACE BEFORE FCA 9 AND THE IMPACT ON CAPACITY ZONES.**

15 A. For FCA 8, a significant retirement took place in a capacity-constrained part of  
16 the system. In October 2013, EquiPower Resources elected to submit a Non-Price  
17 Retirement Request (“NPRR”) for the 1,535 MW Brayton Point Station located in  
18 SEMA. As required by the ISO Tariff, the ISO conducted a reliability review of  
19 the resource and, in December 2013, determined that Brayton Point Station was  
20 needed for reliability. Despite that determination and only days before the  
21 auction, EquiPower Resources (as permitted by the ISO Tariff) elected to retire.  
22 This significant change was a primary driver for the creation of the SEMA/RI  
23 Zone for FCA 9.

24  
25 **Q. YOU ARE PROPOSING TWO MAJOR ZONAL CHANGES FOR**  
26 **POTENTIAL USE IN FCA10. PLEASE BRIEFLY DESCRIBE WHY THE**

---

<sup>5</sup> January 31, 2014 Compliance Filing Of ISO New England Inc., submitted in Docket No. ER12-953-002.

<sup>6</sup> Compliance Filing at p 3.

<sup>7</sup> *ISO New England Inc.*, 147 FERC ¶ 61,071 (2014).

1           **SEMA/RI AND NEMA/BOSTON ZONES ARE BEING COMBINED INTO**  
2           **THE SINGLE, LARGER SENE ZONE, INSTEAD OF CONTINUING TO**  
3           **MODEL TWO SEPARATE ZONES.**

4           A.     In FCA 9, with the new SEMA/RI Capacity Zone in place, 353 MW of new  
5           resources received Capacity Supply Obligations in that zone. In addition, new  
6           transmission projects that will increase the N-1 and N-1-1 import capabilities into  
7           that zone by roughly 500 and 300 MW, respectively, have been accepted for  
8           inclusion in the FCA 10 Network Model. In combination, these changes mean  
9           that the “stand-alone” SEMA/RI issues have now been relieved. However, as  
10          described later in my testimony, significant transmission constraints remain in this  
11          portion of the system along the outer borders of the area formed by the combined  
12          NEMA/Boston and SEMA/RI zones. Put differently, power can generally flow  
13          more freely within this new combined zone, but imports into the zone remain  
14          constrained. These constraints are such that new, qualified resources located in  
15          either the NEMA/Boston or SEMA/RI zone would help address the overall  
16          constraints. Specifically, new resources in SEMA/RI would unload the  
17          constraints expected on the northern border of NEMA/Boston and new resources  
18          in NEMA/Boston would unload the west-to-east constraints that also limit  
19          SEMA/RI import. Similarly, the removal of capacity (through retirements or de-  
20          list bids) in either zone would exacerbate the import constraints into both zones.  
21          In summary, the relevant transmission constraints form a coherent single zone  
22          defined by the outer borders of the combined eastern Massachusetts and Rhode  
23          Island system, which is encompassed within the existing NEMA/Boston and  
24          SEMA/RI Load Zones.

25  
26          **Q.     DOES THE CREATION AND MODELING OF THIS NEW ZONE**  
27          **ASSURE THAT ANY NEW RESOURCES LOCATED WITHIN THAT**  
28          **ZONE WILL QUALIFY FOR FCA10?**

29          A.     No. The new larger zone does not assure that every new resource proposed for  
30          the zone will be qualified, regardless of the location within the zone. The ISO  
31          will still need to conduct the overlapping impacts test (the deliverability test) to

1 determine whether a new resource meets the deliverability requirements of new  
2 capacity interconnections. The delivery requirement is that new capacity be  
3 deliverable to the Load Zone where the resource is located and the boundaries of  
4 the Load Zones are not impacted by the formation of this proposed new Capacity  
5 Zone. It is likely that, for example, a new resource could not be qualified  
6 immediately adjacent to existing resources because there would not be enough  
7 transmission capability for the proposed and existing resources to provide power  
8 simultaneously. This same deliverability requirement is applied to resources in all  
9 parts of the New England system.

10  
11 **Q. WHY IS THE NORTHERN NEW ENGLAND EXPORT-CONSTRAINED**  
12 **ZONE BEING PROPOSED?**

13 A. The so-called North-South interface, which essentially follows the border between  
14 northern Massachusetts and southern Vermont/New Hampshire, has long been  
15 modeled as a constraint in the New England region. As described further in my  
16 testimony, the constraint is being proposed as a potential capacity zone boundary  
17 because of the changes in system flows that are observed as a result of the  
18 combined effects of the 2014 retirement of the approximately 600 MW Vermont  
19 Yankee nuclear generating station in southern Vermont, the retirement of the  
20 Brayton Point Station and the completion of the large Maine transmission project  
21 known as the Maine Power Reliability Program (“MPRP”).

22  
23 **Q. WHY IS IT IMPORTANT THAT THE POTENTIAL NEW CAPACITY**  
24 **ZONES RECEIVE COMMISSION APPROVAL PRIOR TO THE**  
25 **EXISTING CAPACITY QUALIFICATION DEADLINE FOR FCA 10?**

26 A. As I mentioned earlier, this deadline is set out as an ISO Tariff requirement of the  
27 zonal process. The Existing Capacity Qualification Deadline for FCA 10 is June  
28 1, 2015. Section III.12.3 of the ISO Tariff requires that, in order to be used in a  
29 given FCA, any potential new Capacity Zones must have received approval from  
30 the Commission prior to the Existing Capacity Qualification Deadline of the  
31 applicable FCA. To be implementable with sufficient lead time for FCM

1 preparatory activities of the ISO and Market Participants, it is important to have  
2 Commission approval for the identification of the new Capacity Zone boundaries  
3 by the Existing Capacity Qualification Deadline. Among other things, the  
4 Existing Capacity Qualification Deadline includes the deadline for submission of  
5 de-list bids.

6  
7 **II. PROCESS USED TO IDENTIFY POTENTIAL CAPACITY ZONE**  
8 **BOUNDARIES**

9  
10 **Q. WHAT PROCESS DOES THE ISO USE TO IDENTIFY POTENTIAL**  
11 **BOUNDARIES FOR CAPACITY ZONES?**

12 A. The process is specified in Section 3.1 of Attachment K to the ISO OATT. As  
13 explained in Section 3.1, the ISO conducts an annual assessment of transmission  
14 transfer capability pursuant to the applicable NERC, NPCC and ISO standards  
15 and criteria, in order to identify potential future transmission system weaknesses  
16 and limiting facilities that could impact the transmission system’s ability to  
17 reliably transfer energy in the planning horizon. The assessment is conducted  
18 pursuant to NERC Reliability Standard FAC-013-2, “Assessment of Transfer  
19 Capability for the Near-term Transmission Planning Horizon.”

20  
21 **Q. DOES THE ISO TARIFF PROVIDE ANY GUIDANCE REGARDING**  
22 **HOW THE ASSESSMENT SHOULD BE PERFORMED?**

23 A. Yes, Section III.12.4 (b) of the ISO Tariff states that: “[e]ach assessment will  
24 model out-of-service all Non-Price Retirement Requests (including any received  
25 for the current FCA at the time of this calculation) and Permanent De-List Bids as  
26 well as rejected for reliability Static De-List Bids from the most recent previous  
27 [FCA] and rejected for reliability Dynamic De-List Bids from the most recent  
28 previous [FCA].”

1 **Q. IS THE ASSESSMENT PUBLISHED IN ANY ISO DOCUMENTS?**

2 A. Yes. The assessment is included in the New England Regional System Plan  
3 (“RSP”). The RSP is an annual compilation of the regional system planning  
4 activities conducted by the ISO across the ten year planning horizon. The  
5 inclusion of the transfer capability assessment in the RSP facilitates future  
6 potential Capacity Zone boundary discussions by presenting transfer capability  
7 information not only for the upcoming FCA, but also for FCAs associated with  
8 Capacity Commitment Periods up to ten years into the future.<sup>8</sup>

9

10 **III. CONDUCT OF THE TRANSMISSION TRANSFER CAPABILITY**

11 **ASSESSMENT FOR FCA 10**

12

13 **Q. WHAT WERE THE INPUTS AND ASSUMPTIONS USED IN THE**  
14 **TRANSMISSION TRANSFER CAPABILITY ASSESSMENT**  
15 **PERFORMED BY THE ISO IN RELATION TO FCA10?**

16 A. The power flow model used to identify the transfer capability relevant to the new  
17 Capacity Zones portion of the system utilized the latest available forecast 90/10  
18 peak load conditions for 2019. In addition, consistent with the requirements of  
19 Section III.12.4 (b) of the ISO Tariff and Attachment K of the ISO OATT, the  
20 ISO took into account any rejected Static and Dynamic De-List Bids from FCA 9  
21 and submitted Permanent De-List Bids and NPRRs. The generation associated  
22 with these de-list bids and NPRRs was modeled for purposes of the analysis as  
23 “out-of-service.” Any new resources that cleared in the previous FCA were  
24 included in the analysis. In addition, the assessment modeled as “in-service” all  
25 transmission upgrades certified<sup>9</sup> by the affected Transmission Owners and

---

<sup>8</sup> Section 4.2 of the 2014 RSP included a discussion of transmission transfer capabilities and associated Capacity Zones: <http://www.iso-ne.com/system-planning/system-plans-studies/rsp>.

<sup>9</sup> Pursuant to Section 12.6 of the Tariff and Planning Procedure No. 10.

1 accepted by the ISO to be in-service for the relevant Capacity Commitment  
2 Period.<sup>10</sup>

3

4 **Q. YOU STATED THAT THE NETWORK MODEL USES TRANSMISSION**  
5 **PROJECTS THAT HAVE BEEN CERTIFIED BY THE TRANSMISSION**  
6 **OWNERS AND ACCEPTED BY THE ISO. IS THERE A FIXED ISO**  
7 **TARIFF DEADLINE FOR THE INCLUSION OF SUCH PROJECTS?**

8 A. There is no fixed deadline. However, the identification and review of proposed  
9 certified projects for inclusion in the Network Model is scheduled to take place at  
10 the beginning of the preparation processes for the upcoming FCA. The Network  
11 Model is developed as early as possible because multiple activities, such as the  
12 calculation of transfer capabilities, retirement analysis and the qualification  
13 review of new resources, are performed using the Network Model for the given  
14 FCA.

15

16 **Q. HAVE TRANSMISSION OWNERS IDENTIFIED ANY MAJOR**  
17 **TRANSMISSION PROJECTS FOR WHICH THE CERTIFICATION WAS**  
18 **NOT INITIALLY ACCEPTED BY THE ISO, BUT THE TRANSMISSION**  
19 **OWNERS HAVE STATED THAT THEY BELIEVE THAT THE**  
20 **FACILITIES WILL BE IN-SERVICE BY JUNE 1, 2019?**

21

22 A. Yes. Transmission Owners have identified that the Greater Boston Upgrades, the  
23 Greater Hartford/Central Connecticut Project and the Southwest Connecticut  
24 Projects all currently have projected in-service dates of June 1, 2019 or sooner.  
25 June 1, 2019 is first day of the Capacity Commitment Period associated with FCA  
26 10.

27

28 **Q. IF THE CERTIFICATION OF THESE PROJECTS WERE TO BE**  
29 **ACCEPTED BY THE ISO FOR AN IN-SERVICE DATE PRIOR TO JUNE**

---

<sup>10</sup> A list of certified projects accepted by the ISO for the tenth FCA was presented to the January 27, 2015 Reliability Committee.

1           **1, 2019, WOULD THAT CHANGE THE TWO NEW BOUNDARIES THAT**  
2           **ARE PROPOSED IN THIS FILING?**

3    A.    No. The locations of the Greater Hartford/Central Connecticut Project and the  
4           Southwest Connecticut Projects (both located in central/western Connecticut) are  
5           such that they are not relevant to the boundaries that are being proposed. The  
6           Greater Boston Upgrades have been identified as bringing about an increase in the  
7           North-South transfer capability and, therefore, an increase in the Southeast New  
8           England import capability. However, the amounts of those capability increases  
9           have not yet been calculated. It is expected that the locations of the proposed  
10          boundaries will not be changed by the inclusion of the Greater Boston Upgrades.  
11          Furthermore, it is not expected that the increase in transfer capabilities will be  
12          sufficient to remove the need to use the proposed boundaries in the definition of  
13          potential Capacity Zones under the zone formation process.

14  
15   **Q.    WHAT CONTINGENCY CONDITIONS DID THE ISO CONSIDER IN ITS**  
16   **ASSESSMENT?**

17   A.    The ISO considered both first contingency (N-1) and second contingency (N-1-1)  
18          conditions in accordance with NERC, NPCC and ISO criteria.

19  
20   **Q.    ON A BASIC LEVEL, WHAT DOES A TRANSMISSION TRANSFER**  
21   **CAPABILITY ASSESSMENT ENTAIL?**

22   A.    A transmission transfer capability assessment is performed by modeling the  
23          movement of power from a source to a sink, by increasing the output of resources  
24          at the source, and reducing the output of the resources at the sink.

25  
26   **IV.   IDENTIFICATION OF SOUTHEASTERN NEW ENGLAND BOUNDARY**  
27



1 **Q. PLEASE EXPLAIN THE ANALYSIS THAT RESULTED IN THE**  
2 **IDENTIFICATION OF A NEW BOUNDARY FOR A POTENTIAL**  
3 **IMPORT-CONSTRAINED SOUTHEASTERN NEW ENGLAND**  
4 **CAPACITY ZONE FOR FCA 10.**

5 A. With respect to the SENE area, a transmission transfer capability assessment was  
6 performed through modeling in which the output of source resources was  
7 increased in Western New England (*i.e.*, remote from the SENE area), and the  
8 output of sink resources was decreased in the eastern portion of Massachusetts  
9 and Rhode Island. Under those conditions, a scenario analysis was performed  
10 with different sets of generation resources modeled as offline in the  
11 NEMA/Boston and SEMA/RI areas. The scenario analyses enabled the  
12 identification of certain transmission constraints and associated transfer limits.

13  
14 **Q. WAS A PERSISTENT AND MEANINGFUL TRANSMISSION**  
15 **INTERFACE CONSTRAINT OBSERVED IN THE REVIEW OF THE**  
16 **DIFFERENT SCENARIOS?**

17 A. The constraints observed in the transfer of power into the SENE area were found  
18 to be on or near the interface of the boundary formed by the combined existing  
19 SEMA/RI and NEMA/Boston Capacity Zones. These constraints were observed  
20 for the contingency loss of either: generating resources or other transmission  
21 elements on or near the boundary formed by the combination of the Capacity  
22 Zones.

23  
24 **Q. WERE THESE FINDINGS CONSISTENT WITH PREVIOUS STUDIES**  
25 **OF THE AREA?**

26 A. Yes.

27  
28 **Q. DOES THE PROPOSED BOUNDARY POTENTIALLY FORM A**  
29 **MEANINGFUL CAPACITY ZONE FOR USE IN FCM?**

30 A. Yes. Resources in both NEMA/Boston and SEMA/RI are on the downstream side  
31 (such resources would unload the constraints) of the import constraints that are

1 observed for the combined zone. The combined load within the overall zone was  
2 projected to be approximately 13,300 MW by 2018. The N-1 import capability  
3 into the zone is projected to be approximately 4,250 MW.

4  
5 **Q. WHAT IS THE “LINE-LINE” TRANSMISSION SECURITY ANALYSIS**  
6 **(“TSA”) METHODOLOGY?**

7 A. Fundamentally, a TSA is a deterministic calculation that determines the  
8 requirement of an area to meet its load through internal generation and Demand  
9 Resources and import capability. The use and applicability of the line-line TSA is  
10 defined further in ISO Tariff Section III.12. A line-line TSA requirement for a  
11 zone is calculated using the following formula (simplified):

$$\text{TSA Requirement} = \frac{(90/10 \text{ Load} - \text{Import Limit})}{1 - (\text{resource unavailability factor})}$$

12  
13  
14  
15  
16  
17 **Q. COULD YOU PLEASE PROVIDE A VISUAL REPRESENTATION OF**  
18 **THE PROPOSED BOUNDARY?**

19 A. Yes. The map in Appendix 1 to my testimony provides a visual representation, on  
20 a regional map, of the boundary.

21  
22 **Q. CAN YOU EXPLAIN THE EVOLUTION OF SYSTEM ISSUES THAT**  
23 **LED FIRST TO THE CREATION OF A SEMA/RI CAPACITY ZONE IN**  
24 **FCA 9 AND NOW HAVE RESULTED IN THE PROPOSAL TO MODEL**  
25 **SEMA/RI TOGETHER WITH THE NEMA/BOSTON CAPACITY ZONE**  
26 **AS A COMBINED SENE CAPACITY ZONE FOR FCA 10?**

27 A. The primary system change that led to the formation of the SEMA/RI import-  
28 constrained Capacity Zone in FCA 9 was the NPRR of the 1,535 MW Brayton  
29 Point Station in FCA 8. The Commission ordered the ISO to develop a zonal  
30 formation process that was appropriately responsive to retirements and the  
31 Commission approved the proposal to evaluate a SEMA/RI Capacity Zone

1 boundary in May 2014.<sup>11</sup> Since that time, two sets of system changes have  
2 caused the “stand-alone” SEMA/RI issues to become relieved.

3  
4 First, the creation of the SEMA/RI Capacity Zone was successful in resulting in  
5 the addition of 353 MW of new capacity resources in that zone in FCA 9.

6 Second, certain transmission upgrades have been certified<sup>12</sup> and accepted by the  
7 ISO for inclusion in FCA 10 that will allow the increase of the SEMA/RI N-1 and  
8 N-1-1 import capabilities by approximately 500 and 300 MW, respectively.

9 NEMA/Boston and SEMA/RI were both modeled as import-constrained in FCA  
10 9. The system modeling conducted by the ISO in accordance with Attachment K,  
11 Section 3, shows that these portions of the system continue to be import-  
12 constrained. However, now that the “stand-alone” SEMA/RI issues have been  
13 relieved, both zones share the same remaining constraints located on the outer  
14 boundaries of the combined SENE zone. For the conditions studied, no  
15 constraints were observed between NEMA/Boston and SEMA/RI within the  
16 SENE zone. This leads to the proposal to evaluate the combined SENE as a  
17 single Capacity Zone.

18

19 **V. IDENTIFICATION OF NORTHERN NEW ENGLAND BOUNDARY**

20

21 **Q. PLEASE EXPLAIN THE ANALYSIS THAT RESULTED IN THE**  
22 **IDENTIFICATION OF A NEW BOUNDARY FOR A POTENTIAL**  
23 **EXPORT-CONSTRAINED NORTHERN NEW ENGLAND CAPACITY**  
24 **ZONE FOR FCA 10.**

25 A. The North-South interface has been an evaluated interface in planning and  
26 operation studies of the New England system for many years. The interface is  
27 approximately located along the combined southern borders of New Hampshire  
28 and Vermont and the northern border of Massachusetts. Planning studies

---

<sup>11</sup> See Letter Order issued on May 29, 2014 in Docket No. ER14-1939-000.

<sup>12</sup> The upgrades include the uprate of the V148N 115 kV line between Washington and Woonsocket in Rhode Island and the increase of 345/115 kV autotransformer ratings at West Farnum and Kent County.

1 conducted in accordance with Attachment K, Section 3, identified that the pattern  
2 of North-South flows had changed following the retirement of the Brayton Point  
3 Station and the earlier retirement of the Vermont Yankee nuclear facility. After  
4 these retirements, the North-South flows are now forecasted to be more  
5 concentrated along the lines connecting southeastern New Hampshire with eastern  
6 Massachusetts.

7

8 **Q. WERE THESE FINDINGS CONSISTENT WITH PREVIOUS STUDIES**  
9 **OF THE AREA?**

10 A. Yes. As stated above, the North-South interface has been an evaluated interface  
11 for many years. However, as a result of the change in specific flows that are  
12 caused by the pending and completed resource retirements, the transfer capability  
13 is being lowered to appropriately capture the transmission facility usage under  
14 heavy transfers. This change in transfer capability is a driver for the proposed  
15 evaluation of the North-South interface as a Capacity Zone boundary in FCA 10.

16

17 **Q. DOES THE PROPOSED BOUNDARY POTENTIALLY FORM A**  
18 **MEANINGFUL CAPACITY ZONE FOR USE IN THE FCM?**

19 A. Yes. The existing capacity resources north of the North-South boundary all  
20 contribute to the transfer over the interface. In addition, the ISO has reviewed the  
21 Show of Interest applications that have been submitted for FCA 10. The objective  
22 criteria for the modeling of an export-constrained capacity zone includes the  
23 quantity of existing resources behind the potential export constraint and the  
24 quantity of new resources that could qualify. The Show of Interest submittals for  
25 new resources are not made public. The ISO's review of the Show of Interest  
26 submittals is supportive of the evaluation of the North-South interface as a  
27 potential boundary for an export-constrained zone. Note that the Maine Load  
28 Zone is contained within the potential NNE Capacity Zone. In previous FCAs,  
29 the Maine Capacity Zone was evaluated as an export-constrained zone. However,  
30 recent transmission improvements, known as the MPRP, have increased the  
31 export capability out of the Maine area. The Maine zone was evaluated in FCA 9

1 and the objective criteria associated with the formation of an export-constrained  
2 capacity zone was not triggered. The increased export out of Maine does add to  
3 the downstream North-South constraint.

4 The Existing Qualified Capacity for the combined NNE portion of the system was  
5 8,394 MW in FCA 9. The 90/10 peak load of the combined NNE area was  
6 forecast to be 6,500 MW in 2018. The export capability out of the zone is  
7 projected to be 2,100 MW.

8

9 **Q. COULD YOU PLEASE PROVIDE A VISUAL REPRESENTATION OF**  
10 **THE PROPOSED BOUNDARY?**

11 A. Yes. The map in Appendix 2 to my testimony provides a visual representation, on  
12 a regional map, of the Northern New England boundary.

13

14 **Q. WHAT IS THE NEXT STEP IN THE CAPACITY ZONE FORMATION**  
15 **PROCESS?**

16 A. In the next step, the objective criteria specified in ISO Tariff Section III.12.4 (b)  
17 will be used to determine whether the potential zones will actually be modeled as  
18 separate Capacity Zones in FCA 10. The outcome of that determination will be  
19 addressed in the pre-FCA informational filing made pursuant to ISO Tariff  
20 Section III.13.8.1 (a). The ISO will make that filing with the Commission in early  
21 November 2015.

22

23 **Q. YOU MENTIONED THAT, IN ORDER FOR THE ZONAL BOUNDARIES**  
24 **TO BE USED IN FCA 10, THE TARIFF REQUIRES A COMMISSION**  
25 **ORDER APPROVING THE BOUNDARIES BY JUNE 1, 2015. IS THERE**  
26 **A REASON THAT THE TRANSFER CAPABILITY ASSESSMENT WAS**  
27 **NOT PRESENTED TO STAKEHOLDERS PRIOR TO MARCH 2015?**

28 A. Yes. In order to be reactive to system changes, it is important that the ISO reflect  
29 the outcome of the preceding FCA in its analysis of zonal boundaries. FCA 9 was  
30 held on February 2, 2015. The ISO utilized the results from FCA 9 as part of its  
31 analysis for the zonal boundaries.

1 VI. CONCLUSION

2

3 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

4 A. Yes.

## APPENDIX 1

# Proposed Potential Import Constrained Zone Boundary

- The proposed boundary of the Southeast New England Zone would be made up of
  - The northern and western borders of the NEMA/Boston zone and the western border of the SEMA/RI zone








I declare that the foregoing is true and correct.

Executed on April 6, 2015

  
\_\_\_\_\_  
Alan McBride

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2/6/2015

## **New England Governors, State Utility Regulators and Related Agencies\***

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