UNITED STATES OF AMERICA FEDERAL ENERGY REGULATORY COMMISSION

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ISO New England Inc.

Docket No. ER20-1567-000

THE NEW ENGLAND POWER GENERATORS ASSOCIATION, INC.'S COMMENTS IN SUPPORT OF ISO NEW ENGLAND INC.'S ENERGY SECURITY IMPROVEMENTS PROPOSAL

Pursuant to Rule 211 of the Rules of Practice and Procedure of the Federal Energy Regulatory Commission ("Commission"),¹ the New England Power Generators Association, Inc. ("NEPGA")² files these Comments in support of ISO New England Inc.'s ("ISO-NE") compliance filing of market design changes to meet New England's energy security needs.³ ISO-NE's Energy Security Improvements proposal ("ESI Proposal") meets the Commission's directive to file "permanent Tariff revisions reflecting improvements to its market design to better address regional fuel security concerns"⁴ and is just and reasonable. The ESI Proposal does so by creating a voluntary market for day-ahead call options on energy in real-time. These are resource-neutral

¹ 18 C.F.R. § 385.214 (2019). These Comments are timely in accordance with the Commission's Combined Notice of Filings #2 (Apr. 15, 2020), and its Errata Notice Extending Comment Period (Apr. 16, 2020) (extending Comment Date to May 15, 2020). On May 4, 2020, the Commission accepted for filing NEPGA's (doc-less) Motion to Intervene in this proceeding.

² The comments expressed herein represent those of NEPGA as an organization, but not necessarily those of any particular member.

 ³ ISO New England Inc., Compliance Filing of Energy Security Improvements Addressing New England's Energy Security Problems; Docket Nos. EL18-182-000 and ER20-1567-000 (filed April 15, 2020) ("ESI Filing").
⁴ ISO New England Inc., Order Denying Waiver Request, Instituting Section 206 Proceeding, and Extending Deadlines, 164 FERC ¶ 61,003 (2018) ("Show Cause Order").

products designed to meet reserve and other day-ahead planning requirements made necessary by, and capable of being satisfied by the existing and any future resource mix.

The New England Power Pool's Participant Committee ("NEPOOL") asks the Commission to order ISO-NE to adopt three amendments ("NEPOOL Amendments"), which individually or collectively would materially dilute or eliminate the ESI Proposal's price signals and frustrate, if not undermine, the ability of the market design changes to meet the Commission's directives. The ESI Proposal is responsive to the Commission's and stakeholders' longstanding concerns with the hasty, burdensome, and perpetual patchwork of out-of-market, temporary bandaids relied on for over a decade to meet ISO-NE's reliability needs. The NEPOOL Amendments would undermine the intent of the ESI Proposal to build a bridge to a long-term, permanent solution. NEPGA therefore urges the Commission to reject the NEPOOL Amendments and to accept the ESI Proposal without change or modification.⁵

I. ISO-NE'S ESI PROPOSAL FILING IS A COMPLIANCE FILING UNDER SECTION 206 OF THE FEDERAL POWER ACT, NOT A JUMP BALL FILING UNDER THE NEPOOL PARTICIPANTS AGREEMENT

The Commission should reject NEPOOL's request to consider the NEPOOL Amendments together with the ESI Proposal as if both were subject to the "jump ball" standard of review set forth in the Participant's Agreement.⁶ If the Commission were to apply the jump ball standard to this proceeding, it would review both the ESI Proposal and the NEPOOL Amendments and adopt

⁵ NEPGA also supports ISO-NE's proposal to sunset the Fuel Security Retention Mechanism at the conclusion of the FCA 14 Capacity Commitment Period. See ESI Filing Transmittal Letter at 74-6.

⁶ See Comments in Support of the NEPOOL-Approved ESI Proposal at 2, 13, Docket No. ER20-1567-000 (filed April 24, 2020) ("NEPOOL Comments"); see also Participants Agreement Among ISO New England Inc. as the Regional Transmission Organization for New England and the New England Power Pool and the Entities That are From Time to Time Parties Hereto Constituting the Individual Participants ("Participant's Agreement") at § 11.1.5, available at: https://www.iso-ne.com/static-assets/documents/2015/10/parts_agree.pdf.

any or all of the alternate proposals it finds to be just and reasonable.⁷ NEPOOL claims that "the ISO has made it clear" that it filed both the ESI Proposal and NEPOOL Amendments "to be considered and treated by the Commission as if this were a 'jump ball filing," though ISO-NE expressly makes no such request.⁸ Regardless, the Commission has consistently held that the jump ball standard does not apply in Section 206 compliance filing proceedings like this one, and NEPOOL provides no compelling reason why the Commission should depart from its precedent here.

At the outset, ISO-NE's position differs significantly from NEPOOL's characterization. ISO-NE explains in its transmittal letter that it considers its filing of the NEPOOL Amendments as a "fulfillment of [the] commitment" it made at the beginning of the NEPOOL stakeholder process "to file any NEPOOL-approved alternative as if the jump ball provision applied."⁹ However, ISO-NE also clarifies that the compliance filing "is *not* covered by the 'jump ball' provisions in the Participants Agreement."¹⁰ ISO-NE is correct. Unlike in a jump ball filing, where ISO-NE has agreed to in effect cede some measure of its rights under Section 205 of the FPA, neither the Participants Agreement nor the ISO-NE Tariff¹¹ provide ISO-NE with the

⁷ Participants Agreement at § 11.1.5, providing:

If the Participants Committee vote relating to an ISO Market Rule proposal results in the approval by the Participants Committee by a Participants Vote equal to or greater than 60% of a Market Rule proposal that is different from the one proposed by ISO, including, but not limited to, a Governance Participant proposal, ISO shall, as part of any required Section 205 filing, describe the alternate Market Rule proposal in detail sufficient to permit reasonable review by the Commission, explain ISO-s reasons for not adopting the proposal, and provide an explanation as to why ISO believes its own proposal is superior to the proposal approved by the Participants Committee. The Commission will not be required to consider whether the then-existing filed rate is unlawful, and may adopt any or all of ISO's Market Rule proposal or the alternate Market Rule proposal as it finds, in its discretion, to be just and reasonable and preferable.

The term "jump ball" is applied to the procedure to denote that alternate proposals are to be treated as co-equals, unlike the usual rate change application submitted under Section 205 of the Federal Power Act ("FPA"). ⁸ NEPOOL Comments at 2.

⁹ ESI Filing Transmittal Letter at 3.

¹⁰ Id. at 2 (emphasis added) (citing ISO New England Inc., et al., 145 FERC ¶ 61,110, at P 39 (2013)).

¹¹ All references to the ISO-NE Tariff are to ISO-NE's Transmission, Markets and Services Tariff.

authority to cede some measure of its compliance filing obligations.¹² Further, the Commission has repeatedly held that Section 206 compliance filings are not subject to the jump ball standard.¹³ There is nothing about the present compliance filing that should cause the Commission to depart from its precedent.

NEPGA thus asks the Commission to reject NEPOOL's request that it consider the NEPOOL Amendments under the jump ball standard.

II. ISO-NE'S ESI PROPOSAL COMPLIES WITH THE COMMISSION'S DIRECTIVE AND IS JUST AND REASONABLE

NEPGA agrees with ISO-NE that the ESI Proposal is, in its entirety, "in direct compliance" with the Commission's directives.¹⁴ The Commission directed ISO-NE to file "permanent" improvements to its market design to better address regional fuel security concerns, which improvements ISO-NE sets forth in the ESI Proposal,¹⁵ a voluntary market to procure several day-ahead call options on energy and a mechanism to clear day-ahead energy in an amount equal to

¹² NEPOOL may seek a change to the Participants Agreement to, for example, subject a Section 206 compliance filing to the jump ball provision, by a vote of 67% or more in favor. NEPOOL did not ask for that authority with respect to the NEPOOL Amendments, explicitly or impliedly in that none of the NEPOOL Amendments received 67% or greater approval from the NEPOOL Participants Committee.

¹³ *ISO New England Inc.*, 164 FERC P 61,003, at P 34 (2018) (finding that the Participants Agreement jump ball provisions are "applicable only to Section 205 filings"); *ISO New England, Inc.*, 143 FERC ¶ 61,150, P 8, n. 13 (2013) (finding that in a Section 206 compliance proceeding under Order No. 1000, NEPOOL's filing of an alternative to ISO-NE's compliance filing is "appropriately considered comments" and that "NEPOOL is not subject to the requirements of Order No. 1000 and, therefore, we will not evaluate NEPOOL's proposal as an alternative compliance filing."); *ISO New England Inc., et al.*, 145 FERC ¶ 61,110, at P 39 (2013) (finding that a NEPOOL proposal set forth in its protest should not be considered on equal footing with ISO-NE's compliance filing because

[&]quot;[t]he jump ball provision is wholly inapplicable to this case involving a compliance filing submitted by ISO-NE, pursuant to the Commission's specific directive that ISO-NE submit such a filing as a result of a proceeding the Commission instituted under section 206 of the FPA."); *ISO New England Inc.*, 149 FERC ¶ 61,227, at P 64 (2014) (finding that "ISO-NE's tariff filing is not a section 205 filing. Rather, it is a filing made in compliance with the Commission's Show Cause Order, and is therefore governed by section 206. Thus, section 11.1.5 of the NEPOOL Participants Agreement [the jump ball provision] does not apply. Accordingly, we reject the NEPOOL Amendment.").

¹⁴ ESI Filing Transmittal Letter at 1, n. 1.

¹⁵ ISO-NE "intends to pursue" a forward market to complement the ESI Proposal and requires additional time to develop a mitigation proposal. *See* ESI Filing Transmittal Letter at 71-72.

forecast load. These day-ahead products will allow ISO-NE to procure the reserves it requires, from the array of operational resource characteristics available on the system, to create a reliable day-ahead operating plan. A key feature of the ESI Proposal is resource-neutrality. Any current or future resource with the requisite capability can sell day-ahead reserve under the ESI Proposal design.¹⁶ It also is flexible to changes in resource mix and load profiles by procuring a commitment to deliver on energy, not a pre-determined energy input. The ESI Proposal therefore provides a long-term and permanent solution to ISO-NE's energy security needs.

Equally important, the ESI Proposal meets the "fuel security" need, by providing system operators with a reliable day-ahead operating plan that accounts for current and future constraints on fuel (and other current and future constraints), accounting for load forecast error, and restoring the system to its reserve requirements. This is accomplished by addressing the lack of price signals and compensation that has to date resulted in "free" day-ahead call options on energy. Historically, that capability largely came from on-site fuel, which will remain the case to some degree. But as the generation resource mix, load shape and demand profiles have and continue to change, system reliability needs and the resources capable of meeting those needs will likewise change. By pricing the value of day-ahead reserves on a resource-neutral basis, the ESI Proposal will allow the wholesale markets to meet New England's immediate and future energy security needs.¹⁷

¹⁶ By setting the real-time call option strike price at the forecasted real-time Locational Marginal Price, the ESI Proposal captures the full spectrum of real-time call option values that the market rules presently require of capacity resources. *See* ISO-NE Tariff, Market Rule 1, §§ III.13.6.1.1.1.(a) and III.13.6.1.1.2.

¹⁷ While the ESI Proposal represents helpful market improvements, ongoing market reforms may also be appropriate and NEPGA looks forward to engaging in the NEPOOL stakeholder process to consider additional proposals.

A. ISO-NE PROVIDES AMPLE EVIDENCE DEMONSTRATING THAT THE ESI PROPOSAL REPRESENTS A PERMANENT IMPROVEMENT TO THE WHOLESALE ENERGY MARKET TO MEET NEW ENGLAND'S ENERGY SECURITY NEEDS

The ISO-NE filing provides ample evidence to show that the ESI Proposal is in its entirety responsive to the Commission's directives and is just and reasonable. ISO-NE begins by describing three "interrelated market and operations problems" under the current Day-Ahead Energy Market design that create risks to ISO-NE's energy security. ISO-NE's Chief Economist, Matthew White, as principal author of ISO-NE's whitepaper "Energy Security Improvements: Creating Energy Options for New England,"¹⁸ explains that the first of these problems is insufficient price signals and incentives for resources that did not receive a day-ahead energy schedule (or one in a quantity equal to real-time energy demand on the resource) to deliver energy on-call in the event of a contingency when it would be cost-effective for load to incur the costs for those arrangements.¹⁹ The lack of price signals and incentives causes a second problem, as they may result in ISO-NE operators having insufficient energy in reserve to respond to an unexpected and extended large generation, transmission or other supply loss.²⁰ A third problem, insufficient scheduling of day-ahead energy due to day-ahead demand clearing less energy than necessary to meet the day-ahead forecast, contributes as well to the second problem, in that ISO-NE is left with a scheduled energy "gap" between cleared supply and the energy necessary to meet the forecast real-time load.²¹ These related problems together demonstrate a risk to system reliability due to a failure to secure a reliable day-ahead operating plan, a risk that has "become a more significant concern than in the past."²²

¹⁸ ESI Filing, Attachment B, *Energy Security Improvements: Creating Energy Options for New England*, at 12 ("ESI White Paper").

¹⁹ *Id.* at 13-25.

²⁰ *Id.* at 26-33.

 $^{^{21}}$ *Id*.

²² *Id.* at 25.

ISO-NE goes onto explain, through the testimony of its Vice President of System Operations and Market Administration, Peter T. Brandien, that it is subject to North American Electric Reliability Corporation ("NERC") and Northeast Power Coordinating Council ("NPCC") standards (in addition to complying with its own Operating Procedures).²³ These standards, together with ISO-NE's Operating Procedures require ISO-NE to: (i) prepare a day-ahead operating plan that ensures that sufficient resources are available to meet forecast load and the associated reserve requirement; (ii) restore Operating Reserves to the minimum required quantities within defined periods of time after a contingency; and (iii) account for load forecast error.²⁴ ISO-NE will satisfy these requirements under the ESI Proposal by procuring day-ahead energy options and clearing day-ahead energy in quantities commensurate with forecast load (and load forecast error) to address each of the three parts of the day-ahead operating plan in an efficient and resource-neutral manner.²⁵

The ESI Proposal creates three categories of day-ahead options. First, Energy Imbalance Reserves will be procured to meet any forecast energy need not met through the clearing of the Day-Ahead Energy Market.²⁶ Second, three types of Generation Contingency Reserves are defined consistent with the three types of Real-Time Operating Reserves, *i.e.*, 10-minute spinning, 10-minute non-spinning, and 30-minute reserves.²⁷ Third the two Replacement Energy Reserve products are defined to require the delivery of energy (or demand reduction) within 90 or 240 minutes, *i.e.*, to serve as replacement energy for the energy provided by Operating Reserves (in day-ahead terms, General Contingency Reserves) to allow ISO-NE to restore the system to comply

²³ ESI Filing, Attachment A, Testimony of Peter T. Brandien, at 6-7 ("Brandien Testimony").

²⁴ Brandien Testimony at 7 - 17.

²⁵ ESI Filing, Attachment C, Analysis Group's Energy Security Improvements Impact Assessment at 6-9 ("Impact Analysis").

²⁶ ESI Filing Transmittal Letter at 35-6.

²⁷ *Id.* at 37-8.

with NERC and NPCC minimum reserve requirements.²⁸ The Replacement Energy Reserve quantity also accounts for the need for energy in real-time caused by load forecast error, as discussed further below.²⁹

Finally, through the Analysis Group's Impact Analysis, ISO-NE provides evidence that the ESI Proposal will improve upon the current market design to better address ISO-NE's energy security needs, in an efficient manner and at a modest cost to consumers relative to total wholesale market costs.³⁰ As the Analysis Group explains, the ESI Proposal will improve the incentives for resources to be prepared to deliver energy in real-time through incremental revenues for both day-ahead energy (to meet the difference between forecast and cleared demand) and day-ahead call options on energy.³¹ Though the Analysis Group does not "precisely analyze system reliability," it draws from its qualitative results an expectation that the ESI Proposal will create more reliable electric system outcomes "particularly during periods of greater fuel stress."³²

Together, the evidence offered by ISO-NE demonstrates that the ESI Proposal is compliant with the Commission's directive to file long-term, permanent improvements to the market design to address regional fuel security concerns and is just and reasonable.

B. THE ESI PROPOSAL MEETS THE COMMISSION'S PREFERENCE FOR EFFICIENT MARKET SOLUTIONS TO MEET SYSTEM RELIABILITY

In directing this compliance filing, the Commission reaffirmed its support for "market solutions as the most efficient means for providing reliable electric service to New England

²⁸ *Id.* at 38-41.

²⁹ See pp. 21-24, infra.

³⁰ See note 25, supra, Impact Analysis at 83 (explaining that "in the context of all payments made by consumers for wholesale electric power services, these changes in payments are modest.").

 $^{^{31}}$ *Id.* at 6-7.

³² *Id.* at 7.

consumers at just and reasonable rates."³³ It noted that aspects of the current market design are consistent with the Commission's market principles, including resource-neutral price signals to deliver energy when called upon.³⁴ The ESI Proposal properly builds upon these sound market design principles.

The ESI Proposal will replace existing out-of-market and unpriced actions with an economic and efficient market design. As ISO-NE explains, its system operators presently create day-ahead operating plans for reserves by relying on the "free," unscheduled energy potentially available at facilities with significant quantities of on-site fuel available for dispatch beyond their day-ahead energy schedules.³⁵ With no market for day-ahead reserves, ISO-NE must plan for its reserve needs after the clearing of the Day-Ahead Energy Market through several out-of-market actions, including the Security Constrained Reserve Adequacy and Reserve Adequacy Analysis processes (the latter of which ISO-NE may conduct several times by the end of the operating day), and a re-ordering of the Day-Ahead Energy Market dispatch and commitment schedule to optimize reserves.³⁶ ISO-NE thus now meets its energy security needs through the use of unpriced and uncompensated resource capabilities. But ISO-NE can no longer count on these "free" options in preparing a reliable day-ahead operating plan because "it is no longer economical for the current fleet to invest in the energy supply arrangements they need to run."³⁷ Moving forward, the ESI Proposal will allow resources to economically meet ISO-NE's energy security needs through an efficient pricing mechanism that reflects the system day-ahead requirements.

³³ Show Cause Order at P 53.

³⁴ Id.

³⁵ ESI Filing Transmittal Letter at 4.

³⁶ Brandien Testimony at 17-21.

³⁷ ESI Filing Transmittal Letter at 4.

The ESI Proposal includes several characteristics consistent with sound market design. First, it co-optimizes day-ahead energy with the day-ahead options, finding the least cost solution to meet energy, reserve, and reserve restoration needs.³⁸ Second, as the Analysis Group concludes, the price signals are at their highest, and thus the incentives at their greatest, during periods of higher demand and more stressed system conditions, and conversely the incentives and costs are lowest when energy and reserve needs decrease.³⁹ The incentives thus "efficiently target those opportunities to increase inventory that would provide the greatest value to system reliability relative to their incremental costs."40 Third, the ESI Proposal recognizes the value to system reliability of resources with inventoried energy by compensating the potential to convert inventoried energy or other firm energy capability into delivered energy.⁴¹ Fourth, the ESI Proposal will improve price formation in the Day-Ahead Energy Market, because it effectively prices day-ahead energy according to forecast (rather than cleared) demand by adding the Forecast Energy Requirement value to the day-ahead Locational Marginal Price (with the Forecast Energy Requirement value equal to the Energy Imbalance Reserve clearing price). It therefore properly prices energy consistent with day-ahead demand and creates the incentive for load to submit bids that meet the forecast load requirements. Finally, the ESI Proposal is expected to lower production costs and thus create a more efficient operating plan and dispatch order under the most stressed system conditions.⁴²

In sum, ISO-NE has provided ample evidence demonstrating that the ESI Proposal complies with the Commission's directives and is just and reasonable.

³⁸ *Id.* at 5.

³⁹ Impact Analysis at 7.

⁴⁰ *Id*.

 $^{^{41}}$ *Id*.

⁴² *Id.* at 7-8.

III. NEPOOL FAILS TO PROVIDE SUFFICIENT AFFIRMATIVE EVIDENCE UPON WHICH ITS PROPOSED AMENDMENTS MAY BE FOUND JUST AND REASONABLE

NEPOOL asks the Commission to find that the three amendments it proposes are just and reasonable and to order ISO-NE to adopt the amendments either under Section 205 or Section 206 of the FPA. However, NEPOOL neither quantifies the cumulative impact two or all three of its proposed amendments would have on revenues and incentives, nor explains how the ESI Proposal is just and reasonable taking into account the cumulative impact of the NEPOOL Amendments. The Analysis Group's Impact Analysis suggests that the cumulative impacts of the NEPOOL Amendments would be significant.⁴³ Further, NEPOOL fails to provide sufficient affirmative evidence that the ESI Proposal, as modified by any one of the NEPOOL Amendments, complies with the Commission's directives or is just and reasonable. Instead, the crux of NEPOOL's argument is that the amendments will save load from "unjustified" costs, but NEPOOL provides no evidentiary basis upon which the Commission can make a finding that such costs are in fact unjustified.

The ESI Proposal is responsive to the Commission's directives and is just and reasonable because it sends the necessary price signals to efficiently incent suppliers to commit to a day-ahead operating plan that meets ISO-NE's reliability needs. NEPOOL has not shown that the ESI Proposal as amended by one or more of the NEPOOL Amendments would likewise address the reliability needs. Accordingly, the Commission should reject the NEPOOL Amendments on this basis.

⁴³ See, e.g., Impact Analysis at 99 (showing under the Winter Extended Case scenario a \$48 million decrease in revenues due to no Replacement Energy Reserves in the non-winter months and a \$15 million decrease in revenues due to the Strike Price Adder).

IV. THE NEPOOL AMENDMENTS DILUTE THE INCENTIVES AND PRICE SIGNALS THE ESI PROPOSAL CREATES

The record evidence demonstrates that if the NEPOOL Amendments are adopted in whole or in part, they would either eliminate or dilute the very price signals the ESI Proposal creates to ensure a reliable day-ahead operating plan. New England can ill-afford this outcome given the rapidly changing resource mix and load profile, the harm caused to the markets to date from the series of out-of-market actions taken to meet energy security needs, and the risks to reliability New England faces. If the Commission considers the NEPOOL Amendments on their merits, NEPGA asks that it find that they are not compliant with the Commission's directives or just and reasonable.

A. NEPOOL'S AMENDMENT TO PROCURE REPLACEMENT ENERGY RESERVES IN THE WINTER MONTHS ONLY IS BASED ON FAULTY PREMISES

NEPOOL's request to limit the procurement of Replacement Energy Reserves only to the winter months is based on two inaccurate conclusions: (1) that the Commission directed ISO-NE to make design changes "necessarily focused on fuel security concerns tied to the winter months;"⁴⁴ and (2) that ISO-NE has not provided sufficient evidence to support the procurement of Replacement Energy Reserves in non-winter months.⁴⁵ As to the first conclusion, NEPOOL fails to consider that the Commission directed long-term, permanent design changes to meet reliability needs, not only those in effect for the winter months. As to the second, ISO-NE in this docket has provided ample evidence to demonstrate that it must procure sufficient day-ahead options to meet the Replacement Energy Reserve need as part of a reliable day-ahead operating plan year-round. The NEPOOL Amendment to eliminate the procurement of Replacement Energy Reserves in non-winter months should therefore be rejected.

⁴⁴ NEPOOL Comments at 24.

⁴⁵ *Id.* at 18 (citations omitted).

i. PROCURING REPLACEMENT ENERGY RESERVES IN ALL MONTHS IS Responsive to the Commission's 206 Order and Just and Reasonable

NEPOOL asserts that Replacement Energy Reserves should be procured only in winter months because procuring Replacement Energy Reserves day-ahead in all months "goes far beyond the identified fuel security need."⁴⁶ NEPOOL, however, presumes that the primary criterion upon which to judge the need for the Replacement Energy Reserve product is whether it creates incentives to store fuel or enter into a firm fuel contract during the winter months.⁴⁷ This is incorrect. The Commission did not limit compliance to a market design applicable only to the winter months, and ISO-NE has demonstrated that challenges facing New England energy security exist year-round. ISO-NE explains that the need for market design changes comes not only from the potential for gas pipeline constraints, but from the retirement of nuclear, oil, coal, and gas-fired (dependent on LNG for fuel) resources⁴⁸ and the addition of variable resources with no control over their fuel supply (e.g., wind and solar). This need will only grow as more intermittent resources come onto the system. The ESI Proposal meets the Commission's directives for a longterm "permanent solution" because it is resource neutral and procures a call on energy, and thus will procure the reliability services from whatever resources are capable of meeting the reliability need in this and future resource mixes. And, like the other day-ahead option products, the Replacement Energy Reserve product is an important part of this overall design because it meets discrete reliability needs, specifically ISO-NE's need for replacement energy and to account for load forecast error.

⁴⁶ See, e.g., NEPOOL Comments at 22.

⁴⁷ See NEPOOL Comments at 19-25.

⁴⁸ See ISO-NE Key Grid and Market Stats – Resource Mix (reporting, *e.g.*, that "[r]oughly 7,000 MW of generation has retired since 2013 or will retire in the next few years, with another 5,000 MW from coal- and oil-fired plants at risk of retirement in the coming years."), *available at*: <u>https://www.iso-ne.com/about/key-stats/resource-mix/</u>.

As ISO-NE explains, the Day-Ahead Energy Market does not "assign or efficiently compensate resources ... for all of the operational capabilities that are necessary to ensure a reliable next-day Operating Plan."49 As discussed above, ISO-NE has instead relied on out-ofmarket actions to develop a day-ahead operating plan for reserves, including the Resource Adequacy Assessment and Security Constrained Reserve processes and a re-ordering of the dayahead commitment and dispatch schedules to optimize potential reserves.⁵⁰ Even then, ISO-NE must count on the reserves it hopes will be available in real-time without advance price signals. In the past, this was made possible by the significant cumulative capability of on-site fuel resources, a capability that has now to a great extent ceased to operate.⁵¹ The call options under the ESI Proposal will now impose financial consequences for a failure to deliver on that energy, regardless of resource type. Thus, though ISO-NE's on-demand energy needs have and may include firm LNG contracts or advance arrangements for the delivery of oil supplies, those energy needs will increasingly be met by "a broader array of capital investments," such as priceresponsive demand and battery storage.⁵² Likewise, these changes in the resource mix will create new load profiles and new reliability needs that the ESI Proposal is flexible enough to address.

NEPOOL asserts that the costs associated with procuring Replacement Energy Reserves in non-winter months outweigh its benefits, a misplaced concern. The ESI Proposal is designed to send price signals commensurate with ISO-NE's need for day-ahead reserves hour to hour and day to day. As the Analysis Group explains, the "incentives efficiently target those opportunities to increase inventory that would provide the greatest values to the system reliability relative to their

⁴⁹ Brandien Testimony at 4.

⁵⁰ *Id.* at 19-21.

⁵¹ *Id.* at 4.

⁵² ESI White Paper at 1.

incremental costs."⁵³ The ESI Proposal, and the procurement of Replacement Energy Reserves, is therefore self-disciplining in that it will price the reliability need according to the value to system reliability the day-ahead options provide. If indeed there is little to no energy security risk in the non-winter months, then the day-ahead options will reflect the measure of risk with lower clearing prices. On the other hand, if system conditions dictate an increased need for day-ahead reserves in the non-winter months then the day-ahead option quantities would be expected to increase. This is precisely how a market should work.

NEPOOL also makes much of the absence of "non-winter" evidence giving rise to the Commission's Section 206 directives, specifically that the Operational Fuel Security Analysis ("OFSA") and Mystic Retirement Studies considered only winter month reliability metrics.⁵⁴ The OFSA and Mystic Retirement Studies, however, do not define or otherwise modify the Commission's call for "permanent" design changes. ISO-NE, in the instant compliance filing, has explained its current and future energy security needs, which extend well beyond those cited by NEPOOL. Further, in offering the OFSA and Mystic Retirement Studies, ISO-NE took note that fuel security is a concern both in "periods of cold winter weather or other, similar system-stressed conditions (*e.g.*, an extended outage of certain facilities),"⁵⁵ and that the changing resource mix (*e.g.*, retirement of coal and oil-fired resources) and the intermittent nature of renewables makes fuel security a more pointed issue to address.⁵⁶ Thus, though the problem is presently "most acute" during the winter, "it is also a concern in the event that the New England interstate natural gas pipeline system becomes constrained during summer peaks, when dual-fuel plants are restricted

⁵³ Impact Analysis at 5.

⁵⁴ NEPOOL Comments, Attachment 2, Affidavit of James G. Daly ("Daly Aff.") at 4-6; Attachment 1, Affidavit of David A. Cavanaugh ("Cavanaugh Aff.") at 9-10.

 ⁵⁵ Petition of ISO New England Inc. for Waiver of Tariff Provisions, Exh. No. ISO-1, Testimony of Peter T. Brandien on behalf of ISO New England Inc., at 5-6, Docket No. ER18-1509 (filed May 1, 2018).
⁵⁶ Id. at 6, 11-13.

or even prohibited from running on oil due to emissions limitations."⁵⁷ ISO-NE has elsewhere made statements to that effect, for example in responding to questions from New England's U.S. Senate delegation, where ISO-NE CEO Gordon Van Welie explained:

"The purpose of the ESI is to ensure that the power system has resources that can address the energy constraints that currently appear during severe cold, and looking forward, that may appear at other times of the year as the region transitions to a fleet of resources that no longer have stored fuel."⁵⁸

The reliability issue compelling market design changes is therefore one of constraints on on-call energy, which include but are not limited to constraints that may be relieved by the availability of stored or firmly available fuel in the winter months. Constraints on firm energy may be relieved by any resource type under the ESI Proposal during winter and non-winter periods, in that the ESI Proposal compensates for the commitment and delivery of energy output rather than fuel or other inputs.

Eliminating the *procurement* of Replacement Energy Reserves in the non-winter months would likewise eliminate any price signal for resources to take steps day-ahead to be prepared to meet ISO-NE's need for replacement energy and to address load forecast error during nine of the twelve months of the year.⁵⁹ This would undermine a critical part of a reliable day-ahead operating plan, which as discussed above is one used by ISO-NE to satisfy NERC and NPCC criteria , and would require ISO-NE to rely on out-of-market actions in all other months. NEPOOL provides

⁵⁷ *Id.* at 10.

⁵⁸ Letter from ISO New England President and CEO Gordon van Welie to members of New England's U.S. Senate delegation regarding the ISO's Energy Security Initiative and initial letter to the ISO, at 3, November 21, 2019, *available at*: <u>https://www.iso-ne.com/static-</u>

assets/documents/2019/11/combined iso us senate nov 18 and 22 letters.pdf.

⁵⁹ While NEPOOL seeks to deprive day ahead reserve providers of any opportunity for compensation of the Replacement Energy Reserves provided in non-winter months, NEPOOL does not include changes to the Tariff to prevent ISO from scheduling such reserve outside of the day-ahead market.

no justification for causing an incomplete or uncertain operating plan and the associated risks to reliability in the non-winter months. This is not a hypothetical concern – stressed system conditions and reliability events occur in all months As ISO-NE explains, on September 3, 2018, generation outages and an under-forecast of actual real-time load led to a 2.73 GW load-energy imbalance on ISO-NE's system. "This example shows that the need for energy reserves can arise at any time of year, and is not strictly a winter need."⁶⁰ Likewise, on August 11, 2016, ISO-NE experienced tight system conditions for a two-day period, during which it declared a Shortage Event for nearly four hours, due to unplanned generator outages and forecast error, among other factors.⁶¹

The Replacement Energy Reserves product satisfies two important attributes of the dayahead operating plan ISO-NE must develop to meet its year-round system operator responsibilities. The NEPOOL Amendment to remove this priced option from the ISO-NE's day-ahead plan would render it deficient in the non-winter months.

ii. A \$10/MWH STRIKE PRICE ADDER WILL SIGNIFICANTLY DILUTE IF NOT Eliminate the ESI Proposal Incentives

NEPOOL asks the Commission to order ISO-NE to amend the ESI Proposal to add \$10/MWh to the Strike Price in all hours ("Strike Price Adder").⁶² According to NEPOOL, the Strike Price Adder will reduce costs to consumers "without adversely impacting fuel security"⁶³ – a position the system operator and its experts do not share. Though NEPOOL is correct in that the Strike Price Adder would reduce costs by depressing day-ahead option clearing prices and overall

⁶⁰ Brandien Testimony at 23.

⁶¹ ISO New England's Internal Market Monitor 2016 Annual Markets Report at 82-3, *available at*: <u>https://www.iso-ne.com/static-assets/documents/2017/05/annual_markets_report_2016.pdf</u>.

⁶² NEPOOL Comments at 27.

⁶³ *Id.*, *citing* Cavanaugh Aff. at 16.

revenue opportunities (and thus incentives), it would come at the price of marginalizing the improvements to energy security the ESI Proposal is designed to promote, including those needed to meet stressed system conditions.

The Analysis Group, ISO-NE, and its External Market Monitor ("EMM") all agree that the Strike Price Adder reduces the incentives the ESI Proposal creates.⁶⁴ ISO-NE explains that it opposes the Strike Price because of the reduction in incentives, which "appears to be most severe during periods when the system is stressed, suggesting that an adder will undermine the design's objectives most significantly when energy security is most critical to the region."⁶⁵ Thus, according to ISO-NE, the Strike Price Adder would "undermine the design's efficacy in addressing the misaligned incentives problem and potentially reduce the design's ability to address the region's energy security concerns."⁶⁶ The Analysis Group concludes that it would "expect that ESI would create less reliability benefit because, with a reduced closeout cost risk … the incentives to increase inventoried energy would be diminished."⁶⁷ The EMM finds that the incentives "would be diminished by the reduced close-out cost by up to \$10 per MWh."⁶⁸

NEPOOL cites approvingly to the External Market Monitor's ("EMM") support for the Strike Price Adder. The EMM reasons in part that the overall net revenue impacts are "very small" with a "significant share of the impacts [occurring] during moderate market conditions" when a

⁶⁴ ESI Filing Transmittal Letter at 48; Impact Analysis at 96; *Potomac Economics Memorandum Re: NESCOE Proposal to Raise the Strike Price of Energy Call Options*, at 2, March 20, 2020, presented at the March 24, 2020, NEPOOL Markets Committee, *available at:* <u>https://www.iso-ne.com/static-</u> assets/documents/2020/03/a2_b_vi_emm_memo_re_nescoe_strike_price_amendment.pdf. ("EMM Memo").

⁶⁵ ESI Transmittal Letter at 48. *See also* ISO-NE Presentation at Feb 2020 MC, (showing that approximately 20% of option MWh have a reduced incentive to be available in real-time when real-time LMPs exceed \$150/MWh). ⁶⁶ *Id.*

⁶⁷ Impact Analysis at 96, *citing ISO-New England*, "Energy Security Improvements (ESI): Assessing a Strike Price 'Bias' How adding a 'bias' to the strike price may impact resource incentives," NEPOOL Markets Committee, February 11-13, 2020, <u>https://www.iso-ne.com/static</u>

assets/documents/2020/02/a4_a_iv_esi_assessing_a_strike_price_bias.pptx. ⁶⁸ EMM Memo at 2.

lack of unavailability due to decreased incentives is "less likely to materially impact reliability."69 What the EMM considers "very small" are what the Impact Analysis shows are quite significant, with revenues decreasing from 14 - 21% in the two non-winter scenarios (*i.e.*, over a nine-month period) and from 21 - 37% in two of the three winter scenarios.⁷⁰ Only under the Winter Frequent Case does the Impact Analysis show little effect.⁷¹ Further, although the Impact Analysis shows little impact in one scenario, because it shows significant decreases in revenues in the four other scenarios, the Impact Analysis supports a contrary finding than that drawn by the EMM.

A significant decrease in incentives over all months and most weather conditions is critical, because suppliers will evaluate whether the incentives over several years and in all months justify investments, not in just those years where the weather conditions mirror that of the Winter Frequent Case. With the Winter Frequent Case showing the highest level of winter incremental net revenues, a supplier would maximize its profits by making the necessary investments only in that year, but it cannot do so due to the unpredictability of weather. Instead, with sufficient incentives, a rational Market Participant will incur the costs necessary to deliver on energy options in all years in order to capture the years where higher incremental net revenues are realized while potentially taking losses in other years.

The Impact Analysis is a deterministic study, and thus places no probability on the Winter Frequent Case conditions (which show the highest net incremental revenue opportunities) occurring with any certainty or frequency. Thus, a supplier cannot predict which year would give rise to the Winter Frequent Case revenue opportunities, and even if it could it may be waiting a

⁶⁹ *Id.* at 3.

⁷⁰ The Impact Analysis shows that total revenues decrease by 37% in the Winter Infrequent Case, by 21% in the Winter Extended Case, by 14% under the Non-Winter Severe Case, and by 21% under the Non-Winter Moderate Case. Impact Analysis at 99 - 102, Tables 48 - 50, 54-55 (comparing Change in Total Customer Payments in Central Case versus Strike Price Plus \$10 Case). ⁷¹ *Id*.

long time before it could realize that revenue opportunity. More to the point, the ESI Proposal is not designed to incent a Market Participant to make advance capital and marginal cost arrangements only during the winter and only in Winter Frequent Case years, but in all years and year-round. NEPOOL's reference to ISO-NE's insurance analogy is apt, in that a rational actor does not guess which year or month it will break its leg by paying its premium only in that year, but instead pays it each month of each year so that the insurance will be there when most needed. Likewise, the ESI design creates an incentive for suppliers to make the necessary investments so that the insurance is available each day and each year. The decrease in incentives due to the Strike Price Adder is significant over the series of years and months in which a rational Market Participant will consider the incentives, compromising the ability of the ESI Proposal to procure those reliability services in all years and months, and when most needed.

The EMM also reasons that some suppliers, "e.g., a high cost oil-fired peaking unit" may be able to deliver on the energy option regardless of the decrease in incentive.⁷² Though perhaps true, it applies only to a small and decreasing subset of resources, whereas the ESI Proposal is a resource-neutral design for options on delivering energy or a demand reduction, not one designed to procure a particular resource characteristic such as fuel on-site. Further, it uses as an example a specific resource that should already maximize the value of its fuel inventory through opportunity cost bidding under current market rules. The more important impact of the Strike Price Adder to consider is how it impacts the incentives for resources on the margin and those whose capital and other investments will be dictated by the strength of those incentives.

Finally, the Strike Price Adder interferes administratively with proper price formation and price signals. A \$10/MWh adder is an arbitrary number, with NEPOOL offering no particular

 $^{^{72}}$ EMM Memo at 3.

rationale for that value. ISO-NE, NEPOOL, the EMM, and the Analysis Group however agree that it will reduce the clearing price of the day-ahead options.⁷³ As a result, the Strike Price Adder causes the day-options to price not strictly on marginal costs, opportunity costs, and risk factors, but as skewed by an arbitrary, administrative risk reduction adjustment. Further, the Strike Price Adder will interfere with the Day-Ahead Energy Market price signals in that it will mute efficiency and reliability values as reflected in differences in marginal costs among different resources, when the difference is less than \$10/MWh. If the basis difference between energy from one market participant versus another is less than \$10/MWh, the Strike Price Adder will cause the co-optimization of energy and call options to consider those resources equal from an economic and reliability standpoint. The Strike Price Adder will consequently interfere with efficient price signals on the call on energy.

Together, the record evidence shows that the Strike Price Adder is an arbitrary, administrative risk reduction mechanism that would dilute the reliability benefits to be derived from the ESI Proposal. NEPGA thus asks the Commission to reject this NEPOOL Amendment.

iii. Eliminating Load Forecast From The Replacement Energy Reserves Quantity Ignores a Long-Standing Day-Ahead Planning Consideration

NEPOOL asks the Commission to order ISO-NE to eliminate load forecast error from the calculation of the Replacement Energy Reserves quantity, a measure NEPOOL characterizes as a "discretionary ability to increase the new [Replacement Energy Reserves] it purchases."⁷⁴ Accounting for load forecast error in the day-ahead operating plan, however, is neither discretionary nor new. ISO-NE has long recognized the need to prepare for load forecast error in

⁷³ See ESI Filing Transmittal Letter at 48; Impact Analysis at 96; EMM Memo at 2; NEPOOL Comments at 28-9.

⁷⁴ NEPOOL Comments at 25.

its day-ahead operating plan, relying on 30-minute operating reserves to serve that purpose.⁷⁵ What is new is that ISO-NE can no longer rely on the free call options on energy it has accounted for in its day-ahead operating plan, including those ISO-NE has relied on to deliver energy due to the inevitability of load forecast error, and thus it proposes to compensate for call options under the ESI Proposal. Despite best practices and efforts, neither ISO-NE nor any other ISO/RTO can predict load day-ahead with certainty. Accounting for load forecast error, thus, is an important part of the day-ahead operating plan like the other day-ahead option products.

NEPOOL claims that the Commission cannot accept the load forecast error as part of the Replacement Energy Reserve quantity calculation because ISO-NE does not define precisely how it will calculate this value in its Tariff.⁷⁶ While the Tariff dictates that ISO-NE reliably operate the bulk power system, as ISO-NE explains its operating procedures define all of its real-time Operating Reserve requirements.⁷⁷ The Commission has long-accepted ISO-NE's inclusion of the Operating Reserve Requirements in the operating procedures. Specifically, the Tariff provides that Operating Reserves requirements are defined in Operating Procedure No. 8,⁷⁸ including the ten-minute, thirty-minute, and replacement reserve requirements.⁷⁹ Operating Procedure No. 8 also requires that ISO-NE account for "[e]rrors in forecasting New England RCA/BAA loads,"⁸⁰ which it does by relying on the potential for 30-minute reserves to provide both the 30-minute reserve requirement and that necessary to meet load forecast error.⁸¹ The inclusion of the precise

⁷⁵ Brandien Testimony at 10.

⁷⁶ NEPOOL Comments at 25-6 (arguing that the Commission would violate its obligation under the FPA for rates, terms and conditions be on file with the Commission, if it were to accept the load forecast error value in the RER quantity).

⁷⁷ ESI Transmittal Letter at 41.

⁷⁸ ISO-NE Tariff § III.1.7.17.

⁷⁹ ISO-NE Operating Procedure No. 8, Part III. 1.

⁸⁰ Id. at Part I.

⁸¹ ISO-NE Presentation, *Replacement Energy Reserves (Goal #2): Accounting for Load Forecast Error Discussion*, at 11, February 11-13, 2020, NEPOOL Markets Committee Meeting, *available at: https://www.iso-ne.com/static-assets/documents/2020/02/a4_a_ii_esi_rer_goal2_accounting_for_load_forecast_error.pptx*.

definition of load forecast error in the operating procedures is therefore entirely consistent with the Tariff.

NEPOOL also takes the position that ISO-NE need not account for load forecast error in the Replacement Energy Reserve quantity because it "is already addressed under current market rule arrangements,"⁸² citing to what it believes is ISO-NE's practice of accounting for some amount of load forecast error in its calculation of thirty-minute reserve requirements.⁸³ But ISO-NE does not account for load forecast error in its 30-minute operating reserve day-ahead operating plan requirement, nor do other markets compensate for it. ISO-NE "relies on" 30-minute operating reserve to "help account for load forecast error,"⁸⁴ in that if those reserves are there but not used (*e.g.*, the contingency giving rise to the dispatch of 30-minute reserves does not occur), then they can be used to meet an energy need due to load forecast error. However, if there is both a contingency and forecast error the system runs the risk of being short on reserves, just as was the case on September 3, 2018.⁸⁵

NEPOOL further cites to several pricing mechanisms it asserts provide sufficient incentives for day-ahead reserves.⁸⁶ These mechanisms, however, price reserves only once the stressed system conditions have occurred, whereas the ESI Proposal compensates for preparedness

⁸² NEPOOL Comments at 26, *citing* Cavanaugh Aff. at 11-13; NEPOOL Comments, Attachment 3, Affidavit of Benjamin W. Griffiths ("Griffiths Aff.") at 12, 28-30.

⁸³ Griffiths Aff. at 12. NEPOOL also cited to pp. 28-30 of the Griffiths Aff., testimony concluding that Reserve Constraint Penalty Factors and the Pay for Performance construct "price reserve restoration into the ISO-NE's markets."

⁸⁴Brandien Testimony at 10.

⁸⁵ See p. 17, supra.

⁸⁶ See Cavanaugh Aff. at 11-13 (citing to Reserve Constraint Penalty Factors, the Pay for Performance Construct, fast-start pricing, and Opportunity Cost bidding); Griffiths Aff. at 28-30, (citing to the Pay-for-Performance construct and Reserve Constraint Penalty Factors). Further, the Forward Capacity Market does not price capacity according to the degrees of reserve service available from capacity resources. While all capacity resources are required to offer energy into the day ahead and real time energy markets (ISO-NE Tariff § III.13.6.1.1.1.(a)) and all are required to offer that energy according to the unit characteristics of that resource (ISO-NE Tariff § III.13.6.1.1.2), the differences among resource technologies means that some capacity resources provide day ahead reserve and some do not. Consequently, the FCM clearing price cannot compensate for such service.

in advance of those conditions and as means to avoid those conditions. This fundamental difference lies at the reliability value of the ESI Proposal – it helps to avoid reliability risk rather than solely mitigate it once the reliability risk has occurred. Further, the mechanisms NEPOOL cites to often fail to provide the necessary price signals necessary to incent day-ahead reserves.⁸⁷

ISO-NE must plan for load forecast error according to the NERC requirements, a dayahead operating plan parameter that cannot be met with the other day-option products or with the quantity of Replacement Energy Reserves procured to provide replacement energy.⁸⁸ Further, as ISO-NE explains, accounting for load forecast error in the Replacement Energy Replacement quantity rather than as part of the thirty-minute reserve requirement is more efficient, in that resources that have a longer than thirty-minute energy delivery time may prove to be more costeffective in providing reserves to meet a need for real-time energy to address a load forecast error that becomes apparent during the operating day.⁸⁹ ISO-NE's proposal to account for this reliability requirement in the longer lead-time day-option product – the Replacement Energy Reserves quantity – is thus a prudent and reasonable approach.

⁸⁷ See Internal Market Monitor Quarterly Markets Performance Reports, Winter 2020 Report, Dec. 19 – Feb. 2020, May 12, 2020, NEPOOL Markets Committee at 5, (showing that energy market offer opportunity costs did not rise above zero for any hour and had no impact on energy prices over the three months), *available at*: <u>https://www.iso-ne.com/static-assets/documents/2020/05/a8 imm presentation qmr winter 2020.pdf</u>.

 ⁸⁸ ISO-NE Presentation, *Replacement Energy Reserves (Goal #2): Accounting for Load Forecast Error Discussion*, at 14, February 11-13, 2020, NEPOOL Markets Committee Meeting, *available at: https://www.iso-ne.com/static-assets/documents/2020/02/a4 a ii esi rer goal2 accounting for load forecast error.pptx.* ⁸⁹ Id. at 11.

V. CONCLUSION

For the reasons stated above, NEPGA respectfully requests that the Commission approve the ESI Proposal without modification and decline to order ISO-NE to adopt any of the NEPOOL Amendments.

Respectfully Submitted,

/s/ Bruce Anderson_____

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CERTIFICATE OF SERVICE

I hereby certify that I have served a copy of the comments via email upon each person designated on the official service list compiled by the Secretary in this proceeding. Dated at Boston, Massachusetts, May 15, 2020.

/s/ Bruce Anderson_____

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