

147 FERC ¶ 61,172  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Cheryl A. LaFleur, Acting Chairman;  
Philip D. Moeller, John R. Norris,  
and Tony Clark.

ISO New England Inc. and  
New England Power Pool

Docket Nos. ER14-1050-000  
ER14-1050-001  
EL14-52-000

ORDER ON TARIFF FILING AND INSTITUTING SECTION 206 PROCEEDING

(Issued May 30, 2014)

1. On January 17, 2014, ISO New England Inc. (ISO-NE) and the New England Power Pool (NEPOOL) Participants Committee jointly submitted, pursuant to section 205 of the Federal Power Act (FPA)<sup>1</sup> and section 11.1.5 of the ISO-NE Participants Agreement,<sup>2</sup> two alternate proposals to revise ISO-NE's Transmission, Markets and Services Tariff (Tariff). Each proposal is intended to address fleet-wide resource performance problems in New England. ISO-NE's proposal involves significant changes to the Forward Capacity Market (FCM) design, while NEPOOL's proposal involves incremental changes to the energy and ancillary services market and the FCM while largely maintaining the existing FCM rules. We find that neither proposal standing alone has been shown to be just and reasonable. We will institute a proceeding under

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<sup>1</sup> 16 U.S.C. § 824d (2012).

<sup>2</sup> Section 11.1.5 of the Participants Agreement, commonly referred to as the "jump ball" provision, provides, in pertinent part, that if a Market Rule proposal that differs from that proposed by ISO-NE is approved by a Participants Committee vote of 60 percent or more, ISO-NE "shall, as part of any required Section 205 filing," describe the alternate Market Rule proposal in sufficient detail to permit reasonable review by the Commission and also explain its reasons for not adopting the alternate proposal and why it believes its own proposal is superior. Section 11.1.5 provides that the Commission may "adopt any or all of ISO[-NE]'s Market Rule proposal or the alternate Market Rule proposal as it finds ... to be just and reasonable and preferable."

section 206 of the FPA<sup>3</sup> in Docket No. EL14-52-000 and require ISO-NE to submit Tariff revisions reflecting a modified version of its proposal and an increase in the Reserve Constraint Penalty Factors, consistent with NEPOOL's proposal. We will also establish a refund effective date of the date on which the Secretary publishes the notice of the Commission's section 206 proceeding in the *Federal Register*.

## **I. Background**

2. ISO-NE operates the FCM through which it procures capacity on a three-year forward basis.<sup>4</sup> Capacity suppliers make offers into an annual Forward Capacity Auction (FCA) in which ISO-NE procures the amount of capacity needed in a one-year period (the Installed Capacity Requirement), and suppliers of the capacity that clears each FCA take on Capacity Supply Obligations, committing to provide capacity for the relevant Capacity Commitment Period, three years in the future. This Capacity Supply Obligation requires a capacity resource to, among other things, offer into the day-ahead energy market, leave that offer open throughout the operating day, and follow ISO-NE's dispatch instructions. In addition, a capacity resource must be available to operate during certain Tariff-defined reserve deficiencies, known as Shortage Events,<sup>5</sup> or the resource will be subject to penalties under the Tariff. In exchange for the Capacity Supply Obligation, the capacity resource receives capacity payments in each month of the Capacity Commitment Period.

## **II. Summary of the Instant Filings**

### **A. ISO-NE's Proposal**

3. According to ISO-NE, the current FCM design contains a flawed incentive structure that perpetuates fleet-wide resource performance problems and, as a result, is

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<sup>3</sup> 16 U.S.C. § 824e (2012).

<sup>4</sup> ISO-NE determines the Installed Capacity Requirement such that the probability of disconnecting non-interruptible customers due to resource deficiency will be, on average, no more than once in ten years. Tariff, § III.12, III.12 Calculation of Capacity Requirements, 8.0.0 (2013).

<sup>5</sup> A Shortage Event is a period of 30 or more contiguous minutes during which the supply of energy and reserves is insufficient to meet the demand for energy and the real-time reserve requirement. Tariff § III.13.7.1.1.1.

now failing to ensure reliability in a cost-effective manner.<sup>6</sup> ISO-NE argues that capacity resources rarely face financial consequences for failing to perform, and therefore have little incentive to make investments to ensure that they can reliably provide what the region needs: energy and reserves when supply is scarce. ISO-NE asserts that the “negligible” consequences for non-performance under the current FCM design results in adverse selection of capacity resources, and encourages resources that are likely to be poor performers to participate in the market when they should exit.

4. ISO-NE proposes to address these problems by linking capacity revenues to resource performance during reserve deficiencies. Describing its proposed fix as a “Pay for Performance” market design, ISO-NE seeks to implement a two-settlement process, whereby a capacity resource’s total capacity revenue is comprised of a Capacity Base Payment and a Capacity Performance Payment (two-settlement capacity market design).

5. The first settlement entails a Capacity Base Payment established through the FCA. Resources that take on a Capacity Supply Obligation receive a Capacity Base Payment, which is determined for each resource by multiplying the amount of MW associated with its Capacity Supply Obligation by the FCA clearing price. ISO-NE states that a resource that clears in the FCA takes on a “forward position,” meaning that it acquires both a physical obligation to offer the MW amount of its Capacity Supply Obligation into the energy market during the Capacity Commitment Period, as well as a financial obligation to cover the resource’s share of the system’s total energy and reserve requirements during Capacity Scarcity Conditions. A Capacity Scarcity Condition is measured in 5-minute intervals and exists in a Capacity Zone whenever the real-time energy price includes a Reserve Constraint Penalty Factor<sup>7</sup> triggered by (1) the system minimum 30-minute

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<sup>6</sup> ISO-NE identifies several specific flaws in the current FCM that it alleges are inconsistent with sound market design: (1) the Shortage Event mechanism bases a resource’s capacity payments on the resource’s “availability” rather than its performance; (2) the Shortage Event mechanism allows numerous exemptions for non-performance under which resources are deemed fully “available” despite their inability to provide energy or reserves; (3) a resource’s capacity payments may not be reduced by more than its total FCM revenue, which means it cannot lose money by taking on a Capacity Supply Obligation even if it entirely fails to perform; (4) the penalty rate is needlessly complex, too low to be effective, and “defies economic logic” because the penalties “actually decrease, rapidly, as the length of the scarcity condition increases;” and (5) results in a “systemic bias towards clearing less reliable resources.” ISO-NE Tariff Filing at Att. I-1a, 10-17.

<sup>7</sup> Reserve Constraint Penalty Factors are rates, in \$/MWh, that are used within the real-time dispatch and pricing algorithm to reflect the value of Operating Reserve

(continued..)

reserve requirement, (2) the system 10-minute reserve requirement, or (3) the zonal 30-minute reserve requirements.

6. The second settlement entails a Capacity Performance Payment, determined for each resource by measuring its performance against its forward position (i.e., its share of the system's requirements at the time of each Capacity Scarcity Condition). If a resource provides more than its share of energy and reserves, it will receive a positive Capacity Performance Payment; if it provides less than its share, it will receive a negative Capacity Performance Payment. The Capacity Performance Payment is calculated using an administratively-determined rate specified in the Tariff, known as the Capacity Performance Payment Rate.<sup>8</sup> ISO-NE states that the Capacity Performance Payment Rate is calculated based on two economic principles. First, when new entry is necessary to satisfy the Installed Capacity Requirement, the sum of the prospective entrant's Capacity Base Payment and the expected Capacity Performance Payment is at least as large as the net cost of new entry. Second, if a resource's expected performance is zero during scarcity conditions over the entire Capacity Commitment Period, its total expected negative Capacity Performance Payment should fully offset the Capacity Base Payments. ISO-NE states that the Capacity Performance Payment Rate is designed to achieve its loss-of-load probability standard of "one day in ten years," as described in its Planning Procedure No. 3.

7. ISO-NE states that even resources without Capacity Supply Obligations are eligible to receive Capacity Performance Payments, in order to incent all resources to provide energy and reserves when system reliability is at heightened risk. Further, because capacity resources are able to offer their capacity in blocks with different prices, allowing all resources to be eligible for Capacity Performance Payments will allow capacity resources to receive Capacity Performance Payments for blocks of their capacity that do not clear in the FCA but nonetheless provide energy and reserves during Capacity Scarcity Conditions.

8. As detailed below, ISO-NE proposes no exemptions from negative Capacity Performance Payments for non-performance, so if a capacity resource deviates from its forward position, its Capacity Performance Payments are adjusted regardless of what

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Shortages. ISO-NE Tariff § I.2.2. The Reserve Constraint Penalty Factor acts as a cap on the price that ISO-NE may pay to procure additional reserves. Reaching this cap signals that the system is in a reserve deficiency.

<sup>8</sup> ISO-NE proposes to phase-in this rate as follows: \$2,000/MWh for the period June 1, 2018 through May 31, 2021; \$3,500/MWh for the period June 1, 2021 through May 31, 2024; and \$5,455/MWh for the open-ended period starting June 1, 2024.

caused the deviation. In order to lessen a resource's downside risk, however, ISO-NE's proposal contains a "stop-loss" mechanism that limits—on both a monthly and annual basis—the amount of money a resource can lose as a result of its performance. Further, under ISO-NE's proposed bidding rules and market monitoring provisions, the risk premium that a resource includes in its bid is separate from the net-going forward cost reflected in the bid, in order to allow the market monitor to analyze the two components separately.

9. ISO-NE also seeks to raise the current trigger for Internal Market Monitor review of de-list bids, from \$1.00/kW-month to \$3.94/kW-month; the Internal Market Monitor would mitigate bids above the increased threshold only if the bid is from a resource associated with a Lead Market Participant that is found to be a pivotal supplier. A Lead Market Participant will be considered pivotal if any of the capacity from the existing resources controlled by that Lead Market Participant is needed to satisfy the capacity requirements either system-wide or in an import-constrained Capacity Zone.

10. ISO-NE's proposal also provides a mechanism for resources to trade their performance bilaterally under certain conditions, to mitigate the risk of negative Capacity Performance Payments during periods shorter than a month, or on shorter notice than a Capacity Supply Obligation can be shed. ISO-NE explains that these bilaterals do not affect either party's Capacity Supply Obligation, or the associated rights and obligations under their Capacity Supply Obligations; rather, the bilaterals serve only to modify each resource's Capacity Performance Score<sup>9</sup> for purposes of calculating their Capacity Performance Payments.

## **B. NEPOOL's Proposal**

11. NEPOOL agrees there are fleet-wide performance problems but proposes to address those problems by increasing performance incentives in ISO-NE's energy and ancillary services markets and modifying the current FCM design to include a new "performance" metric for measuring "availability." NEPOOL states that its proposal reflects a preferred approach that better addresses the concerns that are motivating changes to the New England markets through incremental change to the reserve and capacity markets rather than a "major and unnecessary redefinition of the FCM

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<sup>9</sup> A resource's Capacity Performance Score, for each five-minute interval in which a Capacity Scarcity Condition exists in the Capacity Zone in which the resource is located, shall equal the resource's Actual Capacity Provided during the interval minus the product of the resource's Capacity Supply Obligation and the applicable Capacity Balancing Ratio. Tariff § III.13.7.2.4.

product.”<sup>10</sup> NEPOOL further states that rule changes to the energy and ancillary services markets, rather than to the capacity market, can better ensure adequate procurement of energy and operating reserves. Thus, NEPOOL asserts that, with “implementation of reforms to the Energy and Ancillary Services markets — those made in the recent past, those approved and to be implemented, and those included in the NEPOOL Proposal — a redesigned capacity product as dramatic as ISO-NE is proposing is unnecessary and unjustified.”<sup>11</sup>

12. In the energy market, NEPOOL proposes to increase the existing Reserve Constraint Penalty Factors for 30-Minute Operating Reserves, from \$500/MWh to \$1,000/MWh, and for 10-Minute Non-Spinning Reserves, from \$850/MWh to \$1,500/MWh. These changes to the Reserve Constraint Penalty Factors would increase the price that ISO-NE may pay to procure energy and reserves in real-time. NEPOOL asserts that this will enhance performance incentives by addressing real-time price formation in the hourly markets, rather than trying to “mimic” those real-time incentives by redefining the capacity product.

13. In the FCM, NEPOOL proposes to replace the existing Shortage Event mechanism with a new Equivalent Peak Period Forced Outage Rate, or “EFORp,” metric that measures “performance based on availability during all ‘EFORp Hours.’”<sup>12</sup> NEPOOL states that ISO-NE would calculate an annual EFORp Hour Availability Score for each capacity resource, based on the resource’s availability in the EFORp Hours of that Capacity Commitment Period and using the definition of “availability” in the existing FCM.<sup>13</sup> NEPOOL states that ISO-NE would then compare the resource’s EFORp Hour Availability Score for that Capacity Commitment Period to the resource’s average

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<sup>10</sup> NEPOOL Transmittal at 14.

<sup>11</sup> NEPOOL Transmittal at 19.

<sup>12</sup> EFORp Hours are defined as the hours from 1:00pm to 5:00pm, Monday through Friday (excluding holidays), during June, July, and August; and the hours from 5:00pm to 7:00pm, Monday through Friday (excluding holidays), during December and January. ISO-NE Tariff Filing at Att. N-1a (NEPOOL Transmittal), 12.

<sup>13</sup> For each Shortage Event, ISO-NE calculates a Shortage Event Availability Score for each resource having a Capacity Supply Obligation. The score is the resource’s “available” MW divided by its Capacity Supply Obligation, subject to exemptions for unavailability due to following ISO-NE’s dispatch, starting or ramping limitations, transmission outages, having a self-schedule request denied by ISO-NE, or transmission construction delays. Tariff § III.13.7.1.1.3(a)-(j).

EFORp Hour Availability Score during the historical 5-year period used to establish the Installed Capacity Requirement for that Capacity Commitment Period.

14. NEPOOL states that at the end of each Capacity Commitment Period, ISO-NE would calculate charges and credits for each resource at 150 percent of the FCA clearing price, subject to annual caps, based on how each resource's availability in that Capacity Commitment Period compared to its five-year historical availability. NEPOOL states that ISO-NE would then aggregate these charges and credits and, based on whether there is a net surplus or deficit, would either refund or charge load based on the Capacity Load Obligation of each Load Serving Entity.

### **III. Notice of Filing, Interventions, Comments, Protests, and Answers**

15. Notice of the tariff filing was published in the *Federal Register*, 79 Fed. Reg. 4683 (2014), with interventions and protests due on or before February 7, 2014. On January 17, 2014, ISO-NE and NEPOOL jointly filed a motion to extend the comment date to February 12, 2014. On January 23, 2014, the Commission granted ISO-NE and NEPOOL's joint motion.

16. Numerous entities filed interventions, and many of those entities also filed comments, protests, or both.<sup>14</sup>

17. On February 12, 2014, ISO-NE filed an answer in opposition to NEPOOL's proposal (ISO-NE February 12 Answer). On February 27, 2014, NRG, Indicated Generators, and NEPOOL filed answers to ISO-NE's February 12 Answer; Maine PUC and Maine Public Advocate filed an answer to ISO-NE's February 12 Answer and to ISO-NE's External Market Monitor's comments; and GDF SUEZ, Connecticut, Rhode Island PUC, and United Illuminating, Dominion, and Entergy Nuclear filed answers to various comments and protests in this proceeding.<sup>15</sup> On March 3, 2014, ISO-NE filed an answer to protests and comments submitted in response to ISO-NE's proposal (ISO-NE March 3 Answer). On March 18, 2014, NEPOOL filed an answer to ISO-NE's March 3 Answer. On March 28, 2014, NextEra filed an answer to ISO-NE's March 3 Answer.

18. On February 27, 2014, NEPOOL filed a motion for discovery, requesting that the Commission direct ISO-NE to produce information related to market operations during the 2013-2014 winter season. On March 4, 2014, ISO-NE filed an answer to NEPOOL's motion for discovery (ISO-NE March 4 Answer). On March 6, 2014, NEPOOL filed an

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<sup>14</sup> See Appendix A.

<sup>15</sup> On February 28, 2014, GDF SUEZ filed an errata to its answer.

answer to ISO-NE's March 4 Answer and Public Systems filed an answer in support of NEPOOL's motion for discovery.<sup>16</sup> On March 7, 2014, Connecticut, Rhode Island, and United Illuminating filed an answer to ISO-NE's March 4 Answer.

#### **IV. Discussion**

##### **A. Procedural Matters**

19. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2013), the notices of intervention and timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding.

20. Pursuant to Rule 214(d) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214(d) (2013), we will grant Brookfield's and NextEra's late-filed motions to intervene given their interests in the proceeding, the early stage of the proceeding, and the absence of undue prejudice or delay.

21. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2013), prohibits an answer to an answer or protest unless otherwise ordered by the decisional authority. We will accept the answers filed in this proceeding because they provided information that assisted us in our decision-making process.

22. We deny NEPOOL's motion for discovery. NEPOOL filed its motion under Rule 401 of the Commission's Rules of Practice and Procedure, which is located in Subpart D of Part 385.<sup>17</sup> Subpart D is entitled "Discovery Procedures for Matters Set for Hearing Under Subpart E."<sup>18</sup> Rule 401(a) under Subpart D provides that "this subpart applies to discovery in proceedings set for hearing under subpart E of this part, and to such other proceedings as the Commission may order."<sup>19</sup> Because we have not set this matter for hearing, formal discovery is not available in this proceeding. While the Commission has in rare circumstances directed discovery in proceedings not set for hearing, discovery is not necessary here because the written evidentiary record provides a sufficient basis for resolving the issues relevant to this proceeding.

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<sup>16</sup> On March 11, 2014, Public Systems filed an errata to its answer.

<sup>17</sup> 18 C.F.R. § 385.401 (2013).

<sup>18</sup> 18 C.F.R. Subpart D (2013).

<sup>19</sup> 18 C.F.R. § 385.401(a) (2013).



## **B. Substantive Matters**

23. As a threshold matter and pursuant to our authority under section 206 of the FPA, we find that ISO-NE's existing Tariff is unjust and unreasonable, because it fails to provide adequate incentives for resource performance, thereby threatening reliable operation of the system and forcing consumers to pay for capacity without receiving commensurate reliability benefits. Turning to the proposals before us, we find that ISO-NE's proposal to address the resource performance problems by correcting the flaws in the FCM payment design, has not been shown to be just and reasonable and may be unjust, unreasonable, unduly discriminatory or preferential as-filed. As discussed in more detail below, we find that ISO-NE's proposal unduly discriminates against energy efficiency resources, and potentially sends improper price signals in the event of an intra-zonal transmission constraint. Further, ISO-NE's proposal does not respond to the region's resource performance problems with the requisite speed. As ISO-NE acknowledges, the region's resource performance problems are threatening system reliability now. However, the impact of ISO-NE's proposal will not be fully reflected in real-time resource performance until 2018. ISO-NE has not adequately demonstrated how a proposal that purports to address immediate resource performance problems but does not provide an increased performance incentive for the next four years is a just and reasonable solution.

24. We similarly find that NEPOOL's proposal has not been shown to be just and reasonable. As noted above, NEPOOL's proposal seeks to address the resource performance problems through a new performance metric—the EFORp metric—in the FCM and increased Reserve Constraint Penalty Factors to improve scarcity pricing in the real-time markets. While the increased Reserve Constraint Penalty Factors represent an incremental improvement in real-time price signals which provides an increased incentive for resources to perform in real-time, the proposal has not been shown to be just and reasonable in two primary respects. First, NEPOOL's proposed EFORp metric is flawed.<sup>20</sup> By measuring a resource's performance only against its own historical

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<sup>20</sup> Brookfield Comments at 15, Indicated Generators Protest at 33-34, Maine PUC Protest at 19, GDF SUEZ Comments at 3, ISO-NE February 12 Answer at 34-39, Massachusetts DPU and New Hampshire PUC Comments at 18-21, External Market Monitor Comments at 4. The External Market Monitor states that the proposed EFORp metric is flawed and proposed several revisions to the metric, including: (1) eliminate the 50 percent excess payment or penalty for over- or under-performance; (2) measure over- and under-performance against the historic average EFORp for all resources, not the historic average for the unit itself; (3) measure performance in the peak hours in which the resource is called upon; and (4) eliminate the stop loss provisions. External Market Monitor Comments at 26.

performance, NEPOOL's proposed EFORp metric may inappropriately reward poorly-performing resources and penalize highly-performing resources, which could further erode reliability in the region.<sup>21</sup> Further, NEPOOL's proposal to calculate charges and credits for each resource at 150 percent of the FCA clearing price, subject to annual caps, based on how each resource's availability in that Capacity Commitment Period compared to its five-year historical availability, could provide an incentive for a capacity resource to reduce its measured performance over the next four years to lower the five-year historical EFORp Hour Availability Score against which its performance would be measured starting in the 2018-2019 Capacity Commitment Period. Second, NEPOOL's proposal is deficient because, while the Reserve Constraint Penalty Factor changes are a step in the right direction, they alone do not provide a sufficient incentive to fully address the region's resource performance problems and they do not correct the fundamental flaws in the FCM design, which NEPOOL acknowledges have contributed to poor resource performance.<sup>22</sup>

25. Thus, while we find neither proposal to be just and reasonable, we find that most of the provisions in ISO-NE's proposal, as modified herein, together with increases to the Reserve Constraint Penalty Factors, from NEPOOL's proposal, provide a just and reasonable incentive structure that will help ensure reliability. Accordingly, as discussed below, we will largely adopt ISO-NE's proposal, save for ISO-NE's proposed treatment of energy efficiency resources, and direct further modifications. We will also adopt the Reserve Constraint Penalty Factor increases as reflected in NEPOOL's proposal. We will direct ISO-NE to submit a compliance filing within 45 days of the date of this order with Tariff revisions reflecting the provisions directed herein.

26. As nearly all parties in this proceeding—including ISO-NE and NEPOOL—recognize, the performance of capacity resources in New England has substantially

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<sup>21</sup> In addition, the EFORp mechanism, when measured using a resource's own historical performance, may not provide a performance incentive over the long-term. While reduced performance in one year relative to a resource's historical average performance will result in a penalty, this reduced performance will also lower that resource's historical average performance (the 5-year average EFORp) which could then lead to increased payments in future years if the resource's performance returns to its historical average level.

<sup>22</sup> While we acknowledge that the External Market Monitor's revisions could improve NEPOOL's EFORp metric, we find that the EFORp metric would still be flawed because it would measure performance in terms of "availability," would do so only in certain peak hours of the year, and would maintain numerous exemptions for non-performance.

declined in recent years to a level that has jeopardized ISO-NE's ability to reliably operate the electric system.<sup>23</sup> As ISO-NE explains, the overall rate of unplanned outages across the entire New England generating fleet has more than doubled since 2007, and the average response rate for generators dispatched following a contingency is only 71 percent.<sup>24</sup> These conditions evidence that the current market construct has not sufficiently influenced capacity suppliers' longer-term investment and retirement decisions to ensure that their resources can reliably provide energy and reserves when called upon, particularly during reserve deficiencies. For example, as multiple parties assert, the existing FCM treats many resources as if they are fully available to operate during Shortage Events, and pays them accordingly, even when those resources are unable to deliver energy or reserves at that time. These existing payment features of the FCM not only fail to incent resource performance, but also perversely select less reliable resources over more reliable resources because a capacity supplier's decision to forego investments that would improve resource performance allows it to offer into the FCA at a lower price.<sup>25</sup> For these reasons, we find that the existing Tariff, specifically, the FCM payment design, is unjust and unreasonable.

27. As detailed herein, we direct ISO-NE to submit a compliance filing within 45 days of the date of this order with Tariff revisions to (1) implement its two-settlement capacity market design with the modifications discussed below, and (2) increase the Reserve Constraint Penalty Factors for 30-minute operating reserves to \$1,000/MWh and for 10-minute non-spinning reserves to \$1,500/MWh. Because the increased Reserve Constraint Penalty Factors may impact specific elements of ISO-NE's two-settlement capacity market design, including the ultimate Capacity Performance Payment Rate, we will also direct ISO-NE to include in its compliance filing either any Tariff adjustments that it believes are necessary in light of the Commission's decision to implement the Reserve Constraint Penalty Factor changes, or an explanation as to why no such adjustments are necessary.

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<sup>23</sup> ISO-NE Transmittal at 10-11 (citing Att. I-1b, 2-5); NEPOOL Transmittal at 7; External Market Monitor Comments at 3; Massachusetts DPU and New Hampshire PUC Comments at 9-11; HQUS Comments at 3-5; New England Natural Gas Industry Comments at 1-2; Public Systems Protest at 2; NRG Protest at Test of Judith Lagano, 3-4; Consumer Advocates at 11-12; National Grid Comments at 3-7; EnerNOC Protest at 1; Entergy Comments at 11; EMCOS Protest at 13; NGSAs Comments at 5-7; and GDF SUEZ Comments at 2-4.

<sup>24</sup> ISO-NE Transmittal at 11, n.17 (citing Att. I-1b at 36-52).

<sup>25</sup> ISO-NE Transmittal at 3-4, ISO-NE Tariff Filing at Att. I-1C, 22.

28. We next turn to disputed issues specific to either ISO-NE's proposal or NEPOOL's proposal.

**1. ISO-NE's Proposal**

**a. Capacity Resource Performance Measurement**

**i. ISO-NE's Proposal**

29. As explained above, ISO-NE's proposed two-settlement capacity market design modifies the capacity product to measure resources' performance based on their delivery of energy or reserves during Capacity Scarcity Conditions. In support of this change, ISO-NE states that the existing FCM poorly defines the capacity product and, as a result, fails to procure the product the region needs, namely reliable energy and reserves when supply is scarce. ISO-NE explains that the existing FCM rules measure resources' performance by their "availability," but that the rules include numerous exemptions under which resources that are not able to provide energy or reserves during a reserve deficiency are nonetheless deemed "available" and eligible to collect their full capacity payments.

**ii. Comments, Protests, and Answers**

30. GDF SUEZ, HQUS, National Grid, and the NGSAs support ISO-NE's proposal as filed, stating that it will provide the proper incentives for improved capacity resource performance and that it is resource neutral. Massachusetts DPU and New Hampshire PUC state that the reliability of the New England electricity grid could be at risk without significant changes to the FCM's system of incentives and penalties in the near term.<sup>26</sup>

31. However, most commenters object to ISO-NE's proposal,<sup>27</sup> many of whom argue that the proposal fundamentally redefines the capacity product and inappropriately attempts to address resource performance concerns in the capacity market rather than in

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<sup>26</sup> Massachusetts DPU and New Hampshire PUC Comments at 11.

<sup>27</sup> See comments or protests of: Brookfield at 1, Connecticut, Rhode Island PUC, United Illuminating at 16-18, Dominion at 1, EMCOS at 1 and 3, Energy Efficiency Stakeholders at 7-8, Energy Management at 1, Indicated Generators at 2, Industrial Energy Consumers at 1 and 5, Maine PUC at 1-2, NextEra at 5, Northeast Utilities at 4, NRG at 1, PSEG at 1, Public Systems at 9, and United Illuminating at 2. Of these protesters, five are from the generation sector and there are two from each of the following sectors: transmission, supplier, end users, publicly owned and state regulatory entities.

the energy and ancillary services markets.<sup>28</sup> Multiple parties assert that it is inappropriate to link resources' capacity revenues to their real-time performance, and that a capacity market should provide stable revenues to facilitate long-term planning, while the type of performance incentive ISO-NE seeks should be provided through the energy and ancillary services markets.<sup>29</sup> NRG states that suppliers face a "settlement for deviations" that occurs several years after the forward commitment is established, in contrast to the next-day settlement that takes place in the energy markets, and capacity payments are settled by evaluating a resource's "performance" against a level of output that is almost certain to differ from the resource's forward Capacity Supply Obligation.

32. While Brookfield affirms that capacity resources are fully expected to perform when dispatched by ISO-NE in the energy market, it also argues that a clear separation of compensation, characteristics, incentives, and non-performance penalties should exist in each individual market in order to send appropriate price signals. Dominion states that ISO-NE's proposal will distort price signals sent to load, explaining that instead of changing the manner in which scarcity is reflected in real-time prices, ISO-NE instead seeks to remove appropriate and needed energy scarcity pricing from the real-time energy markets and embed it in the capacity product. Dominion contends that from a market design standpoint, it is essential that both generation and load see the true cost of energy in real-time price signals and make investment decisions based on those signals.<sup>30</sup> NRG also states that ISO-NE's proposal lacks the requisite price transparency of a well-functioning two-settlement capacity market design, stating that the price signals under ISO-NE's proposal would be static and insensitive to the severity of real-time scarcity, and would flow through only to suppliers.<sup>31</sup> Entergy Nuclear states that if the energy market is failing to provide adequate incentives or is providing artificially suppressed price signals, the energy market should be reformed instead of the FCM, and the FCM should remain a long-term planning market.

33. NEPOOL asserts that the current FCM has provided a mechanism for reasonably predictable and stable revenues that are critical to longer-term retirement and investment

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<sup>28</sup> See generally comments or protests of: Brookfield at 3, Connecticut, Rhode Island PUC, and United Illuminating at 3-4, Dominion at 21, Indicated Generators at 3, Maine PUC at 15, NEPOOL at 14, PSEG at 9, and Public Systems at 9.

<sup>29</sup> Brookfield Comments at 4-5 and 15, Dominion Comments at 19-20, NEPOOL Comments at 15-16, and NRG Protest at 23-24.

<sup>30</sup> Dominion Answer at 16.

<sup>31</sup> NRG Answer at 3.

decisions.<sup>32</sup> NEPOOL also asserts that one of ISO-NE's primary goals is to incent certain flexible resources, such as fast-start, fast-ramping, or dual-fuel-capable units, but that the Forward Reserve Market, not the FCM, was designed for that purpose.

34. Maine PUC contends that ISO-NE would be the only grid operator to change the capacity product so that operational incentives are embedded in the capacity market rather than in the energy and reserves markets. Thus, Maine PUC argues that ISO-NE's proposal would move New England away from what they believe is the Commission's interest in developing a common set of best practices.<sup>33</sup>

### **iii. ISO-NE's Answer**

35. ISO-NE contends that Commission policy and accepted capacity market Tariff provisions affirm that capacity market design can and does appropriately incorporate performance requirements.<sup>34</sup> ISO-NE states that in order to ensure that the reliability objective is met in a cost-effective manner, as would occur in a fully functional energy-only market, the capacity market must procure the actual delivery of energy and reserves during scarcity conditions. However, ISO-NE states that the current capacity market only pays resources to be available during scarcity conditions. Therefore, resources routinely receive their full capacity payments regardless of whether they do, or are even able to, provide energy or reserves during periods of scarcity. For example, ISO-NE states that it has documented capacity payments of \$674 million to a set of resources that have provided on average only 17 percent of their Capacity Supply Obligations as actual energy or reserves.<sup>35</sup>

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<sup>32</sup> NEPOOL Comments at 7-8.

<sup>33</sup> Maine PUC Protest at 15.

<sup>34</sup> ISO-NE February 12 Answer at 13 (also citing Commission staff report on Centralized Capacity Market Design Elements, Docket No. AD13-7-000 (August 23, 2013). “[e]ffective performance requirements for capacity markets achieve their resource adequacy goals and customers receive the benefit of the capacity for which they paid.... [E]xisting [performance] requirements penaliz[e] capacity resources for outages after-the-fact by reducing the amount of capacity they can offer in future auctions. However, ineffective performance incentives (or a lack of consequences for failure to meet the standards) have the potential to adversely affect the ability of centralized capacity markets to deliver on the goal of ensuring resource adequacy in real-time.”).

<sup>35</sup> ISO-NE February 12 Answer at 15-16 (citing White January 17 Testimony at 23-24).

iv. **Commission Determination**

36. Based on the record before us, we are persuaded that ISO-NE's proposal to modify the FCM to incorporate a two-settlement capacity market design that measures the performance of capacity resources during Capacity Scarcity Conditions represents a just and reasonable approach to addressing resource performance concerns in the New England region. The overarching goal of the FCM is to help ensure reliability by procuring adequate resources. However, the level of reliability the FCM provides is determined in large part by how the market rules define resource adequacy. Under the existing FCM design, if ISO-NE procures an amount of nameplate capacity that exceeds the region's net Installed Capacity Requirement for a given Capacity Commitment Period, resource adequacy is assumed to have been achieved. While ISO-NE has met this standard in all Capacity Commitment Periods to date, this belies the largely undisputed evidence in this record of the region's resource performance problems. As discussed above, the record here shows that resource performance in the region has deteriorated in recent years.<sup>36</sup> We conclude that ISO-NE has persuasively demonstrated that revising its FCM market design to more closely link capacity revenues to real-time performance will address this concern by providing better incentives for investment decisions appropriate for the New England region. ISO-NE's proposed approach to the problem of resource performance is also consistent with the overall purpose of the FCM: to help ensure reliability through resource adequacy.

37. We disagree with assertions that ISO-NE's proposal inappropriately ties capacity revenues to real-time performance, or that the proposed two-settlement capacity market design is fundamentally at odds with the existing FCM construct. Compensating capacity resources based on their real-time performance, by increasing or decreasing their total capacity revenue, represents an approach that is similar to the current market construct that penalizes capacity resources for failing to perform in certain circumstances. Under the existing FCM rules, a resource's "availability" during a Shortage Event is determined based on whether the resource is able to operate in a given hour. If a resource is partially or fully unavailable during a Shortage Event, the resource is subject to penalties under the Tariff.<sup>37</sup>

38. Further, regardless of whether there is a Shortage Event, under the current FCM rules a resource with a Capacity Supply Obligation must offer into the day-ahead energy market, leave that offer open throughout the operating day, and follow the ISO-NE

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<sup>36</sup> *Supra* P 26.

<sup>37</sup> Tariff § III.13.7.2.7.1.2 ("Availability Penalties").

dispatch instructions.<sup>38</sup> The obligation to follow ISO-NE's dispatch instructions is, in effect, an obligation to provide energy or reserves subject to the resource's operating parameters, and the Commission has explicitly referred to New England capacity resources' energy market obligations as "performance" obligations.<sup>39</sup> A capacity resource's failure to meet any of these energy market obligations may be a Tariff violation.<sup>40</sup>

39. Thus, under the existing FCM, capacity revenues are already linked to real-time performance. ISO-NE's proposal fortifies that existing link by not only providing for penalties, but also compensating capacity resources based on their real-time performance. This change, while significant, is not fundamentally at odds with the existing FCM construct.

40. As to arguments that operational performance is better incentivized through the energy and ancillary services markets than the capacity market, we acknowledge that similar results could potentially be achieved through each of these markets individually, or a combination thereof, as the Commission is directing be instituted in this proceeding. Here, ISO-NE chose to address this issue through the FCM, while NEPOOL sought to address it through the energy market. As we discuss above, based on the record here we find that parts of each proposal, taken together, represent a just and reasonable approach to address the resource performance problems facing the New England region. Accordingly, we do not believe it is necessary in this proceeding to choose between addressing operational performance through the capacity market or the energy market.<sup>41</sup>

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<sup>38</sup> See Tariff § III.13.6.1.1.1; Tariff § III.1.10.1A(d)(vi); Tariff § III.1.7.20(b); *see also New England Power Generators Assoc., Inc. v. ISO New England Inc.*, 144 FERC ¶ 61,157, at PP 48-49 (2013) (*NEPGA*) ("A plain reading of these provisions imposes on capacity resources straightforward requirements to: (1) offer into both the day-ahead and real-time energy markets a MW amount equal to or greater than its Capacity Supply Obligation when the resource is physically available; (2) respond to ISO-NE's directives to start, shutdown or change output levels; and (3) keep supply offers open throughout the operating day.").

<sup>39</sup> *NEPGA*, 144 FERC ¶ 61,157 at P 55 ("Although the Tariff imposes strict performance obligations on capacity resources, it also recognizes that certain events may cause a capacity resource to be unable to follow dispatch instructions.").

<sup>40</sup> *NEPGA*, 144 FERC ¶ 61,157 at PP 60-61.

<sup>41</sup> We note that this issue was discussed at length at the Commission's September 25, 2013 Technical Conference on Centralized Capacity Markets in Regional



**b. Performance Risk and Exemptions for Non-Performance****i. ISO-NE's Proposal**

41. As noted above, ISO-NE's proposal contains no exemptions for non-performance, on the principle that suppliers, not consumers, are in the best position to manage risk and incorporate associated costs into their offers. If a capacity resource fails to deliver its share of energy or reserves during a reserve deficiency, its capacity payment is reduced regardless of the reason for its non-performance. ISO-NE explains that while a resource that performs poorly could lose more than the amount of its Capacity Base Payment, this is an important aspect of sound market design because it motivates suppliers to take steps to ensure that their resources are able to perform when needed and eliminates the "free option problem," whereby it is profitable for even the poorest performing resources to remain in the capacity market because they have nothing to lose. However, ISO-NE's proposal also contains multiple mechanisms to help mitigate the risk to suppliers, including: (1) a monthly and annual stop-loss mechanism, (2) Capacity Performance Bilaterals, and (3) the phase-in of the Capacity Performance Payment Rate.

42. Under the monthly stop-loss limit, in any one month, the maximum amount that can be subtracted from a resource's Capacity Base Payment for that month is the resource's Capacity Supply Obligation quantity times the FCA starting price. Under the annual stop-loss limit, the maximum amount that a capacity resource can lose is equal to three times the resource's maximum monthly potential net loss. ISO-NE states that a resource that hits its monthly or annual stop-loss limit early in the commitment period can, with strong performance in subsequent scarcity conditions, finish the year with a net financial position better than the monthly or annual stop-loss limit. ISO-NE asserts that this design element helps to reduce the frequency with which resources may reach the stop-loss limit and provides a resource an incentive to perform in the event that its losses have reached the monthly or annual stop-loss limit.

43. ISO-NE's proposal also allows resources to mitigate their performance risk through Capacity Performance Bilaterals, which allow resources to bilaterally trade their Performance Scores to mitigate the risk of negative Capacity Performance Payments during periods shorter than a month, or on shorter notice than a Capacity Supply Obligation can be shed. A Capacity Performance Bilateral allows a resource with a Capacity Performance Score greater than zero during a particular five-minute interval of a Capacity Scarcity Condition to transfer some or all of its Capacity Performance Score to another resource for that same five-minute interval, but only if both resources were

subject to the same Capacity Scarcity Condition. ISO-NE explains that these bilaterals do not affect either party's Capacity Supply Obligation, or the associated rights and obligations thereunder; rather, the bilaterals serve only to modify each resource's Capacity Performance Score for purposes of calculating their Capacity Performance Payments.

44. Lastly, ISO-NE proposes to mitigate resources' performance risk by phasing-in the Capacity Performance Payment Rate: \$2,000/MWh for the period June 1, 2018 through May 31, 2021; \$3,500/MWh for the period June 1, 2021 through May 31, 2024; and \$5,455/MWh for the open-ended period starting June 1, 2024. ISO-NE explains that the phase-in will provide participants with an opportunity to gain experience with the new market design before the full Capacity Performance Payment Rate goes into effect. ISO-NE also states that the phase-in will allow ISO-NE to evaluate market participants' behavior in response to the new market design and potentially propose modifications to the Capacity Performance Payment Rate if appropriate.

## ii. Comments and Protests

45. As to the lack of exemptions, HQUS believes that the level of financial risk under ISO-NE's proposed design is manageable and set at appropriate levels to incent performance. HQUS contends that without the risk of significant financial losses capacity suppliers will have little incentive to make changes to increase performance.

46. National Grid supports ISO-NE's proposed no-exemption structure, asserting that exemptions break the link between performance and payment that is essential for reliability and cost-effectiveness. NGSAs also argues that any new FCM payment structure should minimize exemptions that shift responsibility to other capacity suppliers.<sup>42</sup>

47. However, several commenters state that there should be certain exemptions for non-performance due to reasons outside the resource's control.<sup>43</sup> These requested exemptions include: (1) either all, or only unplanned, transmission outages; (2) non-performance due to following ISO-NE dispatch instructions; (3) force majeure events; (4) self-commitment denied by ISO-NE; (5) planned outages approved by ISO-NE; and,

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<sup>42</sup> NGSAs Comments at 11.

<sup>43</sup> EnerNOC Comments at 8, Entergy Nuclear Comments at 7-9, Renewable Energy New England and First Wind Comments at 6-7, Massachusetts DPU and New Hampshire PUC Comments at 12-13, NESCOE Comments at 4-5, and Vermont Agencies Comments at 3.

with the most support, (6) circumstances beyond the resource owner's control.<sup>44</sup> NextEra seeks an exemption for unplanned or unforeseen transmission outage, rather than all transmission outages, because the risks of planned transmission outages can be managed through bilateral availability contracts. NextEra asserts that this narrow exemption would address ISO-NE's concerns that a broad exemption for any transmission outage would create distortions in the market.<sup>45</sup>

48. Some protesters contend that without the referenced exemptions, ISO-NE's proposal is unjust and unreasonable and will add unnecessary and unmanageable risk to the market, which will force generators to include risk premiums in their offers or exit the capacity market altogether.<sup>46</sup> According to protesters, this will cause consumers to pay more, either through higher prices due to risk premiums or as a result of needing to procure additional capacity resources to replace the exiting resources.<sup>47</sup>

49. Energy Management asserts that ISO-NE's no-exemption proposal would undermine investment in all new generation, but that the impact would be particularly adverse to investment in new renewable resources, and thus contrary to both federal and state energy policies. Specifically, Energy Management explains that while most renewable energy in New England would be intermittent in nature and thus subject to unpredictable weather events beyond control of the project owners, ISO-NE has refused to allow any accommodations that would exclude such resources from weather-related penalties. Energy Management explains that the rationale for imposing penalties depends upon the presumption that the affected party has some degree of control over the intended result; where a party has no such control, imposing a penalty is a purely punitive action that can have no effect on performance or reliability. Energy Management states that the Commission should reject ISO-NE's penalty proposal or, in the alternative, condition its

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<sup>44</sup> Indicated Generators Comments at 28-30, Entergy Nuclear Comments at 7-9, Renewable Energy New England and First Wind Comments at 7, NextEra Comments at 6-8. GDF SUEZ Answer at 1. While it originally filed comments supportive of having no exemptions, GDF SUEZ states in its answer that there should be an exemption due to transmission outages because ISO-NE and transmission operators can and do control the extent of outages on these facilities.

<sup>45</sup> NextEra Protest at 23-26.

<sup>46</sup> Indicated Generators Comments at 6, Entergy Nuclear Comments at 6-7

<sup>47</sup> Renewable Energy New England and First Wind Comments at 7, NESCOE Comments at 4-5, Industrial Energy Consumers Comments at 13-14.

implementation upon an exemption for intermittent renewable resources regarding weather-related events beyond the control of project owners.<sup>48</sup>

50. NRG states that, when transmission constraints are binding in the day-ahead or real-time markets, the incentive the Capacity Performance Payment Rate is intended to provide will conflict with ISO-NE's scheduling and dispatch objectives.<sup>49</sup> NRG asserts that when there are transmission constraints, some generators will receive dispatch instructions to produce less energy than they are physically able to generate, and may not even be committed to run, even though there is a Capacity Scarcity Condition. NRG contends that in those situations capacity suppliers would be charged negative Capacity Performance Payments even though they may exceed their operating costs and, absent the transmission constraint, the suppliers' resources could immediately provide energy and reserves to fulfill their full pro-rata allocation for the scarcity interval. NRG argues that generators in this situation will have an incentive to bid below their costs to avoid negative Capacity Performance Payments by increasing the likelihood that they will be dispatched to deliver energy and reserves.

51. Public Systems assert that ISO-NE's proposal punishes resources that have made prudent investments, operate reliably, and follow ISO-NE's dispatch instructions.<sup>50</sup> Public Systems state that since there are no exemptions even where a resource is out for scheduled maintenance, the penalty may have the perverse incentive of discouraging maintenance because without such an exemption a resource faces greater performance risk during times when it is conducting maintenance. Public Systems also argue that because ISO-NE does not offer suppliers a clear mechanism to manage uncontrollable non-performance risks, consumers will ultimately pay for the costs of ISO-NE's proposal because suppliers will increase their supply offers to account for the new, unhedgeable risk.

52. Brookfield argues that accepting ISO-NE's proposal would impose undue penalties on resources following dispatch instructions to address transmission or voltage issues, posturing, or largest system contingency protection. Brookfield also opposes potentially lowering payments to intermittent resources, stating that intermittent resources

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<sup>48</sup> Energy Management Comments at 5-6.

<sup>49</sup> NRG Protest at Test. of Susan Pope, 11-12.

<sup>50</sup> Public Systems Comments at 21.

are already penalized through the reduced qualification of megawatts relative to their nameplate ratings in the FCM.<sup>51</sup>

53. As to the phasing-in of the Capacity Performance Payment Rate, NESCOE and HQUS are supportive of ISO-NE's proposal. They state that during the early years of ISO-NE's proposal, market participants will have an opportunity to gain experience with this new design and modify, if needed, their offers to mitigate the financial risk.<sup>52</sup>

54. Entergy Nuclear and NextEra argue that the Capacity Performance Payment Rate should not be phased-in. Entergy Nuclear states that with the discrete and limited exemptions, there should be more immediate robust penalties for unexcused capacity performance failures during Shortage Events. Entergy Nuclear contends that parties have more than three years notice and will be able to factor these new rates into their offers in the next FCA (which will be in February 2015 for delivery beginning June 2018).<sup>53</sup> NRG contends that the lower Capacity Performance Payment Rate will expose existing capacity suppliers to significant potential losses, but will not send the appropriate price signal to justify new entry.<sup>54</sup>

55. As to the stop-loss mechanism, HQUS is supportive, stating that because the limits are based on auction starting prices, capacity suppliers will have the ability to calculate, prior to the FCA, their total exposure to financial losses and incorporate these risks into their valuation of a Capacity Supply Obligation and offer into the auctions accordingly. However, NextEra suggests that if the Commission adopts ISO-NE's proposal, the Commission require ISO-NE to implement a monthly stop-loss threshold of 2.5 times the monthly clearing price, rather than tie the stop-loss to the FCA starting price. Brookfield requests that if ISO-NE's proposal is accepted, the Commission require ISO-NE to specify that both import capacity resources and resources in different capacity zones can trade their Capacity Performance Scores bilaterally.<sup>55</sup>

56. The External Market Monitor supports ISO-NE's proposal but recommends two modifications affecting the phase-in approach. First, the External Market Monitor

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<sup>51</sup> Brookfield Comments at 6-9.

<sup>52</sup> NESCOE Comments at 6 and HQUS Comments at 15-16.

<sup>53</sup> Entergy Nuclear Comments at 10-11 and NextEra Comments at 6-8.

<sup>54</sup> NRG Protest at 11.

<sup>55</sup> Brookfield Comments at 14.

recommends that the Commission reject ISO-NE's proposed schedule to increase the Capacity Performance Payment Rate beyond the initial value of \$2,000/MWh. The External Market Monitor states that the proposed initial Capacity Performance Payment Rate of \$2,000/MWh is reasonable because it implies a value of lost load of roughly \$30,000/MWh, which is consistent with the External Market Monitor's estimated value of lost load of \$20,000-30,000/MWh. However, it asserts that ISO-NE's proposed Capacity Performance Payment Rate of \$5,455/MWh, which would go into effect for the Capacity Commitment Period 2024-2025, implies a value of lost load of roughly \$120,000/MWh based on actual shortages in 2013, a level that the External Market Monitor states exceeds even the highest estimates of the value of lost load.<sup>56</sup>

57. Second, the External Market Monitor recommends that the Commission consider requiring the introduction of a slope or steps in the Capacity Performance Payment Rate to distinguish between small and deep shortages. The External Market Monitor states that ISO-NE's proposal does not appropriately recognize that the probability of losing load increases as the operating reserve shortage grows, and that, if the reliability value of a resource is based on its contribution to avoiding load-shedding events, efficient shortage pricing should be substantially lower for small shortages and much higher for deep shortages. The External Market Monitor asserts that, by failing to adhere to this principle, ISO-NE's proposal will tend to shift overall compensation to more flexible resources in a manner that substantially exceeds the relative reliability value of these resources. The External Market Monitor suggests that this issue could be addressed through a Capacity Performance Payment Rate step structure, whereby ISO-NE could impose a \$1,000/MWh rate for shortages less than one-half of its 30-minute reserves, \$2,000/MWh for shortages greater than one-half of its 30-minute reserves, and \$3,000/MWh for ten-minute reserve shortages.<sup>57</sup>

### iii. Answers

58. ISO-NE states that exclusion of exemptions is required by sound economic and market design principles because a supplier's pricing in of all risks of non-performance provides essential price signals of both a resource's cost and its reliability.<sup>58</sup> ISO-NE states that because its proposal employs a well-defined forward product definition, a supplier can hedge non-performance risk, in whole or in part, with financial

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<sup>56</sup> External Market Monitor Comments at 16-17.

<sup>57</sup> External Market Monitor Comments at 17-19.

<sup>58</sup> ISO-NE March 3 Answer at 37-38 (citing White January 17 Testimony at 51-52 and ISO-NE February 12 Answer at 18-27).

intermediaries that are not capacity suppliers.<sup>59</sup> ISO-NE explains that because most capacity resources either perform well or are owned by a supplier with a portfolio of capacity resources that naturally provides considerable diversification against performance risk, the actual number of resources that would incorporate a positive risk premium in their capacity supply offers is small. ISO-NE disputes NEPOOL's analysis suggesting that without certain exemptions most resource types will suffer financially,<sup>60</sup> claiming that its own analysis reveals that, most resources, including those with performance as low as 40 percent, will earn greater net capacity revenue than under the existing rules.<sup>61</sup>

59. ISO-NE also argues that using a different reliability standard to calculate the Capacity Performance Payment Rate, such as value of lost load as the External Market Monitor suggests, would result in a different estimate of expected annual scarcity hours.<sup>62</sup> ISO-NE explains that it is not free to unilaterally change its reliability standards, and the appropriateness of the applicable and longstanding reliability standard is not a question before the Commission in this proceeding.<sup>63</sup> Additionally, ISO-NE argues that the External Market Monitor's recommended stepped Capacity Performance Payment Rate is unnecessary and disagrees that this change would provide a material benefit. ISO-NE explains that by measuring scarcity conditions in five-minute increments, its proposal accomplishes much of the goal the External Market Monitor seeks, but in a much simpler manner. Specifically, less severe Capacity Scarcity Conditions tend to be shorter in duration and have less of a financial impact, while more severe events tend to last longer and have a larger financial impact.<sup>64</sup>

60. Some protesters assert that, due to the risk inherent in ISO-NE's proposal, hedging with financial intermediaries will be expensive and will force suppliers to incorporate this hedging cost into their supply offers.<sup>65</sup> Maine PUC and Maine Public Advocate question

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<sup>59</sup> ISO-NE February 12 Answer at 22.

<sup>60</sup> ISO-NE March 3 Answer at 9-11.

<sup>61</sup> ISO-NE February 12 Answer at 24-25.

<sup>62</sup> ISO-NE March 3 Answer at 16-17.

<sup>63</sup> ISO-NE March 3 Answer at 17-18.

<sup>64</sup> ISO-NE March 3 Answer at 19-21.

<sup>65</sup> Maine PUC and Maine Public Advocate Answer at 4, Indicated Generators Answer at 4-6.

ISO-NE's conclusion that only 1,034 MW would incorporate risk premiums up to a maximum of \$3.30 per kW-month and that, given the tight capacity supply evident in the eighth FCA, these high prices could very well set the clearing price for all of the capacity supply units if they are needed to meet the Installed Capacity Requirement.<sup>66</sup> Indicated Generators argue that capacity suppliers are unlikely to find adequate hedging options because constrained zones will have little or no excess supply capable of providing a physical hedge and because suppliers will be inclined to reserve any surplus capacity to hedge their own portfolio of resources.<sup>67</sup> Indicated Generators assert that if suppliers cannot adequately hedge their risk, they may elect to self-schedule, which will not only allow ISO-NE to pick winners and losers by accepting or rejecting self-schedule requests but will also disrupt price formation in the energy market.<sup>68</sup>

61. Connecticut, Rhode Island PUC, and United Illuminating state that ISO-NE's proposal does not implement a traditional two-settlement forward contract structure because the quantity to be supplied is uncertain and ISO-NE has exclusive rights to set the timing and quantity of delivery required. However, if the Commission chooses ISO-NE's proposal, Connecticut, Rhode Island PUC, and United Illuminating urge the Commission to reject the Capacity Performance Payment Rate of \$5,455/kW-month as excessively high.<sup>69</sup> Challenging ISO-NE's assessment of the likely impacts of its proposal, NRG contends that the assessment fails to consider how the phase-in will affect retirements during the six years before the full Capacity Performance Payment Rate is implemented and whether any new entry will take place in response under the lower Capacity Performance Payment Rates.<sup>70</sup>

#### **iv. Commission Determination**

62. While we generally agree with ISO-NE that as part of its proposed two-settlement capacity market design, exemptions for non-performance should be minimal, we find that an exemption is appropriate in instances where an intra-zonal transmission constraint may lead to improper price signals to capacity resources. Therefore, we will direct

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<sup>66</sup> Maine PUC and Maine Public Advocate Answer at 5.

<sup>67</sup> Indicated Generators Answer at 4-5.

<sup>68</sup> Indicated Generators Answer at 9.

<sup>69</sup> Connecticut, Rhode Island PUC, and United Illuminating February 27 Answer at 20-23.

<sup>70</sup> NRG Answer at 10.



ISO-NE to submit a compliance filing with Tariff revisions reflecting such an exemption, as described below. We further find that ISO-NE's proposed Tariff revisions reflecting multiple mechanisms to help mitigate the risk to suppliers are just and reasonable, including: (1) a monthly and annual stop-loss mechanism, (2) Capacity Performance Bilaterals, and (3) the phase-in of the Capacity Performance Payment Rate. Accordingly we will require ISO-NE to submit Tariff revisions reflecting those mechanisms as part of the compliance filing directed here. These Tariff revisions must be submitted within 45 days of the date of this order.

63. As an initial matter, we agree with ISO-NE that in a fully-functioning and uncapped energy market, resources only earn scarcity revenue if they can actually deliver energy during periods of scarcity. In such a market, if a resource fails to perform it is not compensated, regardless of fault. ISO-NE's two-settlement capacity market design replicates the performance incentives that would exist in an uncapped energy market by linking payments to performance during scarcity conditions. It follows that a resource that acquires a Capacity Supply Obligation through the two-settlement capacity market design adopted here does not merit compensation when it fails to perform in accordance with that obligation, regardless of fault.

64. While a resource faces uncertainty about whether it will actually be able to provide energy or reserves during a given scarcity period, ISO-NE's proposed two-settlement capacity market design relies on placing some measure of risk on capacity suppliers to incent them to develop and maintain their resources such that they can reliably perform and ensure that consumers receive benefits commensurate with the costs they incur in the capacity market. We generally agree with ISO-NE that under this market design suppliers, not consumers, are in the best position to assess and price the performance risk associated with their resources. This includes risks beyond a resource's control, including weather-related outages. Because suppliers are expected to price this risk into their offers, it is fair to assume that those resources with better performance characteristics will include a lower risk premium than other resources and be more likely to clear, thereby improving overall fleet performance.

65. However, in certain limited circumstances, the Capacity Performance Payment may lead to improper price signals that could prevent ISO-NE from efficiently dispatching resources. The intent of the Capacity Performance Payment is to signal, through scarcity pricing, an area where more energy and reserves are needed to resolve a Capacity Scarcity Condition. Depending on market conditions during the Capacity Scarcity Condition, the area could include one or more Capacity Zones or the entire ISO-NE footprint. When a Capacity Scarcity Condition exists only in one (or more) Capacity Zone(s) but not in the rest of the ISO-NE footprint, the Capacity Performance Payment would apply only to resources in the zone(s) experiencing the Capacity Scarcity Condition. In these circumstances, capacity outside the affected zone(s) would be capable of producing additional energy, but inter-zonal transmission constraints would

prevent ISO-NE from delivering the energy from the rest of the footprint to the affected zone(s). In essence, a shortage would be occurring in the import-constrained zone(s) but not in the rest of ISO-NE's footprint. It would be inefficient to signal through Capacity Performance Payments the need for additional energy in the rest of the footprint, because additional energy from that area would not help alleviate the shortage in the import-constrained zone(s).

66. While ISO-NE's proposal avoids this inefficiency in instances of inter-zonal transmission constraints, it fails to do so for *intra*-zonal transmission constraints. As with inter-zonal transmission constraints, a planned or unplanned transmission outage can create a binding transmission constraint within a zone that is experiencing a Capacity Scarcity Condition, which could prevent ISO-NE from delivering all of the producible energy on the export side of the constraint within the zone to loads on the import side of the constraint. However, unlike with *inter*-zonal transmission constraints, ISO-NE's proposal would apply Capacity Performance Payments to resources on the export side of an *intra*-zonal transmission constraint. This would send the wrong price signal, as resources on the export side would be incented to maximize their provision of energy or reserves in order to maximize their Capacity Performance Payments for the duration of the Capacity Scarcity Condition, even though that additional energy production would not be useful or efficient because it cannot reach the import-side of the constraint.

67. This improper price signal is problematic because it incents a generating resource on the export side of the constraint to submit energy market offer prices that are below its actual marginal operating costs in order to be dispatched at the greatest quantity possible and thereby maximize its Capacity Performance Payment.<sup>71</sup> ISO-NE's proposal does not

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<sup>71</sup> While this improper price signal could also incent a generating resource on the export side of the constraint to provide energy above the level at which ISO-NE dispatches it, ISO-NE's proposal adequately addresses this problem with the following proposed Tariff language:

A Generating Capacity Resource's Actual Capacity Provided during a Capacity Scarcity Condition shall be the sum of the resource's output during the interval plus the resource's Real-Time Reserve Designation (including any regulation capability available but not used for energy) during the interval; *provided, however, that if the resource's output was limited during the Capacity Scarcity Condition as a result of a transmission system limitation, then the resource's Actual Capacity Provided may not be greater than the resource's Desired Dispatch Point during the interval.*

Tariff, § III.13.7, Performance, Payments and Charges in the FCM, 31.0.0 (2014) (emphasis added).

address this inefficient incentive. A comprehensive solution is to avoid creating the inefficient incentive in the first place by exempting all resources within a zone experiencing a Capacity Scarcity Condition and which are located on the export side of a binding transmission constraint. With such an exemption, when a binding intra-zonal transmission constraint arises, the price signal on the export side would properly be lower than the price signal on the import side. We will therefore direct ISO-NE to submit Tariff revisions to address the improper price signals in this scenario or further explain why the exemption is not necessary. ISO-NE must submit these Tariff revisions as part of the compliance filing required within 45 days of the date of this order.

68. Some protesters also assert that an exemption is warranted for resources that under-perform as a result of following ISO-NE's dispatch instructions.<sup>72</sup> We disagree. This assertion is merely a variant of the argument that exemptions should be given for circumstances beyond their control, an idea we also reject. During scarcity conditions, ISO-NE seeks to dispatch for energy or put on reserve all resources that are capable of providing energy or reserves. Protesters argue that after following ISO-NE's dispatch instructions resources may be unable to provide energy or reserves during a Capacity Scarcity Condition, due to start time or ramp rate constraints. However, in this situation these resources are not providing equivalent reliability contributions as compared to other higher performing resources and thus should not be compensated equally.

69. We further find that other aspects of ISO-NE's proposal appropriately help balance or limit capacity suppliers' risk exposure, and we adopt them as part of the two-part settlement design implemented here. Specifically, ISO-NE must submit in its compliance filing due within 45 days of the date of this order the Tariff provisions as submitted here reflecting the monthly and annual stop-loss mechanisms, Capacity Performance Bilaterals, and the phase-in of the Capacity Performance Payment Rate.

70. Regarding the stop-loss mechanisms, while some protesters argue that the annual stop-loss limit is too high and could result in a resource losing more than its Capacity

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<sup>72</sup> We also disagree with protesters' assertions that not allowing such an exemption will create a perverse incentive to ignore dispatch instructions. Not allowing an exemption for following dispatch instructions does not create an incentive to ignore dispatch instructions because during scarcity conditions, the dispatch software directs resources to produce at a level that maximizes the sum of the energy and reserves they can provide during each interval, subject to the resource's offered capabilities and the transmission network's capabilities. Thus, we agree with ISO-NE that a supplier's financial incentives to maximize its resource's capabilities to provide energy and reserves are fully aligned with the system's dispatch objectives to make maximum use of those capabilities during scarcity conditions.

Base Payment, we agree with ISO-NE that the ability for a market participant's capacity revenues to become negative is an important aspect of its proposed market design because it provides an incentive for resource owners to make investments and maintain their resources to help mitigate the risk of non-performance and helps ensure paying consumers receive commensurate reliability benefits. Further, we note that for a resource to reach the annual stop-loss limit, the number of hours of Capacity Scarcity Conditions would have to significantly exceed the amount of such scarcity conditions the region has experienced in recent years.

71. We acknowledge protesters'<sup>73</sup> concerns that the stop-loss limits could produce a skewed risk profile because the limits are calculated using the FCA *starting price*, whereas the Capacity Base Payment from which a resource's negative performance payments are deducted is calculated using the FCA *clearing price*. However, we find that establishing the stop-loss limit based on the auction starting price is appropriate because the auction starting price is known in advance, and therefore allows a resource to calculate its maximum risk exposure for a Capacity Commitment Period based on its offer price. To the extent the auction clearing price is higher than the resource's offer price, its risk exposure for that Capacity Commitment Period will be reduced.<sup>74</sup>

72. Regarding Capacity Performance Bilaterals, while we acknowledge protesters' concerns that there is uncertainty about whether a market for the bilaterals will develop, we are not persuaded that such uncertainty renders this aspect of ISO-NE's proposal unjust and unreasonable. Protesters' arguments on this point are concerned with the liquidity of the Capacity Performance Bilaterals, not the Tariff rules governing the agreements. Although uncertainty is unavoidable when predicting the liquidity of any new bilateral market, that uncertainty alone does not persuade us to conclude that the market will not materialize and, therefore, will not allow resources to hedge against their performance risk.

73. Regarding the phase-in of the Capacity Performance Payment Rate, we disagree with protesters' assertion that the phase-in should be eliminated and that ISO-NE should instead implement the full \$5,455/MWh rate from the outset. We agree with ISO-NE and others that the phase-in will allow suppliers to gain experience with the new market design at reduced risk exposure before the full Capacity Performance Payment Rate goes into effect. Further, as ISO-NE explains, the phase-in will allow ISO-NE to evaluate market participants' behavior under the new market design and assess whether the phase-in levels and the ultimate Capacity Performance Payment Rate need to be adjusted

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<sup>73</sup> NRG Protest at 11, Indicated Generators Protest at 28-30.

<sup>74</sup> See ISO-NE Tariff Filing, at Att. I-1c, 206.

in response. This type of reevaluation is particularly important in light of our directive below that ISO-NE increase the Reserve Constraint Penalty Factors and submit a compliance filing to explain any necessary adjustments to accommodate that increase.

74. We also disagree with the External Market Monitor and other protesters who assert that the Capacity Performance Payment Rate should be set based on the value of lost load, rather than the cost of new entry. The Capacity Performance Payment Rate is designed to achieve the “one day in 10 years” reliability standard established by the Northeast Power Coordinating Council,<sup>75</sup> and the appropriateness of that longstanding reliability standard is not in question in this proceeding. We are not persuaded that setting the Capacity Performance Payment Rate at the value of lost load would provide adequate incentive for new entry, when required, and would therefore meet this reliability standard.

75. Lastly, we note that, in addition to the stop-loss mechanism, bilaterals, and phase-in discussed above, ISO-NE’s two-settlement capacity market design, as implemented here, allows resources to mitigate their risk by offering their capacity in blocks. We expect this feature of ISO-NE’s market design to provide resources some flexibility to manage their risk exposure through bidding strategies designed to reflect the varying levels of performance risk associated with different levels of output for a particular resource. We find that, taken together, the above aspects of ISO-NE’s proposal properly balance the region’s need for more reliable resources with suppliers’ need to have a quantifiable risk profile in order to secure financing for new resources and calculate the appropriate level of investment to maintain existing resources. While the risk premiums reflected in ISO-NE’s two-settlement capacity market design may increase costs to consumers, we find that, given the nature of the fleet-wide resource performance problems facing the New England region, the market design appropriately balances the increased costs to consumers against the added reliability benefits consumers will receive from a resource fleet with more appropriate incentives and capability to reliably perform when needed.

**c. Treatment of Certain Classes of Resources**

**i. ISO-NE’s Proposal**

76. ISO-NE states that its proposal is resource neutral and will pay suppliers providing the same service the same compensation, regardless of what technology they use.<sup>76</sup> ISO-

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<sup>75</sup> ISO-NE March 3 Answer at 17-18; ISO-NE Tariff Filing, at Att. I-1c, 107-108.

<sup>76</sup> ISO-NE Transmittal at 6.

NE asserts that this is not unfair to older or less flexible resources because resources should be compensated based on what they contribute to maintaining system reliability. ISO-NE states that resources are not compensated this way under the current FCM and that this has created a disincentive for investors to develop units with greater capabilities because resources that are not capable of contributing significantly to reliability get paid the same as units that are highly capable.

77. ISO-NE states that it will continue to assess the performance of demand response resources based on the load reductions they achieve, and that those resources will therefore be eligible for Capacity Performance Payments in the same way as all other resources. ISO-NE also notes that prior to the first Capacity Commitment Period under ISO-NE's proposal, ISO-NE plans to implement its Commission-approved design to fully integrate demand response resources into the energy markets. ISO-NE states that after that integration, demand response resources may participate in the real-time energy and ancillary services markets without a Capacity Supply Obligation and that such resources will be compensated for their performance – in the form of load reductions and, if applicable, reserves provided – during Capacity Scarcity Conditions at the Capacity Performance Payment Rate, consistent with the treatment of all resources under ISO-NE's proposal.<sup>77</sup>

78. ISO-NE states that energy efficiency resources are included in the On Peak Demand Resource and Seasonal Peak Demand Resource categories and that, under current Tariff rules, they demonstrate performance by submitting data to ISO-NE substantiating their energy load reduction during certain peak hours, as defined in the Tariff for each resource type. ISO-NE explains that, therefore, energy efficiency resources' performance is the amount of energy load reduction they provide during defined on-peak hours, and is zero in all other hours. ISO-NE states that an energy efficiency resource's performance during a Capacity Scarcity Condition will be determined based on its average load reduction in the applicable hour.<sup>78</sup>

## **ii. Comments and Protests**

79. Renewable Energy New England and First Wind state that renewable resources can meet their performance obligations under ISO-NE's proposal because wind and solar resources are predictably variable, which gives resource owners and ISO-NE the ability to forecast and rely on the performance of these resources. Further, Renewable Energy New England and First Wind explain that, unlike fossil resources, wind and solar

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<sup>77</sup> ISO-NE Testimony of Matthew White at 151-152.

<sup>78</sup> ISO-NE Testimony of Matthew White at 152-153.

resources are only eligible to provide a fraction of their nameplate capacity into the FCM and therefore can over-perform relative to their Capacity Supply Obligations.

80. Public Systems, PSEG, and Connecticut, Rhode Island PUC, and United Illuminating argue that ISO-NE's proposal will create a bias in the FCM toward resources with high availability factors, quick-start resources, and some types of demand response resources, while creating a bias against intermittent resources and mid-range resources without quick-start capabilities.<sup>79</sup>

81. EnerNOC asserts that ISO-NE's proposed treatment of resources unduly discriminates against demand response resources. EnerNOC explains that because ISO-NE's proposal would tie a resource's capacity revenue payment to its provision of energy or reserves during scarcity conditions, a resource would need access to both the energy and reserves markets in order to avoid significant payment reductions. EnerNOC states that if demand response resources are not allowed to participate in ISO-NE's reserve markets, then during a scarcity event where locational marginal prices fail to reach the level that a demand response resource offered in the energy market, that demand response resource would not be dispatched by ISO-NE to provide energy and would incur substantial capacity penalties.<sup>80</sup> EnerNOC states that because demand response resources are not yet allowed to participate in ISO-NE's reserves market, they will have their capacity revenues decreased for not providing a service that they are not yet allowed to provide. EnerNOC requests that the applicability of ISO-NE's proposal to demand response resources be deferred until the reserves market Tariff rules are effective in advance of the applicable FCA. EnerNOC states that ISO-NE has authorized EnerNOC to state that ISO-NE would not object to a compliance filing directing such a deferral.<sup>81</sup> EnerNOC further states that ISO-NE has indicated that it intends to file reserves market rules for demand response resources pursuant to FPA section 205 in the fourth quarter of 2014 with an effective date in January 2015, in time for the ninth FCA.<sup>82</sup>

82. Energy Efficiency Stakeholders, Connecticut, Rhode Island PUC, and United Illuminating argue that ISO-NE's proposed treatment of resources discriminates against energy efficiency resources and may dissuade them from participating in the FCM.

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<sup>79</sup> Public Systems Comments at 13, PSEG Protest at 12, Connecticut, Rhode Island PUC, and United Illuminating Comments at 41-43.

<sup>80</sup> EnerNOC Comments at 9.

<sup>81</sup> EnerNOC Comments at 1-4, 11.

<sup>82</sup> EnerNOC Comments at n 12.

Energy Efficiency Stakeholders assert that the performance requirements in ISO-NE's proposal are not aligned with energy efficiency resources' passive, non-dispatchable nature because such resources cannot respond to operational contingencies in real time. Energy Efficiency Stakeholders state that under ISO-NE's proposal energy efficiency resources may not receive full payment for their verified performance of the obligation they assumed and may be forced to incur additional measurement and verification costs to avoid further penalties, even though these resources' contribution to resource adequacy would be the same as it is under the existing Tariff.<sup>83</sup>

83. Brookfield states that import capacity resources should not face a reduced payment for non-performance if an external transaction is not dispatched by ISO-NE due to an inaccurate locational marginal price forecast or latency in scheduling protocols. Brookfield further states that an import capacity resource does not have the flexibility to react to intra-hour scarcity events because of scheduling practices among neighboring jurisdictions. Additionally, Brookfield notes that if ISO-NE's locational marginal price forecast is inaccurate, it may not clear the appropriate amount of external transactions to meet load. In these cases, an import capacity resource would be penalized due to ISO-NE error or scheduling delays beyond its control. While ISO-NE's proposal would permit resources to submit a Capacity Performance Bilateral to assign a portion of its score for that interval to another resource, Brookfield argues that this provision does not explicitly apply to external transactions that are not associated with import capacity resources.<sup>84</sup>

### iii. Answers

84. Connecticut, Rhode Island PUC, and United Illuminating state that the Peak Energy Rent deduction exemption should continue to apply to passive demand response resources, such as energy efficiency resources, that do not participate in the energy markets and therefore have no opportunity to earn back energy revenues that the Peak Energy Rent mechanism deducts.<sup>85</sup>

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<sup>83</sup> Energy Efficiency Stakeholders Comments at 6-7.

<sup>84</sup> Brookfield Comments at 11-14.

<sup>85</sup> Connecticut, Rhode Island PUC, United Illuminating Answer at 3 and n.5



**iv. Commission Determination**

85. We find that ISO-NE's proposed treatment of resources unduly discriminates against energy efficiency resources. We will therefore direct ISO-NE to submit Tariff revisions to address this issue as discussed below.

86. As an initial matter, we reject protesters' contentions that ISO-NE's proposal unduly discriminates against intermittent resources and mid-range resources without quick-start capabilities. Under ISO-NE's proposal, resources are compensated without regard to technology type. To the extent resources have different capabilities to provide energy and reserves during a Capacity Scarcity Condition, those resources are not similarly situated, and therefore it is not unduly discriminatory to compensate those resources differently based on their respective capabilities. We also note that ISO-NE estimates resources with performance rates as low as 40 percent will be better off financially under its proposal than under the existing FCM rules.<sup>86</sup> Further, as Renewable Energy New England and First Wind explain, wind and solar resources should benefit from ISO-NE's proposal because they are predictably variable and necessarily have nameplate capacity exceeding their Capacity Supply Obligations.<sup>87</sup>

87. We also reject the arguments that the two-settlement capacity market design unduly discriminates against import resources. In terms of resource scheduling and offer flexibility, import resources are not similarly situated to resources that are within ISO-NE's footprint. As a general principle, it would be preferable for resources in any market to have the ability to adjust their offers in a way that maximizes their ability to respond to price signals in real-time. However, there are technical limitations to offer flexibility.<sup>88</sup> For import resources, offer flexibility is particularly complicated because inertie transactions between neighboring systems—e.g., between ISO-NE and the New York Independent System Operator (NYISO)—require coordination between independent system operators to economically optimize the interchange schedule. This coordination requires communication and complex calculations, both of which take time.<sup>89</sup> Further,

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<sup>86</sup> ISO-NE February 12 Answer at 25 (citing Test. of Paul Hibbard and Todd Schatzki at 23).

<sup>87</sup> Renewable Energy New England and First Wind Comments at 5.

<sup>88</sup> Even resources within New England cannot update their offers less than 30 minutes prior to a given operating hour. *See ISO New England Inc. & New England Power Pool*, 145 FERC ¶ 61,014 (2013).

<sup>89</sup> *See, e.g., ISO New England Inc.*, 139 FERC ¶ 61,047 (2012) (accepting tariff revisions to implement Coordinated Transaction Scheduling between ISO-NE and

(continued..)

each independent system operator schedules its fleet in a way that it deems necessary to maintain reliability in its own region. To the extent an import resource is disadvantaged under the two-settlement capacity market design as a result of the scheduling practices in the resource's home region, that disadvantage is the direct result of the resource not being similarly situated to the resources within New England.

88. While EnerNOC argues that ISO-NE's two-part settlement design unduly discriminates against demand response resources, we expect that its concerns will be addressed by our requirement, discussed *infra* at section IV.2.iii, that ISO-NE increase the Reserve Constraint Penalty Factors for 30-Minute Operating Reserves, from \$500/MWh to \$1,000/MWh, and 10-Minute Non-Spinning Reserves, from \$850/MWh to \$1,500/MWh.<sup>90</sup> EnerNOC expresses concern that demand response resources could incur substantial penalties if energy prices failed to reach the level at which a demand response resource offered in the energy market during a Capacity Scarcity Condition. However, once ISO-NE increases its Reserve Constraint Penalty Factor for 30-Minute Operating Reserves to \$1,000/MWh, as directed here, then when ISO-NE experiences a Capacity Scarcity Condition,<sup>91</sup> energy prices should equal or exceed \$1,000/MWh and demand response resources offered into the energy market during that Capacity Scarcity Condition should be dispatched, thus addressing EnerNOC's concerns regarding penalties

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NYISO, subject to a compliance filing); *see also ISO New England Inc. & New England Power Pool Participants Committee*, 146 FERC ¶ 61,190, at P 15 (2014) (summarizing ISO-NE's explanation that economic optimization of interchange schedules under Coordinated Transaction Scheduling requires evaluation by both ISO-NE's and NYISO's dispatch systems, which occurs sequentially and takes approximately 30 minutes).

<sup>90</sup> The Commission takes note of the May 23, 2014 decision of the U.S. Court of Appeals for the District of Columbia Circuit in *Elec. Power Supply Ass'n v. FERC*, No. 11-1486. The Commission is still considering both the scope of and possible next steps with respect to that court decision.

<sup>91</sup> This does not address the possibility that demand response resources would not be dispatched during a zonal Capacity Scarcity Condition, since the zonal Reserve Constraint Penalty Factor is only \$250/MWh. However, we note that ISO-NE has experienced only 105 minutes of zonal operating reserve shortages since April 23, 2008. *See ISO-NE, RCPF Events through 4\_2014 5.19.2014.xlsx*, at sheets 'Summary\_local\_oct06\_dec09' and 'Summary\_local\_jan10\_apr14', *available at* [http://www.iso-ne.com/markets/othrmkts\\_data/fcm/doc/opr\\_reserve\\_deficiency\\_info\\_hist\\_data\\_updated\\_5\\_21\\_2014.zip](http://www.iso-ne.com/markets/othrmkts_data/fcm/doc/opr_reserve_deficiency_info_hist_data_updated_5_21_2014.zip).

associated with Capacity Scarcity Conditions.<sup>92</sup> This is because energy offers, including those from demand response resources, cannot exceed the \$1,000/MWh offer cap.<sup>93</sup>

89. However, we find that ISO-NE's proposal is unduly discriminatory with respect to the treatment of energy efficiency resources. As protesters explain, ISO-NE's proposal assumes that energy efficiency resources provide zero performance in off-peak hours, which means those resources must either incur significant costs to measure and verify their load reductions around-the-clock, rather than only in certain peak hours of the year, or face guaranteed negative Capacity Performance Payments during any Capacity Scarcity Condition during off-peak hours. While it is necessary to track the performance of other types of resources around-the-clock under ISO-NE's proposed market design, this is not the case for energy efficiency resources. Energy efficiency resources are not similarly situated to other capacity resources because they do not actively perform in real-time—they represent a pre-determined level of load reduction that is constant as a percentage of that resource's load—and therefore are not able to respond to the ISO-NE proposal's performance incentive. Therefore, we direct ISO-NE to submit as part of the compliance filing required within 45 days of the date of this order, Tariff revisions ensuring that energy efficiency resources' Capacity Performance Payments are calculated only for Capacity Scarcity Conditions during hours in which demand reduction values are calculated under the Tariff for that particular type of resource.

**d. Bidding Rules/Market Monitoring**

**i. ISO-NE's Proposal**

90. ISO-NE states that under its proposed bidding rules, a de-list bid will include four separate components: (1) net going-forward costs, (2) expectations about the resource's Capacity Performance Payments, (3) risk premium assumptions, and (4) opportunity costs. ISO-NE asserts that the risk premium that a resource includes in its bid is separate from the resource's net going-forward cost in order to allow the Internal Market Monitor to analyze the two components separately. ISO-NE states that “[a]ny risk that can be quantified and analytically supported and that is not already reflected in the formula for net going-forward costs may be included in the risk premium component.”<sup>94</sup> ISO-NE

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<sup>92</sup> NEPOOL states that its proposed Reserve Constraint Penalty Factor levels, which we adopt in this order at section IV.B.2.a.iii, will ensure that all demand response resources would be fully available to ISO-NE for real-time dispatch in order to maintain operating reserve levels. NEPOOL Transmittal at 10.

<sup>93</sup> See Tariff § III.1.10.1A(d)(ix).

<sup>94</sup> ISO-NE Tariff Filing at Att. I-1a, 60.

explains that the Internal Market Monitor may only mitigate the de-list bids of those resources associated with a Lead Market Participant that is found to be pivotal,<sup>95</sup> and will evaluate those de-list bids in two ways. First, for units that are part of a multi-unit portfolio, the Internal Market Monitor will examine whether the risk premium for each unit in the portfolio reflects consistent assumptions. Second, the Internal Market Monitor will compare risk premiums across all market participants to determine whether a particular resource's risk premium is consistent with competitive market behavior.

91. ISO-NE's proposal also raises the trigger for the Internal Market Monitor's review of a de-list bid, from \$1.00/kW-month to \$3.94/kW-month. This trigger is known as the Dynamic De-List Bid Threshold. ISO-NE argues that, ideally, the Dynamic De-List Bid Threshold should be set at the competitive bid of the marginal unit. ISO-NE's proposed \$3.94/kW-month level for the Dynamic De-List Bid is based on the recent historical going forward costs of representative fossil steam units, adjusted for expected net performance penalties. In ISO-NE's view, these are the types of existing resources most likely to seek to leave the auction, and therefore, could be the marginal unit when ISO-NE does not need new capacity.<sup>96</sup> ISO-NE states that the Internal Market Monitor will mitigate bids above the \$3.94/kW-month threshold only if the bid is from a resource associated with a Lead Market Participant that is determined to be a pivotal supplier.<sup>97</sup> ISO-NE explains that a Lead Market Participant will be considered pivotal if any of the capacity from the existing resources controlled by that Lead Market Participant is needed to satisfy the capacity requirements either system-wide or in an import-constrained Capacity Zone.

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<sup>95</sup> ISO-NE states that since the FCM can clear without accepting the capacity supply offers of a non-pivotal supplier, the non-pivotal supplier cannot exercise unilateral market power and cannot profitably raise price to a non-competitive level. In addition, ISO-NE states that the pivotal supplier test detects and screens for whether an individual resource could raise clearing prices due to its market power. ISO-NE, Tariff Filing, at Att. I-1E, 20-21 (Joint Testimony of David LaPlante and Seyed Parviz Gheblealivand).

<sup>96</sup> *See* ISO-NE Tariff Filing at Att. I-1e, 53-61 (Aff. of David LaPlante and Seyed Parviz Gheblealivand on behalf of ISO New England).

<sup>97</sup> A Lead Market Participant, for purposes of the FCM, is the entity designated to participate in that market on behalf of an Existing Capacity Resource or a New Capacity Resource. ISO-NE Tariff § I.2.2.

## ii. Comments and Protests

92. Public Systems argue that ISO-NE's proposal to treat risk premiums as a distinct component of de-list bids eliminates the Internal Market Monitor's previous, well-defined formula for assessing risk, and replaces it with a vague and standard-less review of a resource's risk documentation.<sup>98</sup> They contend that ISO-NE's proposal does not specify how the Internal Market Monitor will verify whether a resource's risk premium is legitimate and will allow market participants to submit data that is not only "subject to bias" but also largely subjective and speculative. Connecticut, Rhode Island PUC, and United Illuminating argue that ISO-NE's proposal creates challenges to effective detection and mitigation of market power necessary to protect consumers and, as a result, consumers will likely see increased costs.<sup>99</sup> They assert that the proposal limits the Internal Market Monitor's pre-auction review of de-list bids<sup>100</sup> and quadruples the dynamic bid threshold to \$3.94, obligating customers to pay \$1.527 billion in capacity charges. Therefore, Connecticut, Rhode Island PUC, and United Illuminating state that maintaining current review practices is essential to protect the market and capacity customers from attempts to exercise market power. They note that even the Internal Market Monitor has expressed concerns that a threshold higher than \$1.00/kW-month could provide an opportunity to exercise market power.<sup>101</sup>

93. Entergy Nuclear states that if the Commission accepts ISO-NE's proposal, it is essential that generators can factor risk premiums into their capacity offers and that those risk premiums are not inappropriately mitigated by the Internal Market Monitor.<sup>102</sup>

94. NextEra argues that if the Commission accepts ISO-NE's proposal, it should require ISO-NE to modify the Internal Market Monitor's proposed pivotal supplier test to

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<sup>98</sup> Public Systems Comments at 26.

<sup>99</sup> Connecticut, Rhode Island PUC, and United Illuminating Comments at 47.

<sup>100</sup> Connecticut, Rhode Island PUC, and United Illuminating contend that, in prior proceedings, the market monitor assured the Commission that it had no expectation that it would be "overburdened in meeting its obligations" in conducting its pre-auction review. Connecticut, Rhode Island PUC, and United Illuminating Comments at 52-53 (citing *ISO New England Inc.*, 135 FERC ¶ 61,029, at P 321 (2011)).

<sup>101</sup> Connecticut, Rhode Island PUC, and United Illuminating Comments at 50-51 (citing *ISO New England Inc.*, 135 FERC ¶ 61,029 at P 313).

<sup>102</sup> Entergy Nuclear Comments at 9-10.

evaluate portfolios based on ownership and control, rather than the Lead Market Participant, because some Lead Market Participants submit supply offers that they do not control. NextEra asserts that the proposed pivotal supplier test could lead to over mitigation based on an errant finding that the Lead Market Participant is a pivotal supplier.<sup>103</sup> NextEra argues that under ISO-NE's proposal, a capacity supplier may offer a resource's capacity in blocks with different offer prices, but that this action could be perceived as physical or economic withholding, constituting a violation of the Commission's anti-manipulation regulations in 18 C.F.R. Part 1c. NextEra thus seeks confirmation that a capacity resource abiding by the rules of ISO-NE's proposal will not be deemed in violation of the anti-manipulation regulations.<sup>104</sup>

### iii. Answers

95. ISO-NE argues that NextEra's protest regarding the pivotal supplier test should be rejected. ISO-NE explains that it has no access to underlying contractual relationships between Lead Market Participants and other entities with an interest in particular resources, and thus has no way to ascertain with certainty which entity has authority to determine the capacity supply offer price associated with a specific resource. Accordingly, ISO-NE explains, the only feasible approach to avoid the potential for masked market power is to consider all resources offered by the same Lead Market Participant as a portfolio in which the Lead Market Participant plays a potential role in the capacity supply offer pricing.<sup>105</sup>

### iv. Commission Determination

96. We find the bidding rules and market monitoring provisions in ISO-NE's proposal to be a just and reasonable component of the two-settlement capacity market design adopted here. Therefore, we direct ISO-NE to submit those Tariff provisions as part of the compliance filing required within 45 days of the date of this order. ISO-NE's proposal allows suppliers to include in their bids "[a]ny risk that can be quantified and analytically supported and that is not already reflected in the formula for net going forward costs."<sup>106</sup> As ISO-NE explains, ISO-NE's proposal allows each company to

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<sup>103</sup> NextEra Protest at 6-8.

<sup>104</sup> NextEra Protest at 29-30.

<sup>105</sup> ISO-NE March 3 Answer at 26-27.

<sup>106</sup> Tariff, § III.13.1 Forward Capacity Auction Qualification (22.0.0), § III.13.1.2.3.2.1.4.

evaluate its risks using its own methodology, rather than following a single methodology dictated by the Internal Market Monitor, because calculating risk is more complex under ISO-NE's proposal than under the existing FCM rules. We agree that this is appropriate given the complexity and company-specific nature of valuing performance risk.

97. We are not persuaded that this approach creates an overly vague standard of review or hinders the detection and mitigation of market power, as various protesters argue. Under ISO-NE's proposal, market participants must provide "documentation separately detailing any risk premium included in the bid" and the documentation "should address all components of physical and financial risk reflected in the bid, including, for example, catastrophic events, a higher than expected amount of reserve deficiencies, and performing scheduled maintenance during reserve deficiencies."<sup>107</sup> As ISO-NE explains, the Internal Market Monitor will analyze a risk premium to determine whether it is (1) consistent with assumptions across the market participant's portfolio and (2) consistent with competitive market behavior, based on all market participants' risk premiums. If the Internal Market Monitor is concerned about a particular risk premium, it may ask the market participant for additional information.<sup>108</sup>

98. Because these types of risk premiums have not yet been analyzed by the Internal Market Monitor, there is necessarily uncertainty both in how suppliers will value the risks specific to this market design and how the Internal Market Monitor will assess those calculations. However, this uncertainty does not supplant or undermine ISO-NE's stated standard of review, i.e., whether a market participant's risk premiums reflect consistent assumptions and are consistent with competitive market behavior; rather it emphasizes the importance of assessing risk premiums across all market participants and communicating with those market participants about their risks. While risk valuation can be complex, it is by no means a new discipline, and we are persuaded that the types of performance risks under ISO-NE's proposal can be adequately quantified and shown to be reasonable. We agree with ISO-NE that the risks associated with ISO-NE's proposal appear to be "within the bounds of other risks routinely absorbed and priced by the financial community."<sup>109</sup> We further note that, as a competitive market design, ISO-NE's proposal creates an incentive for resources to submit offers that accurately reflect their risks, rather than inflating them, in order to increase the likelihood that they will clear in

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<sup>107</sup> Tariff, § III.13.1 Forward Capacity Auction Qualification (22.0.0), § III.13.1.2.3.2.1.4.

<sup>108</sup> Tariff, § III.13.1 Forward Capacity Auction Qualification (22.0.0), § III.13.1.2.3.2.1.1.

<sup>109</sup> ISO-NE March 3, 2014 Answer at 14, Att. A at 5-23 (Mudge Testimony).

the FCA. We expect that, as market participants and the Internal Market Monitor gain familiarity with the new market design and the number of competitive bids and risk premiums submitted and reviewed increases over time, the uncertainty concerning risk premiums that exist at the outset will diminish.

99. We further disagree with NextEra that the Internal Market Monitor is likely to over-mitigate offers based on a Lead Market Participant's submission of a supply offer for resources that it does not control. ISO-NE's proposed tariff language states that Lead Market Participants will be evaluated for pivotal supplier status based on "the amount of capacity from all of the Existing Capacity Resources controlled by the Lead Market Participant for the resource submitting the bid..."<sup>110</sup> Based upon this Tariff language, a Lead Market Participant may seek to justify to the Internal Market Monitor that a resource for which it has submitted a supply offer is not under its control and may seek to have the capacity from such resource removed from the pivotal supplier test calculation. We agree with ISO-NE that because ISO-NE is not privy to a Lead Market Participant's contractual arrangements with resource owners, it is impractical to expect the Internal Market Monitor to determine which entity other than the Lead Market Participant exercises control over the resource.

100. As to NextEra's concern that a capacity supplier that offers its capacity in blocks with different offer prices due to different risk premiums may be found to be withholding capacity from the FCM, we cannot definitively conclude that such an action will never constitute withholding. As noted above, we expect that a resource's ability to offer its capacity in blocks provides an important opportunity for resources to manage their resources' performance risk. However, as with any offer under ISO-NE's proposal, the risk premium associated with a resource's offer-blocks must be consistent with competitive market behavior and will accordingly be subject to review by the Internal Market Monitor as necessary.

## **2. NEPOOL's Reserve Constraint Penalty Factor Changes**

### **a. NEPOOL's Proposal**

101. NEPOOL proposes to increase the current, system-wide Reserve Constraint Penalty Factor values for Thirty-Minute Operating Reserves from \$500/MWh to \$1,000/MWh and for Ten-Minute Non-Spinning Reserves from \$850/MWh to \$1,500/MWh.<sup>111</sup> NEPOOL states that the Reserve Constraint Penalty Factor serves as a

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<sup>110</sup> Tariff, § III.13.1 Forward Capacity Auction Qualification (22.0.0), § III.13.1.2.3.2

<sup>111</sup> NEPOOL Transmittal at 9.



price cap for the real-time price of each reserve product, and thus, its proposal to raise Reserve Constraint Penalty Factor levels would establish more efficient price signals to the marketplace during reserve shortages.<sup>112</sup> NEPOOL further states that higher Reserve Constraint Penalty Factor levels will: (1) ensure that all Demand Response resources will be fully available to ISO-NE for real-time dispatch in order to maintain operating reserve levels; (2) attract more reserve resources to the market; (3) better encourage market participants to schedule in the Day-Ahead Energy Market and pursue other hedging activities to limit and manage their exposure to real-time prices; and (4) decrease the amount of total Net Commitment Period Compensation incurred.<sup>113</sup> NEPOOL asserts that the use of Reserve Constraint Penalty Factors to set efficient prices during operating reserve shortages has been endorsed by the Commission.<sup>114</sup>

**i. Comments and Protests**

102. Maine PUC and Consumer Advocates state that they support an increase to the Reserve Constraint Penalty Factors because it appropriately encourages price-responsive demand and will avoid the high risk premiums of ISO-NE's proposal.<sup>115</sup> NEPOOL counters ISO-NE's criticisms that the proposed Reserve Constraint Penalty Factors increase is an order of magnitude too small by stating that its proposal is not designed to mimic the effect of the ISO-NE proposal but is adequate to enhance economic incentives in the real-time markets.<sup>116</sup>

103. GDF SUEZ argues that increasing Reserve Constraint Penalty Factors will only exaggerate the inefficiency of the existing Peak Energy Rent deduction. GDF SUEZ contends that even under existing scarcity pricing provisions, real-time energy prices generally exceed the Peak Energy Rent proxy rate and result in the Peak Energy Rent

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<sup>112</sup> NEPOOL Transmittal at 9-10.

<sup>113</sup> NEPOOL Transmittal at 10-11.

<sup>114</sup> NEPOOL Transmittal at 10 (citing *Wholesale Competition in Regions with Organized Elec. Markets*, Order No. 719, 73 Fed. Reg. 64,100 (2008), FERC Stats. & Regs. ¶ 31,281 (2008)).

<sup>115</sup> Maine PUC Protest at 18-19 and Consumer Advocates Comments at 4-5, 12.

<sup>116</sup> NEPOOL Comments at 28.

deduction from capacity revenues equivalent to a significant portion of the real-time energy price.<sup>117</sup>

104. Massachusetts DPU and New Hampshire PUC oppose NEPOOL's proposed increases to the Reserve Constraint Penalty Factors because they believe it would result in higher prices and increased volatility in the hourly energy prices and volatility in the total procurement costs from year to year without providing a way for customers to appropriately respond to those price signals, and because it would likely make financing new generation more difficult.<sup>118</sup> In addition, Indicated Generators state that the Reserve Constraint Penalty Factor changes will not address load under-scheduling in the day-ahead market.<sup>119</sup>

**ii. Answers**

105. Dominion contends that with the offer flexibility changes,<sup>120</sup> as well as the Reserve Constraint Penalty Factor changes proposed by NEPOOL, significantly higher real-time locational marginal prices during constrained or reserve shortage conditions will provide very strong incentives for gas-fired resources to make sure they have back-up fuel provisions in place.<sup>121</sup>

106. ISO-NE argues that NEPOOL has provided no explanation or justification for the proposed Reserve Constraint Penalty Factor increases and no analysis attempting to demonstrate that these proposed adders will have any useful effect on investment in reliability.<sup>122</sup> ISO-NE states that higher energy prices during scarcity conditions due to increases in the Reserve Constraint Penalty Factor values could have similar effects on suppliers' incentives, but only if the higher energy market prices are of a comparable magnitude to the Pay for Performance incentives. ISO-NE asserts that the Reserve

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<sup>117</sup> GDF SUEZ Comments at 18-19.

<sup>118</sup> Massachusetts DPU and New Hampshire PUC Comments at 17.

<sup>119</sup> Indicated Generators Comments at 34-35.

<sup>120</sup> Dominion explains that the offer flexibility changes include the opportunity to make intra-day hourly re-offers, and notes that these measures are designed to ensure that offers are not "stale." Dominion Answer at 4.

<sup>121</sup> Dominion Answer at 5.

<sup>122</sup> ISO-NE February 12 Answer at 6-7.

Constraint Penalty Factor increases are insufficient to cover the costs needed to retrofit any existing gas-fired resources in ISO-NE's fleet with dual-fuel capability.<sup>123</sup>

**iii. Commission Determination**

107. We find that NEPOOL's proposed Reserve Constraint Penalty Factors in combination with ISO-NE's proposal, as modified, represent a just and reasonable solution to the region's resource performance problems. Accordingly, we will direct ISO-NE to submit as part of the compliance due within 45 days of the date of this order Tariff revisions increasing the Reserve Constraint Penalty Factors for 30-Minute Operating Reserves, from \$500/MWh to \$1,000/MWh, and 10-Minute Non-Spinning Reserves, from \$850/MWh to \$1,500/MWh.

108. ISO-NE acknowledges that increasing the Reserve Constraint Penalty Factors could help incent performance but argues that NEPOOL's proposed increases are insufficient to address the region's resource performance problems. However, the Reserve Constraint Penalty Factor changes are not intended to be a complete panacea to the region's resource performance problems, but rather part of a comprehensive solution that will enhance performance incentives in the near-term until ISO-NE's proposal, as adopted here, begins impacting real-time performance. While Massachusetts DPU and New Hampshire PUC argue that the Reserve Constraint Penalty Factor changes could increase price volatility through a price signal to which consumers have no way to respond, we find it to be part of a just and reasonable solution, given the urgency of the reliability concerns facing the New England region and the incremental nature of the increases to the Reserve Constraint Penalty Factors. Further, we direct ISO-NE to implement both the Reserve Constraint Penalty Factors and the two-settlement FCM design because we find that there is value to providing incentives in both the FCM and the energy and ancillary services markets. This is because different combinations of revenue streams make sense for different resources.

109. Additionally, because the immediacy of energy market price signals provides strong incentives to gas-fired generators to bolster fuel availability, the Reserve Constraint Penalty Factor changes should help address in the near-term the gas-electric coordination issues that have contributed to resource non-performance.<sup>124</sup> In other words, resources will be incentivized to ensure they are deliverable during a Capacity

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<sup>123</sup> ISO-NE February 12 Answer at 33, Test. of Paul Hibbard and Todd Schatzki at 10.

<sup>124</sup> *ISO New England Inc. and New England Power Pool*, 145 FERC ¶ 61,014 (2013).

Scarcity Condition due to the Reserve Constraint Penalty Factor changes going into effect immediately.

110. As discussed above, because the increased Reserve Constraint Penalty Factors may impact specific elements of ISO-NE's proposal, we will also direct ISO-NE to submit as part of its compliance filing due within 45 days of the date of this order either Tariff revisions reflecting any adjustments that it believes are necessary in light of the Commission's decision to implement Reserve Constraint Penalty Factor changes, or an explanation as to why no such adjustments are necessary. With respect to GDF SUEZ's concern regarding the interaction of the increased Reserve Constraint Penalty Factors and the Peak Energy Rent mechanism, we dismiss its comments as beyond the scope of this proceeding. The potential inefficiency that GDF SUEZ protests exists independent of, and is not impacted by, the increase to the Reserve Constraint Penalty Factors. The purpose of increasing the Reserve Constraint Penalty Factors is to increase performance incentives, which can be provided in the form of either rewards or penalties, depending on whether the resource has been scheduled in the day-ahead market. However, the Peak Energy Rent deduction does not affect the incremental incentives to produce energy, because a resource's Peak Energy Rent deduction will be the same whether or not it produces energy.

111. In cases where, as here, the Commission institutes a proceeding under section 206, section 206(b) of the FPA requires that the Commission establish a refund effective date that is no earlier than publication of notice of the Commission's initiation of its proceeding in the *Federal Register*, and no later than five months subsequent to that date. We establish a refund date to be the earliest date possible in order to provide maximum protection to customers, i.e., the date that notice of initiation of the section 206 proceeding in Docket No. EL14-52-000 is published in the *Federal Register*.

The Commission orders:

(A) ISO-NE's proposal and NEPOOL's proposal are hereby rejected, as discussed in the body of this order.

(B) Pursuant to the authority contained in and subject to the jurisdiction conferred upon the Commission by section 402(a) of the Department of Energy Organization Act and by the FPA, particularly section 206 thereof, and pursuant to the Commission's Rules of Practice and Procedure and the regulations under the FPA (18 C.F.R., Chapter 1), the Commission hereby institutes a proceeding in Docket No. EL14-52-000, as discussed in the body of this order.

(C) ISO-NE is hereby directed to submit a compliance filing within 45 days of the date of this order, as discussed in the body of this order.

(D) The Secretary shall promptly publish in the *Federal Register* a notice of the Commission's initiation of the proceeding ordered in Ordering Paragraph (B) above, under section 206 of the FPA.

(E) The refund effective date established pursuant to section 206 (b) of the FPA will be the date of publication in the *Federal Register* of the notice discussed in Ordering Paragraph (E) above.

By the Commission.

( S E A L )

Nathaniel J. Davis, Sr.,  
Deputy Secretary.

**Appendix A – Interventions, Comments, and Protests**

# - Denotes Notice of Intervention rather than Motion to Intervene.

\* - Denotes filing made out-of-time.

^ - Denotes filing of a subsequent errata or supplemental pleading.

<b>Interventions</b>	
Algonquin Gas Transmission, LLC	Consolidated Edison Energy, Inc. and Consolidated Edison Solutions, Inc.
America’s Natural Gas Alliance	Dept. of Public Utilities of the Commonwealth of Massachusetts and the State of New Hampshire Public Utilities Commission #
American Wind Energy Association *	Dominion Resources Services, Inc., on behalf of Dominion Energy Marketing, Inc., Dominion Energy Manchester Street, Inc., and Dominion Nuclear Connecticut, Inc.
Attorney General for the State of Connecticut *	Dynegy Marketing and Trade, LLC, and Casco Bay Energy Company, LLC
Bay State Gas Company, The Berkshire Gas Co., EnergyNorth Natural Gas, Inc., City of Holyoke, Massachusetts Gas and Electric Department, Northern Utilities, The Southern Conn. Gas Company, Westfield Gas & Electric Dept., and Fitchburg Gas and Electric Light Company	Eastern Massachusetts Consumer-Owned Systems
Brookfield Energy Marketing LP	Energy Management Inc.
Calpine Corporation	EnerNOC, Inc.
Connecticut Municipal Electric Energy Cooperative, Massachusetts Municipal Wholesale Electric Company, New Hampshire Electric Cooperative, Inc., Vermont Public Power Supply Authority, and Vermont Electric Cooperative	Entergy Nuclear Power Marketing, LLC
Connecticut Public Utilities Regulatory Authority and motion to intervene by the Commissioner of the Connecticut Department of Energy and Environmental Protection #	EquiPower Resource Management, LLC

<b>Interventions, cont.</b>	
Essential Power, LLC, Essential power Newington, LLC, and Essential Power Massachusetts, LLC	New England Power Generators Association, Inc. and the Electric Power Supply Association
Exelon Corporation	New England States Committee on Electricity
First Wind Energy, LLC	New Hampshire Office of Consumer Advocate
GDF SUEZ Energy Marketing NA, Inc.	NextEra Energy Resources, LLC ^
H.Q. Energy Services (U.S.) Inc.	Northeast Energy Efficiency Partnerships, Inc.
Industrial Energy Consumer Group	Northeast Utilities Service Company
Iroquois Gas Transmission System, L.P.	NRG Power Marketing LLC, GenOn Energy Management, LLC, Connecticut Jet Power LLC, Devon Power LLC, Middletown Power LLC, Montville Power LLC, Norwalk Power LLC, NRG Canal LLC, NRG Kendall LLC and Energy Curtailment Specialists Inc.
Long Island Power Authority	Potomac Economics *
Maine Public Advocate Office	PSEG Power LLC, PSEG Power Connecticut LLC and PSEG Energy Resources & Trade LLC.
Maine Public Utilities Commission #	Renewable Energy New England, Inc.
Maritimes & Northeast Pipeline, L.L.C.	Repsol Energy North America Corporation
Massachusetts Attorney General	Rhode island Public Utilities Commission #
Massachusetts Electric Company, Nantucket Electric Company and Narragansett Electric Company d/b/a National Grid	Tennessee Gas Pipeline Company, L.L.C.
Millennium Power Partners, L.P.	TransCanada Power Marketing Ltd.*
Natural Gas Supply Association	United Illuminating Company
NEPOOL Industrial Customer Coalition	Vermont Department of Public Service

<b>Interventions, cont.</b>	
Vermont Public Service Board #	
Verso Paper Corp.	
Vitol Inc.	

<b>Comments and Protests</b>	
America's Natural Gas Alliance (ANGA)	Connecticut Public Utilities Regulatory Authority, Connecticut Office of Consumer Counsel, Attorney General for the State of Connecticut, Connecticut Department of Energy and Environmental Protection, the United Illuminating Company and the Rhode Island Public Utilities Commission (Connecticut, Rhode Island PUC, and United Illuminating)
American Wind Energy Association (AWEA) *	Department of Public Utilities of the Commonwealth of Massachusetts and the State of New Hampshire Public Utilities Commission (Massachusetts DPU and New Hampshire PUC)
Brookfield Energy Marketing LP (Brookfield)	Dominion Resources Services, Inc., on behalf of Dominion Energy Marketing, Inc., Dominion Energy Manchester Street, Inc., and Dominion Nuclear Connecticut, Inc. (Dominion)
Connecticut Municipal Electric Energy Cooperative, Massachusetts Municipal Wholesale Electric Company, New Hampshire Electric Cooperative, Inc., Vermont Public Power Supply Authority, and Vermont Electric Cooperative (Public Systems)	Eastern Massachusetts Consumer-Owned Systems (EMCOS)
Conn. Office of Consumer Counsel, Maine Office of the Public Advocate, Mass. Office of the Attorney General, and the New Hampshire Office of Consumer Advocate (Consumer Advocates)	Energy Management, Inc. (Energy Management)



<p>EnerNOC, Inc. (EnerNOC)</p>	<p>Massachusetts Electric Company, Nantucket Electric Company and Narragansett Electric Company d/b/a National Grid (National Grid)</p>
<p>Entergy Nuclear Power Marketing, LLC (Entergy Nuclear)</p>	<p>Natural Gas Supply Association (NGSA)</p>
<p>Exelon Corporation, EquiPower Resources Management, LLC, Essential Power, LLC, Dynegy Marketing and Trade, LLC and Casco Bay Energy Company, LLC (Indicated Generators)</p>	<p>New England Power Generators Association, Inc. and the Electric Power Supply Association (NEPGA and EPSA)</p>
<p>GDF SUEZ Energy Marketing NA, Inc. (GDF SUEZ)</p>	<p>New England States Committee on Electricity (NESCOE)</p>
<p>H.Q. Energy Services (U.S.) Inc. (HQUS)</p>	<p>NEPOOL Participants Committee (NEPOOL)</p>
<p>Industrial Energy Consumer Group (Industrial Energy Consumers)</p>	<p>Algonquin Gas Transmission, LLC, Iroquois Gas Transmission System, L.P., Maritimes &amp; Northeast Pipeline, L.L.C., Portland Natural Gas Transmission System, and Tennessee Gas Pipeline Company, L.L.C.; National Grid; Northeast Gas Association; New England Local Distribution Companies (Bay State Gas Company, d/b/a Columbia Gas of Massachusetts; The Berkshire Gas Company; EnergyNorth Natural Gas, Inc., d/b/a Liberty Utilities; Connecticut Natural Gas Corporation; Fitchburg Gas and Electric Light Company; City of Holyoke, Massachusetts Gas and Electric Department; Northern Utilities, Inc.; The Southern Connecticut Gas Company; and Westfield Gas &amp; Electric Department); Repsol Energy North America, and GDF Suez Gas North America (New England Natural Gas Industry)</p>
<p>Maine Public Utilities Commission (Maine PUC)</p>	<p>NextEra Energy Resources, LLC (NextEra) ^</p>
<p>Northeast Energy Efficiency Partnerships, Northeast Utilities Companies, Vermont Energy Investment Corporation, and Environment Northeast (Energy Efficiency Stakeholders)</p>	

<p>Northeast Utilities Service Company, on behalf of the Northeast Utilities Companies The Northeast Utilities Companies are The Connecticut Light and Power Company, Western Massachusetts Electric Company, Public Service Company of New Hampshire, and NSTAR Electric Company (Northeast Utilities)</p>	
<p>NRG Power Marketing LLC, GenOn Energy Management, LLC, Connecticut Jet Power LLC, Devon Power LLC, Middletown Power LLC, Montville Power LLC, Norwalk Power LLC, NRG Canal LLC, and Energy Curtailment Specialists Inc. (NRG) ^</p>	
<p>Potomac Economics (External Market Monitor)</p>	
<p>PSEG Power LLC, PSEG Power Connecticut LLC and PSEG Energy Resources &amp; Trade LLC. (PSEG)</p>	
<p>Renewable Energy New England, Inc. and First Wind Energy, LLC (Renewable Energy New England and First Wind)</p>	
<p>The United Illuminating Company (United Illuminating)</p>	
<p>United States Senate</p>	
<p>Vermont Department of Public Service and Vermont Public Service Board (Vermont Agencies)</p>	