UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

ISO New England Inc.	**)**	**Docket Nos. EL18-182-000**
	)	**ER20-1567-000**

COMMENTS IN SUPPORT OF THE NEPOOL-APPROVED ESI PROPOSAL

(April 24, 2020)

The New England Power Pool ("NEPOOL")[1] Participants Committee[2] submits these comments[3] to provide NEPOOL's support for the NEPOOL-approved alternative proposal ("NEPOOL Alternative"),[4] one of the two alternative market rule proposals submitted by ISO New England Inc. ("ISO-NE" or the "ISO") on April 15, 2020 (the "April 15 Filing")[5] in the above-captioned proceedings. The April 15 Filing includes an ISO-favored Energy Security Improvements ("ESI") proposal that NEPOOL does not support, and a second ESI proposal that NEPOOL approved. The ISO submitted the proposals to respond to the Federal Energy

[1] NEPOOL is the principal stakeholder organization for the New England RTO and is authorized to represent its more than 500 members in proceedings before the Commission. *See* Second Restated NEPOOL Agreement § 6.1; Participants Agreement § 8.1.3(c). As a voluntary association organized in 1971 pursuant to the New England Power Pool Agreement, its members include all of the electric utilities rendering or receiving services under the ISO-NE Transmission, Markets and Services Tariff (the "Tariff"), as well as independent power generators, marketers, load aggregators, brokers, consumer-owned utility systems, demand response providers, developers, end users, and a merchant transmission provider. NEPOOL has timely moved to intervene in this docket by doc-less intervention on April 24, 2020.

[2] Capitalized terms not defined herein have the meanings ascribed thereto in the Second Restated NEPOOL Agreement, Participants Agreement, or the Tariff. Section III of the Tariff is referred to as "Market Rule 1."

[3] Combined Notice of Filings #2, Docket No. ER20-1567-000 (Apr. 15, 2020); Errata Notice Extending Comment Period, Docket No. ER20-1567-000 (Apr. 16, 2020).

[4] Although the ISO filed two alternative proposals in the April 15 Filing, for clarity and convenience, the NEPOOL-approved alternative is referred to herein as the "NEPOOL Alternative."

[5] ISO New England Inc., Compliance Filing of Energy Security Improvements Addressing New England's Energy Security Problems, Docket No. ER20-1567-000 (Apr. 15, 2020) ("April 15 Filing").

Regulatory Commission's (the "Commission") July 2, 2018 Order in Dockets Nos. ER18-1509 and EL18-182 (the "July 2 Order").[6] That Order directed ISO-NE to develop market improvements "to better address regional fuel security concerns."[7]

Significantly, whether this proceeding is treated as purely compliance or as compliance with some voluntary Market Rule 1 changes under Section 205 of the Federal Power Act ("FPA"), the ISO has made it clear that it submitted both ESI proposals in the April 15 Filing to be considered and treated by the Commission as if this were a "jump ball" filing.[8] Consistent with its commitment to NEPOOL during the ESI stakeholder process, the ISO submitted the NEPOOL Alternative in its April 15 Filing for the Commission's consideration of both proposals on equal legal footing.

EXECUTIVE SUMMARY

In exercising its authority and discretion, the Commission should adopt the NEPOOL-approved alternative over the ISO-favored one. The NEPOOL Alternative appropriately addresses certain objectionable and expensive elements of the ISO's alternative ESI proposal with three critical modifications, each intended to strike a better balance between reliability benefits and costs to consumers.

First, NEPOOL rejects the ISO's desire to purchase the new day-ahead Replacement Energy Reserve ("RER") year-round. Purchasing that new product during the non-winter

[6] *ISO New England Inc.*, 164 FERC ¶ 61,003 (2018) ("July 2 Order").

[7] *Id.* at P 2.

[8] Under Section 11.1.5 of the Participants Agreement, referred to as the "jump ball provision," NEPOOL Market Rule proposals that are supported by at least a 60% Vote of the Participants Committee are presented to the Commission on an equal footing with alternate proposals by ISO-NE, and allows the Commission to "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." *See* Participants Agreement § 11.1.5. The ISO has voluntarily submitted the NEPOOL Alternative for the Commission's consideration.

months is not needed for fuel security and would impose substantial additional costs on New England consumers (estimated up to $69 million per year) that have not been justified, directed by the Commission, or approved by NEPOOL. The NEPOOL Alternative limits RER procurement to the winter months.

Second, the NEPOOL Alternative eliminates the provision in the ISO-favored proposal that would allow the ISO to increase its purchase of RER by some amount to account for load forecast error ("LFE"). Undeniably, the ISO will err in its load forecast, both above and below the actual load. But the ISO's preference to over-procure RER by accounting for LFE is vague, is not supported by any demonstrated fuel security need, and will add considerable unnecessary costs to consumers.

Third, although NEPOOL generally supports the strike price concept as described in the April 15 Filing, the NEPOOL Alternative appropriately adds $10 per megawatt hour ("MWh") to the strike price ("Strike Price $10 Adder"). This adder is intended to reduce unnecessary risk to suppliers and unjustified costs to consumers, while maintaining the efficacy of the energy call option offer.

In sum, the NEPOOL-approved changes to the proposal favored by ISO are motivated by a desire to address more precisely the fuel security needs targeted by the July 2 Order, thereby helping to ensure the costs to procure the new ancillary services are justified and reasonable for consumers to bear. This filing and NEPOOL's supporting materials, therefore, will demonstrate that the NEPOOL Alternative is preferable to the ISO-favored alternative because it sufficiently addresses fuel security when the region needs it most and helps to safeguard consumers from being required to pay for services that are not needed to maintain reliability.

Section I of this NEPOOL filing provides a summary of the procedural background and the NEPOOL stakeholder process, including the various proposals considered by the NEPOOL Markets Committee and the Participants Committee. Section II identifies the legal support for the Commission to choose between the two proposals filed by the ISO and adopt all or any portion of either proposal that it concludes are just and reasonable and preferable to address the demonstrated fuel security concerns. Section III of this filing, relying on supporting materials, explains why the NEPOOL-approved ESI proposal is preferable over the ESI proposal favored by the ISO and why the Commission should approve that NEPOOL-approved alternative.

NEPOOL offers the following in support of the NEPOOL Alternative:[9]

- Attachment 1 – Affidavit of David A. Cavanaugh, Energy New England ("Cavanaugh Affidavit");
- Attachment 2 – Affidavit of James G. Daly, Eversource Energy Service Company ("Daly Affidavit");
- Attachment 3 – Affidavit of Benjamin W. Griffiths, Office of the Massachusetts Attorney General Energy and Telecommunications Division Office of Ratepayer Advocacy ("Griffiths Affidavit"); and
- Attachment 4 – A tabulation of the NEPOOL votes taken at the April 2, 2020 NEPOOL Participants Committee meeting.

NEPOOL requests Commission action on the April 15 Filing to be effective November 1, 2020,[10] selecting where the two proposals diverge all or those portions of either alternative proposal that the Commission finds preferable and more consistent with the demonstrated fuel security need.

[9] Each Affidavit reflects the general views of the affiants much of which were shared during the NEPOOL stakeholder process and were echoed by some members when voting. Institutionally, NEPOOL acted to approve the Tariff changes and not all members shared their reasons for their votes on the NEPOOL Alternative and the ISO's favored alternative. NEPOOL anticipates that the Commission will receive pleadings from regional stakeholders describing their reasons for the respective votes.

[10] NEPOOL joins ISO-NE in this request. *See* April 15 Filing at 74.

I. PROLOGUE TO NEW ENGLAND'S APRIL 15 FILING

In May 2018, after approximately 1,400 MW of liquefied natural gas-fueled generating capacity located just outside Boston submitted bids to retire from the system, ISO-NE sought a waiver of certain Tariff provisions "to ensure reliable electric service for New England consumers."[11] On July 2, 2018, the Commission denied the ISO's unilateral waiver request.[12] Preliminarily, the Commission concluded that the ISO's waiver request "effectively create[d] an entire process that is not in the ISO-NE Tariff in order to allow for a cost-of-service agreement to meet regional fuel security concerns."[13] Thus, the Commission held that the ISO's request "must [have] be[en] filed as proposed tariff provisions under section 205(d)."[14] However, in response to the Operational Fuel-Security Analysis ("OFSA") and Mystic Retirement Studies submitted by ISO-NE to support its waiver request, the Commission instituted its own Section 206 proceeding finding preliminarily that New England's Tariff "may be unjust and reasonable" in that it "fail[ed] to address *specific* regional fuel security concerns."[15] Accordingly, the Commission directed the ISO to submit within 60 days of the date of the July 2 Order "interim Tariff revisions that provide for the filing of a short-term, cost-of-service agreement to address demonstrated fuel security concerns and to submit by [April 15, 2020[16]] *permanent Tariff*

[11] Petition of ISO New England Inc. for Waiver of Tariff Provisions, Docket No. ER18-1509-000, at 1 (May 1, 2018) ("Chapter 1 Filing").

[12] *See* July 2 Order at P 1.

[13] *Id.* at P 47.

[14] *Id.* at P 47.

[15] *Id.* at P 49 (emphasis added).

[16] The original deadline was July 1, 2019 but was extended twice, ultimately set for April 15, 2020. *See* July 2 Order at P 2; Notice of Extension of Time, Docket No. EL18-182 (Mar. 18, 2019); Notice of Extension of Time, Docket No. EL18-182 (Aug. 30, 2019) (setting April 15, 2020 as the deadline for the ISO "to file its long-term fuel security mechanism").

revisions reflecting improvements to its market design to better address regional fuel security concerns."[17]

As to interim measures, the ISO made two separate filings since the July 2 Order. On August 31, 2018, in response to the Commission's directive, ISO-NE filed Tariff provisions to expand its authority—on an interim basis—to retain resources needed for fuel security subject to a reliability review, a trigger for such retentions, and appropriate cost-of-service arrangements.[18] In December 2018, the Commission accepted the ISO's proposed interim Tariff revisions.[19] Those fuel security retention provisions were in effect for the thirteenth and fourteenth Forward Capacity Auctions ("FCA"), which correspond to the Capacity Commitment Periods that begin on June 1 each year and cover 2022/23 and 2023/24, respectively.[20]

Concluding that more was needed to be done to address fuel security concerns in the interim period, the ISO also developed a supplemental program to "provide incremental compensation to resources that maintain inventoried energy during cold periods when winter energy security is most stressed."[21] In March 2019, the ISO voluntarily filed its interim winter reliability measure, known as the Inventoried Energy Program, for the three winter months during Capacity Commitment Periods 2023/24 and 2024/25.[22] The ISO intended this interim

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[17] July 2 Order at P 2 (emphasis and footnote added). The Commission also provided the ISO with the option of "show[ing] cause as to why the Tariff remains just and reasonable" without the interim and permanent Tariff revisions. *Id.*

[18] ISO New England Inc., Compliance Filing to Establish a Fuel Security Reliability Standard, Short-Term Cost-of-Service Mechanism, and Related Cost Allocation for Out-of-Market Compensation, Docket No. ER18-2364-000 (Aug. 31, 2018).

[19] *See ISO New England Inc.*, 165 FERC ¶ 61,202, at P 1 (Dec. 3, 2018).

[20] *Id.* at P 89. Those Tariff provisions remain in effect for FCA 15, which corresponds to the Capacity Commitment Period 2024/25. *Id.*

[21] ISO New England Inc., Inventoried Energy Program, Docket No. ER19-1428, at 4 (Mar. 25, 2019).

[22] *See id.* at 4.

winter program to serve as a bridge to the longer-term, market-based solution for addressing the region's fuel security issues.[23] The ISO's Inventoried Energy Program became effective by operation of law on May 28, 2019.[24]

Later in 2019, in the midst of ongoing work on the ESI project, the region sought to ensure the Commission was aware of the comprehensive efforts to develop and assess longer-term, market proposals "to better address" New England's fuel security concerns. To provide preliminary input without violating *ex parte* limitations, NEPOOL, ISO-NE, and the New England States Committee on Electricity ("NESCOE") jointly requested a public meeting at the Commission to share information and perspectives with Commission staff.[25] The Commission granted this joint request and, on July 15, 2019, the Commission staff led a broadly attended, publicly noticed meeting, during which ISO-NE, NEPOOL members, and representatives from the six New England States shared their views and proposals relating to the ESI efforts.[26] Many speakers submitted materials and/or pre- or post-meeting comments, most of which reference the contemporaneous understanding at the time that the Commission's directive to create a market-based mechanism to better address fuel security mostly concerned winter security issues.[27]

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[23] *See id.* at 7.

[24] Because the Commission lacked the necessary quorum to act on the ISO's filing, the Inventoried Energy Program became effective by operation of law. *See* Notice of Filing Taking Effect by Operation of Law, Docket No. ER19-1428-001 (Aug. 6, 2019). This outcome was subject of an appeal before the United States Court of Appeals for the District of Columbia Circuit. *See Belmont Mun. Light Dept. v. FERC*, Docket No. 19-1224 (D.C. Cir. 2019). Recently, the Court granted the Commission's unopposed motion to suspend the briefing and for voluntary remand of the record. Order, *Belmont Mun. Light Dept. v. FERC*, Docket 19-224 (Apr. 21, 2020).

[25] Request for Noticed Meeting, Docket Nos. ER18-2364-000 and EL18-182-000 (Apr. 22, 2019).

[26] *See* Supplemental Notice of Staff-Led Public Meeting, Docket Nos. EL18-182-000, ER13-2266-004, ER18-1509-000, ER18-1509-001, ER18-2364-000, ER19-1428-000, ER18-1639-000, ER18-1639-001, ER18-1639-002, and ER18-1639-003 (July 3, 2019).

[27] *See, e.g.*, Speaker Materials of ISO-NE, Docket No. EL18-182-000, *et al.*, at 44 (July 17, 2019); Speaker Materials of the Brattle Group on Behalf of NextEra Energy Resources, Docket No. EL18-182-

Subsequent to the July 15 Commission staff-led meeting, the New England stakeholders and the ISO worked to further develop and evaluate longer-term, market-based solutions, with numerous opportunities within the NEPOOL processes for interested parties to share their varied perspectives and concerns. With the benefit of a six-month extension of time,[28] the region made significant progress through the NEPOOL stakeholder process to refine and improve proposals, to narrow issues of controversy, and to arrive ultimately at the two alternative proposals that are now before the Commission.

A. Comprehensive Stakeholder Consideration of ESI

For many years, NEPOOL and ISO-NE, along with State officials, have used the Commission-approved NEPOOL stakeholder fora to work through together proposed improvements to New England's organized markets. The NEPOOL process encourages and supports informed participation by all affected stakeholders in the development and assessment of any market changes.[29]

In this proceeding, both alternative ESI proposals received the benefit of New England's comprehensive stakeholder process. For more than twenty months, through robust discussions and candid dialogue, NEPOOL members, ISO-NE, NESCOE, and State officials worked closely to develop, refine, and evaluate ESI-related proposals. In that time and with the benefit of meaningful input from those participating in or affected by New England's markets, agreements were reached on certain proposed refinements to the ESI design. When disagreements remained, however, the process was successful in narrowing issues of controversy.

000, *et al.*, at 1 (July 17, 2019); Pre-meeting Comments of the New England Power Generators Association, Inc., Docket No. EL18-182-000, *et al.*, at 3 (July 9, 2019).

[28] *See supra* note 16.

[29] *See* Second Restated NEPOOL Agreement § 5.1(d).

i. NEPOOL Markets Committee Consideration

The ESI alternatives presented in the April 15 Filing are the culmination of many months of work. Over the course of twenty-four NEPOOL Markets Committee meetings, the ISO, State officials, and NEPOOL members discussed and debated ESI-related presentations and proposals that were provided by the ISO, both the Internal and External Market Monitors, NEPOOL stakeholders, and State officials (through NESCOE).[30]

At its March 24, 2020 meeting,[31] the Markets Committee took a series of votes on the ISO's ESI proposal and suggested amendments to it. Although there were a total of six amendments noticed for this meeting, only three amendments were ultimately voted by the Markets Committee. The other proposals were either adopted by the ISO or addressed in Tariff language proposed by the Internal Market Monitor ("IMM").[32]

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[30] Earlier in the stakeholder process, some members presented alternative conceptual approaches to the Markets Committee. For example, Calpine Corporation and NextEra Energy Resources, among others, presented preliminary conceptual ideas/approaches on how to address the region's fuel security needs. *See, e.g.*, Calpine Corp., *Forward Enhanced Reserves Market* (Sept. 2019), https://www.iso-ne.com/static-assets/documents/2019/09/a2_e_2_calpine_presentation_ferm.pdf; NextEra Energy Resources, *ISO-NE Long Term Market Reforms Fuel Security: Updates/Clarifications* (Aug. 13–15, 2019), https://www.iso-ne.com/static-assets/documents/2019/08/a2_c_1_nextera_presentation_energy_security_reforms.pptx. Ultimately, these potential alternative designs were not pursued further through the complete NEPOOL Participant Processes.

[31] In light of the COVID-19 pandemic, all NEPOOL meetings since mid-March 2020 have been held via teleconference.

[32] The Massachusetts Attorney General's Office ("Massachusetts AGO") and NESCOE jointly proposed two amendments, one requiring the IMM "to conduct a comprehensive evaluation" of the ESI design and another "requiring the IMM to report on and certify the competitiveness of energy call option offers." Attachment 3, Affidavit of Benjamin Griffiths at 7 ("Griffiths Aff."). In light of the IMM's proposed Tariff language to require the IMM to perform post-implementation analysis of the ESI design, these amendments were withdrawn. *See* April 15 Filing at 67–68; Griffiths Aff. at 8; *see also* Memorandum from E. Wasik-Gutierrez, Secretary, Markets Committee to NEPOOL Participants Committee, subject: Actions of the Markets Committee, at 2–3 (Mar. 25, 2020), https://www.iso-ne.com/static-assets/documents/2020/03/03_24_mc_actions_final_1.pdf ("MC Notice of Actions"). The Massachusetts AGO offered another amendment to eliminate RER in its entirety, which it also withdrew "after NEPOOL voted in favor" of the NESCOE-sponsored amendment limiting RER solely to the winter months. Griffiths Aff. at 8–9; *see also* MC Notice of Actions at 2.

The three amendments that were voted on by Markets Committee were all sponsored by NESCOE. One such amendment (reflecting the application of RER for only the three winter months) was supported by the Markets Committee, with a 60.73% Vote in favor.[33] Votes on the other two amendments failed. After the three amendments were voted, the ESI proposal reflecting the one amendment that passed was considered but, with a 51.77% Vote in favor, did not receive sufficient support needed for the Markets Committee to recommend Participants Committee approval of that amended proposal.[34] The Markets Committee then voted on the ISO's un-amended ESI proposal at the request of ISO[35] and that proposal also failed with a 42.41% Vote in favor.[36]

ii. Final NEPOOL Action Taken by the Participants Committee[37]

As referenced in the April 15 Filing, final NEPOOL action on the two ESI proposals were taken at the April 2, 2020 NEPOOL Participants Committee meeting. At that meeting, the Participants Committee considered the ISO's ESI proposal, as well as the same three amendments NESCOE presented at the March 24 Markets Committee meeting. A NESCOE

[33] *Id.* at 1.

[34] *Id.* at 3.

[35] Pursuant to Section 11.1.2 of the Participants Agreement, the ISO has the right to request a vote on its un-amended proposal if that proposal is modified in a way that ISO does not support.

[36] MC Notice of Actions at 4–5.

[37] As explained in New England's response to Order No. 719, the Participants Committee is the Participant body that provides the final input by NEPOOL on changes to the Tariff, Manuals, Operating Procedures and other New England matters. New England's governance arrangements have been established to recognize that some Participants may be unable to participate fully and with the benefit of full management feedback until after the Technical Committees have completed their deliberations and made their recommendations. For that reason, all recommendations from the Technical Committee are considered by the Participants Committee (absent delegation to another representative of NEPOOL), but it is final Participants Committee action that defines NEPOOL's organizational position. *See generally* Filing of ISO New England and New England Power Pool in response to Order No. 719, Docket No. ER09-1051 (filed Apr. 28, 2009).

representative explained that the three modifications were supported by all six New England states. NEPOOL members, State officials, and ISO-NE were provided a final opportunity to express their views on each of the proposed amendments, which included arguments in favor and in opposition. All three amendments passed.[38]

The Participants Committee then voted on whether to approve the ESI proposal with the three amendments (i.e., the NEPOOL Alternative). With a 61.70% Vote in favor, this alternative proposal achieved the supermajority support of regional stakeholders needed to obtain approval by NEPOOL.[39] As reflected in Attachment 4, the final vote outcome reflected some support for the NEPOOL Alternative in five out of the six NEPOOL sectors. The Participants Committee also voted on the ESI proposal favored by the ISO and that proposal failed with a 39.59% Vote in favor, with some support in three of the six NEPOOL sectors.[40]

B. Two Alternative ESI Proposals Filed

As explained in the April 15 Filing, ISO-NE seeks Commission approval to implement substantial new market mechanisms to improve New England's markets and ostensibly to

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[38] The first NESCOE amendment (Setting Day-Ahead RER to Zero for Non-Winter Months) passed with a 63.76% Vote in favor (Generation Section – 0%; Transmission Sector – 16.79%; Supplier Sector – 5.60%; Alternative Renewable ("AR") Sector – 7.79%; Publicly Owned Entity ("POE") Sector – 16.79%; and End User – 16.79%).

The second NESCOE amendment (Remove Accounting for LFE) passed with 63.76% Vote in favor (Generation Section – 0%; Transmission Sector – 16.79%; Supplier Sector – 5.60%; AR Sector – 7.79%; POE Sector – 16.79%; and End User – 16.79%).

The third NESCOE amendment (Strike Price $10 Adder) passed with a 61.27% Vote in favor (Generation Section – 0%; Transmission Sector – 16.79%; Supplier Sector – 4.48%; AR Sector – 6.42%; POE Sector – 16.79%; and End User – 16.79%).

[39] *See* Attachment 4 (showing the vote outcome of the NEPOOL Alternative)

[40] *Id.* (showing the vote outcome of the ISO-NE Alternative).

address regional fuel security concerns.[41] The ISO has presented two alternative ESI proposals for the Commission's consideration: one proposal it favors (but NEPOOL does not support) and one that NEPOOL approved (but the ISO does not support). Both proposals would implement three new ancillary services in the Day-Ahead Energy Market. As detailed in the April 15 Filing, the ISO provides a description of the core design of its ESI proposal, including the new ancillary services and the applicable market mechanics.[42]

The NEPOOL Alternative improves upon the ESI design in three important ways: (1) it limits the RER to winter-only months; (2) it removes the unjustified and costly extra insurance policy of the LFE adjustment to RER; and (3) it includes the Strike Price $10 Adder for all hours of the Operating Day that reasonably limits costs to consumers without material adverse effect on fuel security.[43] Thus, the NEPOOL Alternative addresses aspects of the ISO-favored ESI proposal that go further than the scope of the demonstrated fuel security needs and that would impose significant, unjustified costs on consumers.

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[41] As ISO-NE explains in Section VII of the April 15 Filing, it intends to pursue additional ESI-related work, namely, to conduct a market power analysis in support of a mitigation design for ESI and the ISO "anticipates developing a seasonal forward market proposal and bringing it through the stakeholder process in 2021." *See* April 15 Filing at 69–72.

[42] *See id.* at 34–56.

[43] Of note, the ISO filed corresponding Tariff revisions to sunset the Fuel Security Retention Mechanism and the Inventoried Energy Program before the beginning of the Capacity Commitment Period for FCA 15, contingent on the Commission's acceptance of ESI. *See id.* at 64–66 (describing the revisions to sunset the Fuel Security Retention Mechanism and Inventoried Energy Program). NEPOOL fully considered and, through separate actions, voted overwhelmingly to support both corresponding Tariff revisions. The early sunset to the Fuel Security Retention Mechanism proposal was unanimously approved by NEPOOL, with two abstentions registered by Exelon Generation Company, LLC ("Exelon") and Mr. Michael Kuser. The earlier sunset of the Inventoried Energy Program received NEPOOL approval, with one opposition by Exelon and abstentions noted by Dynegy Marketing and Trade, LLC, NextEra Energy Resources, LLC, National Resources Defense Council, and Mr. Kuser.

II. THE COMMISSION HAS BROAD AUTHORITY TO ADOPT ALL OR ANY PORTION OF THE NEPOOL ALTERNATIVE

In the April 15 Filing, the ISO explained that it agreed to file the NEPOOL Alternative as if covered by Section 11.1.5 of the Participants Agreement.[44] This section is referred to as the "jump ball" provision.[45] By filing the two alternatives together as if the jump ball applied, the ISO has signaled its agreement for the Commission to consider both proposals on equal legal footing.

Moreover, although the ISO submits its April 15 Filing to comply with the Commission's directive pursuant to Section 206 of the FPA, the ISO explicitly asks that, if the Commission concludes that component(s) of the ISO alternative goes beyond compliance, then any such component(s) should be treated as being filed pursuant to Section 205.[46] To the extent the Commission considers any aspect of the April 15 Filing to be a voluntary filing under Section 205, the jump ball provisions of the Participants Agreement clearly apply.[47] The Commission therefore is free to approve any or all portion of either proposal that it finds just and reasonable and preferable.

In any event, once the Commission finds, as it preliminarily did in Docket Nos. ER18-1509 and EL18-182, that the filed rate is unjust and unreasonable, it has very broad authority to

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[44] *See id.* at 2–3.

[45] *See supra* note 8 and accompanying text.

[46] *See* April 15 Filing at 1 n.1 ("To the extent the Commission finds any part of the proposed long-term, market-based solution filed here to be outside the scope of its directive, the ISO requests the Commission consider it under Section 205 of the FPA, and find it just and reasonable. If such a Commission finding relates to a part of the proposal for which NEPOOL supported an alternative, that proposal should be considered in accordance with Section 11.[1.]5 of the Participants Agreement."); *see also* 16 U.S.C. § 824d.

[47] *See* Participants Agreement § 11.1.5.

fashion an appropriate remedy.[48] Here, the Commission's authority, which is "at its zenith," is certainly broad enough to permit it to choose between the two slightly different ESI proposals. The Commission recognized as much when it considered and adopted portions of a NEPOOL-approved alternative in the ISO's Order No. 1000 compliance filing.[49]

The submission of alternative proposals and supporting information provides the Commission a comprehensive record upon which it can rely in exercising its broad authority. As part of the record, the ISO filing sought to provide the necessary factual support for the alternative ESI proposal it favors. NEPOOL relies on that factual support for the undisputed components of the ESI design because both proposals are nearly identical. NEPOOL explains with stakeholder affidavits submitted with this filing why New England stakeholders supported the NEPOOL-adopted changes and provides the Commission the necessary factual support for selecting the NEPOOL Alternative over the ISO's favored proposal. Conversely, the ISO does not show why the aspects of its preferred proposal that depart from the NEPOOL Alternative are justified. Under these circumstances, the Commission can and should fully analyze both alternatives and approve the alternatives and elements thereof that, based on the record, have been demonstrated to be just and reasonable and preferable in responding to the Commission's July 2 Order.

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[48] *See, e.g., Niagara Mohawk Power Corp. v. FPC*, 379 F.2d 153, 159 (D.C. Cir. 1967) (providing that the Commission's breadth of discretion is "at its zenith" when fashioning remedies); *see also Pub. Util. Comm'n of the State of Cal. v. FERC*, 462 F.3d 1027, 1053 (9th Cir. 2006) (acknowledging judicial deference to the Commission's remedial refund authority under the FPA); *Towns of Concord, Norwood, & Wellesley, Mass. v. F.E.R.C.*, 955 F.2d 67, 72–75 (D.C. Cir. 1992) (examining the Commission's remedial authority and discretion under the FPA); *San Diego Gas & Elec. Co.*, 149 FERC ¶ 61,116, at P 236 (2014) (noting that "the Commission's discretion is at its zenith when fashioning a remedy").

[49] The Commission, in its determination on the ISO's Section 206 compliance filing for Order No. 1000, adopted alternatives proposed by NEPOOL, as it can here. *See ISO New England Inc.*, 143 FERC ¶ 61,150, at PP 208, 239 (2013).

III. THE NEPOOL ALTERNATIVE IS PREFERABLE AND SHOULD BE APPROVED

On the one hand, the NEPOOL Alternative focuses on reliability needs and benefits, and, on the other, it balances those needs and benefits against costs. This dual focus makes the NEPOOL-approved proposal more consistent with the requirements of the FPA that all jurisdictional rates, terms, and conditions of service be demonstrated to be just and reasonable. As described below, the NEPOOL Alternative is designed to tie consumer costs more closely to demonstrated needs and benefits from implementation of the ESI design without undermining the fuel security objectives of ESI. The alternative proposal favored by the ISO lacks this important nexus between costs and needs/benefits with regard to its proposed year-round application of RER. Additionally, removal of the LFE adjustment and inclusion of the Strike Price $10 Adder will help mitigate consumer costs without jeopardizing fuel security when needed.

The Commission's statutory obligation under the FPA to ensure just and reasonable rates is as fundamental to its mission as its obligation to ensure reliability.[50] Indeed, the current mission statement of the Commission sounds like the theme of the NEPOOL Alternative: "Economically Efficient, Safe, Reliable, and Secure Energy for Consumers. Assist consumers in obtaining *economically efficient, safe, reliable, and* ***secure energy services at a reasonable cost*** through appropriate regulatory and market means, and collaborative efforts."[51] As the

[50] *See, e.g.*, *NSTAR Elec. & Gas Corp. v. FERC*, 481 F.3d 794, 803 (D.C. Cir. 2007) ("Although the system operator plainly has an incentive to ensure that system-critical power is available to ensure grid stability and reliability, FERC neither in its decisions nor at oral argument was able to identify incentives driving ISO-NE to bargain for low prices. . . . Thus neither FERC's reasonableness analysis nor its stated reliance on ISO-NE's actions appears to have satisfied its statutory obligation to ensure that rates are just and reasonable.").

[51] Fed. Energy Regulatory Comm'n, *About FERC*, https://www.ferc.gov/about/about.asp (emphasis added) (last updated Mar. 31, 2020).

Commission stated in its July 2 Order, it was seeking market-based solutions "as the most efficient means to provide *reliable electric service to New England consumers at just and reasonable rates.*"[52] The changes included in the NEPOOL Alternative are specifically designed to achieve that dual objective.

The Commission's statements in orders and other proceedings, as well as court precedent, recognize and underscore the obligation to balance cost and need/benefit when it comes to reliability.[53] For example, in approving reliability standards, the Commission must still ensure that the standards are just, reasonable, not unduly discriminatory or preferential, and in the public interest.[54] More particular to its wholesale market jurisdiction, the history of the present filing makes clear that reliability benefits are no excuse for excess costs. The D.C. Circuit's remand of New England's 2013–2014 Winter Reliability Program made clear that the Commission is bound to consider whether resulting rates are just and reasonable—even when implementing a temporary reliability fix.[55] Surely, cost must be a central consideration when implementing a permanent solution to better address regional fuel security concerns, and in evaluating the April 15 Filing, the Commission should fully consider whether the proposed market design would

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[52] July 2 Order at P 53 (emphasis added).

[53] *See, e.g., Farmers Union Cent. Exch., Inc. v. FERC*, 734 F.2d 1486, 1502 (D.C. Cir. 1984) (providing that, although delineating the zone of reasonableness may involve "a complex inquiry into a myriad of factors," nonetheless, "the most useful and reliable starting point for rate regulation is an inquiry into costs").

[54] *See* 16 U.S.C. § 824o(d)(2); *see also, e.g.*, Order No. 867, Final Rule, Transmission Planning Reliability Standard TPL-001-5 (Jan. 23, 2020) (declining Notice of Proposed Rulemaking directive to require corrective action plans for protection system single points of failure in combination with a three-phase fault if planning studies indicate potential cascading after taking record evidence of increased costs and implementation issues).

[55] *TransCanada Power Mktg., Ltd. v. FERC*, 811 F.3d 1, 13 (D.C. Cir. 2015) (providing that a failure to demonstrate that there is "no excess of profits" is not reasoned decision making).

result in the incurrence of costs that are beyond those that are demonstrated to be reasonably necessary.[56]

In this latest case of fuel security for New England, the same principle applies: there is no demonstrated need for year-round RER or the LFE adjustment to justify the substantial extra cost of tens of millions of dollars per year to consumers. Without such a demonstration, the Commission cannot make its determination that the rates produced are just and reasonable with resulting costs commensurate with identified benefits and demonstrated needs. Therefore, the Commission-accepted ESI design should not include procuring RER in the non-winter months, should not allow the LFE adjustment, but should include the Strike Price $10 Adder.

In sum, the NEPOOL Alternative is clearly preferable to the set of Tariff revisions favored by the ISO. In evaluating the justness and reasonableness of any proposed market reform, the Commission must balance competing interests.[57] The NEPOOL Alternative reflects an appropriate balancing of interests by seeking to ensure regional fuel security/reliability in a cost-effective manner that balances costs to consumers against *demonstrated* needs and benefits. Moreover, it is amply supported by Commission and judicial precedent requiring that the cost of purchasing reliability protections be subject to a just and reasonable standard.

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[56] In other contexts, the Commission has referred in ratemaking to incurrence of costs beyond those considered to be reasonably necessary as "gold plating." *See, e.g., Fuel Retention Practices of Natural Gas Companies*, 120 FERC ¶ 61,255, at P 18 (2007). *See also Transwestern Pipeline v. FERC*, 988 F.2d 169, 172 (1993) (stating that mismatch between cost incurrence and cost responsibility is contrary to the Commission's traditional policy); *Carnegie Natural Gas Co. v. FERC*, 968 F.2d 1291, 1293 (1992) (providing that cost responsibility should match cost incurrence); *Northern States Power Co.*, Opinion No. 383, 64 FERC ¶ 61,324, at 63,379 (1993) (stating that gold plating violates the "fundamental theory of ratemaking . . . that costs should be recovered in the rates of those customers who utilize the facilities and cause the costs to be incurred"), *reh'g denied*, 74 FERC ¶ 61,106 (1996).

[57] *See Wis. Pub. Power Inc. v. FERC*, 493 F.3d 239, 262 (D.C. Cir. 2007) (per curiam) (quoting *Fed. Power Comm'n v. Hope Nat. Gas Co.*, 320 U.S. 591, 603 (1944)).

A. NEPOOL Preferred Changes to the RER Design

Two of the NEPOOL-approved changes affect RER. First, under the NEPOOL Alternative, RER would be acquired only in the three winter months of December, January, and February.[58] The Commission has directed that longer-term market changes are implemented "to address specific regional fuel security concerns."[59] ISO-NE has not provided sufficient analysis to support the procurement of RER for fuel security in non-winter months.[60] With the NEPOOL-approved change, consumers would not be subject to unjustified RER-related costs during months where there has not been an identified fuel security concern requiring RER.[61]

NEPOOL's second approved change to RER is to remove the LFE adjustment provisions.[62] This modification removes the ISO's broad ability—which is vague and undefined in ISO's alternative—to procure additional RER to account for possible errors in forecasting loads. The ISO has not shown that it must over-procure this new day-ahead ancillary service and impose substantial additional costs on consumers.

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[58] *See* NEPOOL Clean Tariff at §§ 1.8.5(d)–(e) (included as Attachment E-2 to the April 15 Filing)

[59] July 2 Order at P 49.

[60] *See id.* at PP 4, 58; Chapter 1 Filing at 2 ("The problem is most critical during the winter months, when the region's pipelines are most constrained."); ISO New England Inc., *Operational Fuel Security Analysis*, at 19 (Jan. 17, 2018), https://www.iso-ne.com/static-assets/documents/2018/01/20180117_operational_fuel-security_analysis.pdf ("OFSA"); ISO New England Inc., *Fuel Security Reliability Need for Mystic 8 and 9*, at 15 (Apr. 10, 2018), https://www.iso-ne.com/static-assets/documents/2018/04/npc_20180406_addl_II.pdf ("Mystic Retirement Studies"); *see* Attachment 1, Affidavit of David A. Cavanaugh at 9 ("Cavanaugh Aff."); Attachment 2, Affidavit of James G. Daly at 6–7 ("Daly Aff."); Griffiths Aff. at 12–13, 15–19.

[61] Cavanaugh Aff. at 8–11, 14; Daly Aff. at 4–8; Griffiths Aff. at 9–10, 23–25.

[62] *See supra* note 58.

i. RER should not be procured during non-winter months when there has been no demonstrated fuel security need.

Under the NEPOOL Alternative, RER would be procured solely for the winter months, which is the only timeframe that analysis provided by the ISO has identified a fuel security need.[63] For the following reasons, this treatment is preferable to the ISO's-favored approach, which seeks to procure RER year-round.[64]

a) The ISO has not demonstrated that RER is required in non-winter months.

First, the ISO has not provided a sufficient record that justifies a need for RER outside the winter months. The analysis presented during the stakeholder process (and later in the April 15 Filing) failed to show any fuel security related need for RER in non-winter months. To the contrary, the analyses of historical reserve deficiencies showed that fuel security is *not* a demonstrated concern during non-winter months.[65] A forward-looking analysis supports a similar conclusion. As stated in the Griffiths Affidavit, the Analysis Group's Impact Assessment[66] contains outcome scenarios that demonstrate that eliminating RER in the non-winter months (and eliminating LFE year-round) will not affect system reliability.[67] Mr. Griffiths explains why the general lack of projected reserve deficiencies under both ESI and current market rules, as modeled by the Analysis Group, does not support the ISO's suggestion

[63] *See* July 2 Order at PP 4, 28; Chapter 1 Filing at 2; OFSA at 19.

[64] *See* April 15 Filing at 42.

[65] Griffiths Aff. at 15–17.

[66] To evaluate the efficacy and cost of its design, the ISO engaged the Analysis Group, Inc. to conduct the Energy Security Improvements Impact Assessment. *See* April 15 Filing at 5–6; Analysis Group, Inc., *Energy Security Improvements Impact Assessment*, at 10 (April 2020) ("Impact Assessment"). The Impact Assessment is included in the April 15 Filing at Attachment C.

[67] Griffiths Aff. at 17–20.

that RER is required in the non-winter months for reliability.[68] More specifically, as Mr. Griffiths explains, the Impact Assessment—after simulating more than 150,000 hours during winter and non-winter months, with numerous configurations and 18 different scenarios—showed only three hours of operating reserve shortages under the existing market rules and all of those shortages were limited to the winter months.[69]

As acknowledged in the ISO-sponsored Brandien Testimony in the April 15 Filing, the ISO already has operational tools to call upon resources when needed to meet its NERC and NPCC reserve requirements.[70] Nowhere in the ISO filing—or in any filings that are part of the record that initiated this proceeding—is there any demonstration that ISO needs a brand-new, day-ahead ancillary RER service to address a non-winter month problem. Furthermore, the Cavanaugh and Griffiths Affidavits identify existing Market Rule mechanisms that already provide for substantial incentives for suppliers of energy to be available and perform when needed in the non-winter months. These market mechanisms include the Reserve Constraint Penalty Factors ("RCPF"), Pay-for-Performance ("PFP") in the Forward Capacity Market, the Opportunity Cost Adder Incentive, and Fast Start Pricing.[71]

As did NEPOOL, the Commission should also reject the ISO's attempt to justify RER during non-winter months as required by NERC and NPCC reliability standards.[72] No other RTO procures RER-like day-ahead reserves, which suggests—if not outright demonstrates—that

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[68] *Id.* *See also* Daly Aff. at 5 (showing a table of Eversource's LDC daily demand history since January 2017).

[69] *See* Griffith Aff. at 13–14 (citing Impact Assessment at 95–96, 100–101).

[70] Testimony of Peter T. Brandien at 17–23 (included as Attachment A to April 15 Filing).

[71] *See* Cavanaugh Aff. at 6, 12–13; Griffiths Aff. at 28–30. As the Cavanaugh Affidavit points out, current market rules provide over $8,000 per MWh incentives through, among others, RCPF and PFP. Cavanaugh Aff. at 6, 12.

the NERC and NPCC reliability standards do not require an RER-like reserve ancillary service. The reliability standards the ISO uses to justify RER require the ISO to have an Operating Plan for next-day operations that addresses each of the following criteria: expected generation resource commitment and dispatch, interchange scheduling, demand (load) patterns, and capacity and energy reserve requirements.[73] An Operating Plan refers to "processes and procedures which are available to the System Operator on a daily basis to allow the System Operator to reliably address conditions which may arise throughout the day."[74] The ISO currently meets its reserve requirements with existing operating reserve products that it will not only continue to procure in real-time as it does now, but also day-ahead through the new ESI design present in both alternatives. Nothing in the NERC/NPCC requirements calls for a new, untested day-ahead RER mechanism to be implemented year-round.

Although it might be desirable and acceptable to create new market mechanisms to support meeting existing NERC/NPCC reserve requirements, the Commission should require that the proponent of any such mechanism demonstrate that the resulting costs are just and reasonable. Both ESI proposals in this proceeding create Generation Contingency Reserve ("GCR") and Energy Imbalance Reserve ("EIR").[75] NEPOOL and the ISO are in alignment that these market mechanisms are appropriate. NEPOOL objects, however, to the year-round procurement of RER because its costs are not at all commensurate with need or benefit. The ISO

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[72] *See* April 15 Filing at 38–41.

[73] *See* North American Electric Reliability Corporation Standard TOP-002-4 – Operations Planning, at Requirement R4.

[74] North American Electric Reliability Corporation Standard TOP-002-4, Section F (Associated Documents) at 7. These processes and procedures are to be "valid for tomorrow, the day after, and the day after that." *Id.*

[75] For a more complete description of GCR and EIR, see the April 15 Filing at 35–38.

does not need this new ancillary service outside of winter months to meet its NERC/NPCC requirements.[76]

The ISO-favored ESI proposal goes far beyond meeting the identified fuel security need. Although NEPOOL supports appropriate compensation for products and services that are needed and that provide demonstrable benefits in the wholesale markets, the need for RER outside of the winter months has not been demonstrated. Accordingly, the ISO has simply not met its statutory burden of proof under Section 205 of the FPA.[77] As the Affidavits in support of the NEPOOL Alternative make clear, the ISO has not provided a sufficient evidentiary basis to justify procuring RER year-round. In fact, the ISO's consultant, i.e., the Analysis Group, that was engaged to evaluate its ESI proposal lends credence to the NEPOOL position to limit RER as a response to a winter-only concern.

The Analysis Group's modeling suggests that the system would operate during non-winter months exactly the same under current market rules as under ESI:

> [B]ecause fuel supply during non-winter months does not face the constraints experienced in winter months, comparable shifts in fuel consumption between CMR [current market rules] and ESI cases do not occur in the non-winter month analyses. Given these factors, our quantitative analysis of real-time market outcomes produces the same outcomes in the CMR and ESI cases. *As a result, impacts that are based on changes in real-time outcomes (e.g., production costs and operational benefits) are not assessed because our analysis would not quantify any change that may occur.*[78]

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[76] *See* Griffiths Aff. at 10–13.

[77] *See, e.g.*, 16 U.S.C. § 824d(e) (providing that the burden of proof to show that the proposed change "is just and reasonable shall be upon the public utility," which is the ISO in this case); *Northern Maine Independent Service Administrator, Inc.*, 119 FERC ¶ 61,231, at P 17 (2007) (finding that party filing under section 205 "failed to demonstrate that the proposed tariff revisions are just and reasonable, and, accordingly, has failed to satisfy its burden of proof under section 205 of the FPA").

[78] Impact Assessment at 78 (emphasis added; internal footnote omitted).

This statement makes clear the new RER component of ESI offers no demonstrated reliability benefits outside of the winter months. Mr. James Daly, the Vice President, Energy Supply for Eversource, whose daily responsibilities include ensuring fuel supplies at reasonable customer costs for New England's largest regulated utility, agrees, in part, that "concerns about fuel security are limited to the most severe peak winter days."[79] Appropriately balancing reliability with costs, the NEPOOL proposal removes RER only in the non-winter months.[80]

Finally, NEPOOL's RER alternative is preferable over the ISO-favored alternative because it more specifically targets the fuel security needs that the July 2 Order required to be addressed. Specifically, the Commission's decision to institute a Section 206 proceeding was motivated by its finding that the Tariff "may be unjust and unreasonable, based on ISO-NE's demonstration . . . that its Tariff fails to address *specific regional fuel security concerns identified in the record*."[81] The record the ISO provided previously, which the Commission relied upon to reach its conclusion that the current market rules might be unjust and unreasonable, identified specific regional fuel security concerns through the OFSA and the Mystic Retirement Studies.[82]

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[79] Daly Aff. at 6; *see also id.* ("During these times, electric loads are at seasonally high levels, and the available natural gas supplies into New England are being used for firm gas customers to primarily heat their homes, offices and factories. Generators that lack firm pipeline capacity are limited in their ability to get enough fuel to operate at desired levels during these periods. While dual-fuel units may avail themselves of oil supplies during these circumstances, inventories are limited, as is the potential ability to refill tanks during the winter months.").

[80] *See* April 15 Filing at 33 ("The[] [Impact Assessment] results reflect that the Energy Security Improvements function similar to insurance, in that they help to protect against price spikes during tight market conditions, but will have higher costs and limited benefits when conditions are mild and the increased energy inventory incented by the improvements is less likely to displace higher cost energy generation.").

[81] July 2 Order at P 2 (emphasis added).

[82] *See id.* at PP 49–54, 55. For its part, the OFSA "modeled 23 possible future resource-mix combinations, including four high-impact outages of key energy facilities, during December, January, and February, of *winter* 2024/2025." OFSA at 19. Using the OFSA model, the Mystic Retirement Studies were similarly constrained to winter periods. Mystic Retirement Studies at 2.

Both Studies used winter-based models.[83] Thus, the Commission's directive in the July 2 Order "to submit . . . permanent Tariff revisions reflecting improvements to its market design to better address regional fuel security concerns" necessarily focused on fuel security concerns tied to winter months, when "fuel security . . . is particularly challenging."[84] By procuring the RER only in winter months, the NEPOOL Alternative more appropriately addresses New England's fuel security needs that were recognized by the Commission.[85]

b) Without a demonstrated need, the Commission should not subject consumers to the unjustified costs of procuring RER in non-winter months.

The NEPOOL Alternative, as supported by a supermajority of NEPOOL members, will reduce consumer costs with no materially adverse impact on system reliability. As noted, the Impact Assessment shows that RER in non-winter months would have no material impact on projected reserve deficiencies. Yet, purchases of RER in those months are projected to cost consumers each year up to $69 million, excluding additional costs if RER quantities are increased for an allowance for LFE.[86] In exchange for these tens of millions of dollars each year, ratepayers can expect a negligible increase, if any, to system reliability during non-winter

[83] Although the Impact Assessment was performed for both winter and non-winter months, "the quantitative assessment focused on the impacts of the market rule changes during *winter months*, because energy security currently poses the most pressing challenges to New England in these months." April 15 Filing at 27.

[84] July 2 Order at P 4.

[85] *See* Daly Aff. at 4–8; *see generally ISO New England Inc. and New England Power Pool Participants Comm.*, 162 FERC ¶ 61,190, at P 47 (holding that the ISO's proposal in that proceeding went "beyond the scope of the [Winter Reliability Program], which [was] designed particularly to ensure reliability *during the winter*") (emphasis added).

[86] Cavanaugh Aff. at 10 (citing Impact Assessment at 102). *See also* Griffiths Aff. at 23–25 (providing analysis on the costs of the ISO supported ESI Alternative versus the NEPOOL Alternative). To the extent the values included in the Cavanaugh Affidavit and the Griffiths Affidavit differ, such differences can be attributed to additional analysis conducted in the Griffiths Affidavit to contextualize the data

months.[87] It would not be just and reasonable based on the information before the Commission here to impose substantial additional costs on consumers by requiring the procurement of RER during non-winter months. Stated differently, by not procuring RER in non-winter months, system reliability would not decrease but consumers would avoid tens of millions of dollars each year of added costs.

The Commission should conclude that the procurement of RER in non-winter months goes well beyond the scope of the July 2 Order and that the ISO has not demonstrated RER in non-winter months to be just or reasonable at this time. Accordingly, the NEPOOL Alternative is a preferable, just and reasonable approach because it limits RER to winter-only months, thereby appropriately balancing costs against demonstrated need and commensurate benefits.

ii. To avoid further unjustified costs to consumers, the Commission should adopt the NEPOOL Alternative that removes the LFE adjustment provision from the RER design.

The NEPOOL Alternative eliminates from the ESI proposal the ISO's discretionary ability to increase the new RER it purchases day-ahead to account for LFE.[88] This modification is preferable to the proposal favored by the ISO for two reasons.

First, the ISO fails to explain fully—much less define—the term "load forecast error."[89] The undefined and vague term is concerning. Aside from presentations regarding the contextual

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presented by the Impact Assessment. To be clear, both Affidavits derive their data from the same Impact Assessment tables.

[87] *See, e.g.*, Daly Aff. at 7 (noting that the ISO's "market design creates material costs to meet RER when actual costs to meet the underlying reliability requirements are, in fact, negligible"); Griffiths Aff. at 25–28.

[88] *See* April 15 Filing at 40–41.

[89] NEPOOL recognizes that the term "load forecast error" is describing the error that is an inherent aspect of forecasting load in real-time. *See* ISO New England Inc., Memorandum Re Reliability Standards Supporting Day-Ahead Ancillary Services Requirements, from ISO New England Inc. to the NEPOOL Markets Committee, at 15 (July 3, 2019), https://www.iso-ne.com/static-

aspects of the LFE, the ISO did not provide NEPOOL stakeholders with an adequate understanding of how the ISO proposed to calculate LFE.[90] The FPA requires that material rates, terms, and conditions of service be on file with the Commission and that the Commission determine that charges under those filings will be just and reasonable.[91] Without more specificity on LFE, the ISO has failed to justify its proposal to impose this cost on consumers and the Commission has no way to satisfy its statutory obligation to ensure resulting rates would be just and reasonable.[92]

Second, even if the ISO were to provide more specificity for LFE, it must demonstrate why such additional costs are justified. Messrs. Cavanaugh and Griffiths explain in their Affidavits how LFE is already addressed under current market rule arrangements.[93] The ISO has not provided justification for imposing these additional costs on consumers to cover for error in day-ahead forecast.[94] In effect, if RER is viewed as an insurance policy for addressing fuel

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assets/documents/2019/07/07_8_9_10_mc_materials_2nd_set.zip (stating that the undefined error is determined "during the course of the operating day"). This recognition, however, does not resolve NEPOOL's concerns of the innate problems with the term "load forecast error."

[90] *See* April 15 Filing at 40 ("The precise reserve capability and the amount to be used for addressing [LFE] is currently unspecified."). In fact, the ISO presented—very late in the Commission-approved stakeholder process—a wide range of possibilities from 200 MWh to 2,240 MWh. ISO New England Inc., *Energy Security Improvements: Market-Based Approaches Replacement Energy Reserves (Goal #2): Accounting for Load Forecast Error Discussion*, at 22 (Feb. 11–13, 2020), https://www.iso-ne.com/static-assets/documents/2020/02/a4_a_ii_esi_rer_goal2_accounting_for_load_forecast_error.pptx.

[91] This principle is reflected by the filed rate doctrine that requires that all wholesale electric rates (and terms and conditions governing such rates) be on file with the Commission. *See, e.g.*, *Ark. La. Gas Co. v. Hall*, 453 U.S. 571, 577 (1981); *Mont.-Dakota Utils. Co. v. Nw. Pub. Serv. Co.*, 341 U.S. 246, 251–52 (1951). This fundamental proposition constitutes the linchpin of the Commission's statutory and regulatory authority. *Lockyer v. FERC*, 383 F.3d 1006, 1011–12 (9th Cir. 2004) (describing the "filed rate doctrine," and finding it to be "central to FERC's operations").

[92] 16 U.S.C. § 824d(c).

[93] *See* Cavanaugh Aff. at 11–13; Griffiths Aff. at 12, 28–30.

[94] *See Id. See also* Daly Aff. at 7 ("With respect to the modification to limit the ISO-NE's discretion, Eversource shares the concern expressed by many NEPOOL members that there would be no limits or guidance on ISO-NE's discretion to purchase additional RER quantities. As with the ISO-NE-preferred

security needs in the winter, then LFE is an unjustifiably expensive insurance rider on the RER insurance policy. That rider is both excessive and unneeded and should not be reflected in the Commission-accepted ESI proposal.

B. NEPOOL's Approved Adder to the Strike Price

The third and final difference between the NEPOOL Alternative and the ISO-favored ESI proposal is the Strike Price $10 Adder for all hours of the Operating Day.[95] The effect of this provision is to reduce costs to consumers by reducing the risk to suppliers that is associated with a financial call option and thereby reducing the risk premium in offers, all without adversely impacting fuel security.[96] The Commission should approve this Strike Price $10 Adder for the following reasons.

First, a $10/MWh addition to the strike price falls well within the range of what would be considered just and reasonable. The ISO has explained that the strike price should follow the principle of "close is good enough."[97] Under this principle, a strike price that is "a little bit above" at the money[98] will not materially change incentives.[99] And ISO-NE's Chief Economist in his ESI White Paper signaled a broad range of just and reasonable outcomes with respect to

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RER proposal, there is a risk that consumers will be obligated to pay for additional ancillary services without any demonstrated need.").

[95] *See* NEPOOL Clean Tariff at § 1.8.3 (included as Attachment E-2 to the April 15 Filing).

[96] *See* Cavanaugh at 16.

[97] The "close is good enough" principle is one of three guidelines to set the strike price. *See* ISO New England Inc., *Energy Security Improvements*: *ISO Discussion Paper, Version 1*, at 63 (Apr. 2019), https://www.iso-ne.com/static-assets/documents/2019/04/a00_iso_discussion_paper_energy_security_improvements.pdf; *id.* ("In simpler terms, a strike price that is set a little bit above the 'at the money' level doesn't change incentives materially.").

[98] "At the money" is the second guideline in setting the strike price. *Id.* at 62.

[99] *Id.* at 63 ("In simpler terms, a strike price that is set a little bit above the 'at the money' level doesn't change incentives materially.").

the strike price.[100] The Commission and the courts have long recognized that there is a range of just and reasonable outcomes,[101] and the modest $10/MWh adder to the strike price, which enjoys NEPOOL support (as well as support from NESCOE), remains well within a range of reasonableness.

Of course, the level of the strike price can have a material impact on costs to consumers. The ISO's own independent External Market Monitor ("EMM") provided that the additional $10/MWh "[w]ould reduce the likelihood that the day-ahead ancillary services market would lead to excessive costs to consumers . . . during mild and moderate operating conditions."[102] In addition, the ISO's consultant determined that the Strike Price $10 Adder will reduce costs to consumers by as much as $15 million in the winter months and by as much as $19 million in non-winter months.[103]

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[100] ISO New England Inc., *Energy Security Improvements: Creating Energy Options for New England*, at 76 (Apr. 15, 2020) (providing that "small inaccuracies in setting the strike price 'at the money' should not matter much") (included as Attachment B to the April 15 Filing).

[101] *See, e.g.*, *FPC v. Conway Corp.*, 426 U.S. 271, 278–79 (1976) (discussing the Commission's broad authority in choosing a rate among a range of just and reasonable rates); *Permian Basin Area Rate Cases*, 390 U.S. 747, 791–92 (1968); *Colo. Interstate Gas Co. v. FPC*, 324 U.S. 581, 589 (1945) (noting that "Allocation of costs is not a matter for the slide-rule. It involves judgment on a myriad of facts. It has no claim to an exact science."); *Louisville Gas & Electric Co.*, 114 FERC ¶ 61,282, at P 29 (2006) (finding that "the just and reasonable standard under the FPA is not so rigid as to limit rates to a 'best rate' or 'most efficient rate' standard" but that "a range of alternative approaches often may be just and reasonable").

[102] Memorandum from David B. Patton and Pallas Lee VanSchaick to ISO New England and NEPOOL Markets Committee, subject: NESCOE Proposal to Raise the Strike Price of Energy Call Options at 3 (Mar. 20, 2020), https://www.isone.org/static-assets/documents/2020/03/a2_b_vi_emm_memo_re_nescoe_strike_price_amendment.pdf ("EMM Memorandum").

[103] *See* Cavanaugh Aff. at 17 (citing Impact Assessment at 97–98, 101–102). The mathematical conclusion is that a year-round Strike Price $10 Adder could result in savings as high as $34 million, i.e., $15 million (in winter months) plus $19 million (in non-winter months). *See also* Daly Aff. at 7 (providing that "[b]y adding $10/MWh to the strike price, as the NEPOOL-approved alternative does, the risk that there will be close out costs decreases, which will correspondingly decrease the cost of the option to consumers").

Moreover, the Strike Price $10 Adder would reduce costs with no material impact on system reliability. The EMM made this point when stating that the Strike Price $10 Adder "would not undermine the market and reliability benefits of satisfying reserve adequacy needs within the market, but [w]ould reduce the likelihood that the day-ahead ancillary services market would lead to excessive costs to consumers to during mild and moderate operating conditions."[104] The EMM further explained that "[t]he overall net revenue impacts are very small, and they only account for a significant share of the impacts during moderate market conditions when reserve providers are less likely to materially impact reliability if available."[105]

IV. CONCLUSION

The ISO described the ESI design as "function[ing] similar to insurance, in that [it] help[s] to protect against price spikes during tight market conditions, but will have higher costs and limited benefits when conditions are mild and the increased energy inventory incented by the improvements is less likely to displace higher cost energy generation."[106] Accepting that characterization, NEPOOL agrees that insurance is useful when it addresses a demonstrated need. ISO-NE, however, favors a very high-premium, gold-plated insurance policy that is not needed to address regional fuel security concerns and that is not otherwise justified under the statutory just and reasonable standard.

The NEPOOL Alternative appropriately addresses fuel security when needed, consistent with the Commission's directive in this proceeding, and will maintain fuel security while protecting consumers from significant unjustified costs. In light of the substantial and novel

[104] EMM Memorandum at 3.

[105] *Id.*

[106] April 15 Filing at 33.

changes to the Tariff envisioned by both ESI proposals, the NEPOOL Alternative strikes a more appropriate and preferred balancing of interests. As such, NEPOOL respectfully requests that the Commission accept the NEPOOL Alternative and require ISO-NE to make the three modifications to the ESI design proposed by NEPOOL.

Respectfully submitted,

NEPOOL Participants Committee

By: */s/ David T. Doot*

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Dated: April 24, 2020

ATTACHMENT 1 – AFFIDAVIT OF DAVID A. CAVANAUGH

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

ISO New England Inc.	**)**	**Docket Nos. EL18-182-000** **ER20-1567-000**

AFFIDAVIT OF DAVID A. CAVANAUGH

Introduction, Qualifications and Purpose of Affidavit

Q: Please provide your name, title, and company description.

A: David A. Cavanaugh, Vice President Regulatory & Market Affairs, Energy New England ("ENE"). ENE is a municipal lighting plant cooperative, organized and existing under Massachusetts General Laws, chapter 164, Section 47C, and a public instrumentality of the Commonwealth of Massachusetts, established in 1998. ENE provides services including but not limited to, wholesale and retail power supply contracting, risk and credit management, electric generation bidding and scheduling and asset management, development and submission of price-sensitive and fixed demand bids for loads in the day ahead market, ISO settlement management, energy efficiency and electric vehicle program management, peak load management, and regulatory and governmental affairs representation to municipal electric systems located in the six New England states. ENE provides generation bidding and scheduling in the ISO New England Inc. ("ISO-NE") markets and related services to municipal and merchant owned electric generation for approximately 500 MW of diverse generating resources from wind, dual-fuel fired combustion turbines, and conventional oil-fired resources. ENE municipal light plant customers serve approximately 1,300 MW of peak load, and own and operate approximately 350 MW of electric generation.

ENE acts as agent for 25 New England municipal electric utilities for their interface with ISO-NE and in the NEPOOL stakeholder process.

Q: Please describe your relevant work experience and education.

A: In my approximately 35 years in the utility business, I have held positions in merchant power companies, Public Power, Investor Owned Utilities and ISO/RTO organizations. I spent approximately 15 year with Northeast Utilities ("NU", now Eversource) where I held

numerous positions within the Fossil/Hydro Engineering & Operations division. For approximately 13 of those years I held various positions within conventional thermal and hydro generation operations and corporate support services, with seven of those years holding nearly all positions related to the direct operation of coal, oil and duel-fuel electric power generating stations. In addition, I spent approximately 18 months as Project Manager, Conservation and Load Management responsible for managing NU's energy efficiency capacity resource participation in the Forward Capacity Market ("FCM") and demand response markets.

From 1998 to 2011, I held various positions within ISO-NE including Director of Market Services. In this role, I had direct control and responsibility for market-facing business operations, including but not limited to: Customer Support, which is responsible for resolving market participant issues related to participation in the New England markets; Market and Asset registration, which is the functional area for enrollment of market participants; registration of market participant loads, demand response, and generation assets for participation in the markets; and asset and resource auditing and performance monitoring, where the performance for resources are verified with regards to participation requirements of the various market products in which they may enroll.

Prior to joining ENE I served for three years as NRG's Director of Regulatory and Market Affairs for the New England markets with responsibility for supporting the interests of NRG in the NEPOOL stakeholder process, with ISO-NE, and industry associations such as the New England Power Generators Associations ("NEPGA") where I served as a board member. In my role of Director for NRG, I provided direct support to NRG's commercial operations and asset developments teams including support of the Canal 3 combustion turbine development project, which went into service in May 2019.

During 2013 and 2014, and since 2017, I have served as ENE's Vice President Regulatory and Markets Affairs with the responsibility for establishing regulatory strategies for ENE and its customers, and managing the interests of ENE and its customers in the ISO New England and NEPOOL stakeholder process, with the Federal Energy Regulatory

Commission ("FERC" or the "Commission"), ISO-NE, the states through the New England States Committee on Electricity ("NESCOE"), and other industry associations. In my VP role, I provide direct support to ENE's Energy Operations, mid and back office teams, and to ENE and its customers in pursuit of their objectives in competitive wholesale electric markets and in interaction with ISO-NE.

I was also elected by the Participants in the NEPOOL Publicly Owned Entity ("POE") Sector to be their Vice-Chair of the NEPOOL Participants Committee, and have served in that role since January 2019.

I hold a master's degree in education from Cambridge College

Q: In what capacity are you submitting this affidavit?

A: I am submitting this affidavit in my capacity as representative of the 25 individual Market Participants in NEPOOL, which ENE represents. I am also submitting it in my capacity as Vice Chair of the POE Sector of NEPOOL, which is made up of many municipal and cooperative power entities in New England. While I do not speak for each of the individual members of that Sector, the POE Sector did vote in support of the amendments described below that make up the NEPOOL-approved alternative Energy Security Improvements ("ESI") proposal ("NEPOOL Alternative").[1]

Q: What is the purpose of your affidavit?

A: The purpose of my affidavit is to explain why entities I represent in the NEPOOL stakeholder process support the NEPOOL Alternative rather than ISO-NE's proposal, and why the Commission should adopt the NEPOOL Alternative as the right balance of fuel security for the region and consumer protection from unnecessary costs.

[1] Although both of the proposals in this proceeding were submitted by ISO-NE, only one, containing the three amendments discussed herein, received support from NEPOOL. For ease of reference, the amended proposal is referred to throughout as the "NEPOOL Alternative," despite it being an ISO-NE proposed alternative.

Background

Q: Please describe your participation in the region's fuel security discussions leading up to the ESI stakeholder process.

A: As the representative for ENE and the 25 customers it represents in NEPOOL, I have been very involved in the NEPOOL stakeholder process and related matters and proceedings leading up to the development of ESI. ENE has a consistent record of bringing forth or supporting initiatives that address New England fuel security concerns through a balanced approach of reliability measures procured at reasonable consumer costs. From the beginning, ENE has worked to assure solutions developed to address fuel security issues in New England address them in a way that balances the need to maintain reliability with protecting consumers from undue costs. These efforts in the context of fuel security in New England include the following:

- In response to the Mystic Units 8 and 9 priced retirement bids and attendant reliability concerns, ENE developed and brought forth at the June 29, 2018 NEPOOL Participants Committee meeting a proposal to restore the Winter Reliability Program, as previously detailed in the ISO-NE Market Rules.

- ENE, along with the Massachusetts Attorney General's Office ("MA AGO"), developed and sponsored joint amendments at the August 25, 2018 Participants Committee meeting designed to limit ISO-NE's ability to retain existing capacity resources for the purpose of fuel security to FCAs 13 and 14 only. This proposal was an effort to protect consumers from undue costs and force development of other solutions to fuel security in New England in time for FCA 15. The ENE/MA AGO amendment was supported by NEPOOL, but not by ISO-NE in its August 31, 2018 compliance filings, although ISO-NE later sought to terminate the fuel security retention provision for FCA 15.

- At the March 13, 2019 Participants Committee meeting, ENE introduced a proposal to modify ISO-NE's Inventoried Energy Program ("IEP") with the intent of

providing winter fuel security from resources that will actually provide incremental winter fuel security at a reasonable cost to those consumers that will pay for it.

- ENE and its customers remain active in the Mystic Cost Of Service Agreement and IEP proceedings.

Similar motivation, for ENE and its customers' activities within the NEPOOL stakeholder process and at FERC, underlies our support for the NEPOOL Alternative over the ISO-NE proposal in this proceeding.

Q: Please describe your participation in the ESI stakeholder process.

A: I have been fully involved with the stakeholder process for ESI by participating in all stakeholder meetings, probing the proposed novel ESI design to build a deeper understanding of the design principles, intended outcomes, benefits and costs. Early in the ESI design stakeholder process, ENE and members of the POE Sector, as experienced owner/operators and bidding and scheduling entities for a diverse set of electric generating resources, agreed with ISO-NE's identification of a problem in the markets regarding incentives and compensation. ISO-NE identified the tension that resource owners face between uncertain production schedules and return on investment for making fuel arrangements: *viz.*, the misalignment of costs and revenues.

POE members also agreed with ISO-NE that creating Generation Contingency Reserve ("GCR") products in the Day-Ahead Energy Market was an appropriate step in resolving the identified incentive and alignment issues and for providing electric generating resources compensation, in that market, for services they have been providing but for which they had not previously been compensated.

Q: Why did you agree with ISO-NE's proposal on year-round GCR?

A: Unlike RER, we view implementation of GCR as a year-round product as appropriate for the following reasons: (1) it addresses a long-standing NEPOOL priority of implementing reserve products in the Day-Ahead Energy Market to improve the markets and

reliability/fuel security. Year-round GCR also comports with ISO-NE's External Market Monitor ("EMM") recommendations for the same objectives, dating back to at least June 2015 for Day-Ahead reserve products that would "[a]ddress concerns regarding unit availability by scheduling reserves in a timeframe in which suppliers can make fuel and staffing arrangements to be available for reserve deployments."[2]

Q: Are there existing incentives under the ISO-NE Market Rules that are relevant to fuel security under stressed system conditions?

A: Yes. There are substantial existing incentives to secure fuel and perform during stressed system conditions under the current Market Rules, and ESI would increase them. Those current incentives add up to potentially $8000/MWh available for performance in stressed system conditions. They include incentives of up to $1000/MWh and $1500/MWh in payments related to Reserve Constraint Penalty Factors for Ten and Thirty minute reserve deficiencies respectively, and the $5455/MWh Pay-For-Performance incentive available in scarcity conditions.

Q: How else did ENE participate in ESI development?

A: During the ESI development, ENE and POE Sector members met with ISO-NE senior management, and the ISO-NE Board of Directors and provided feedback on the ESI design elements. In those meetings, we shared our concerns with the pace of development needed to support an initial July 1, 2019 filing date, lack of essential details on the ESI program design, such as the Forward Seasonal Procurement, Market Mitigation, and the undue cost burden of a year-round program for some of the ancillary services. ENE and POE members raised additional concerns regarding ISO-NE's initial strike price design for ESI. ISO-NE had proposed static strike price values for on-peak and off-peak hours stating, "close enough is good enough." ENE and POE Sector members were vocal about the need for, at a minimum, an hourly strike price value as a way to minimize consumer costs that would

[2] *Highlights of the 2014 Annual Report on the ISO New England Markets*, Presentation by Potomac Economics, External Market Monitor, to the NEPOOL Participants Committee, at 21 (June 23, 2015), https://www.iso-ne.com/static-assets/documents/2015/08/npc_20150625_composite7.pdf.

result from inherent and unnecessary risk premiums, and to minimize option risk premiums included in all call option offers. Risk-based premiums to account for strike price uncertainty would materially affect the two largest cost components of the ESI design, Day-Ahead cleared options and Forecasted Energy Requirement ("FER") payments,[3] layering unnecessary costs on consumers.

At the July 15, 2019, FERC Open Meeting regarding ESI, on behalf of ENE, its customers, and the POE members at large, I provided comments: (1) recognizing POE Sector member alignment with certain of ISO-NE's ESI design components, and concerns or disagreement with certain other ESI design components, (2) concern with lack of details on the aforementioned design components and well developed year-round ESI program cost estimates, and (3) significant concern that ISO-NE and its stakeholders needed additional time for a more fulsome development, debate and consideration of ESI.[4]

As the record shows, ISO-NE dropped the Multi-Day Ahead Market component from the ESI design. FERC appropriately accepted two requests for extensions of the ESI compliance date, which provided for a more fulsome development and stakeholder process to the benefit of everyone involved, through a more developed and considered ESI filing. No doubt, there is more to be done to further improve upon the ESI design.

[3] Under ESI, a new constraint is added to the day-ahead clearing engine. The new constraint looks to co-optimize, for each hour, the clearing of Energy Imbalance Reserve ("EIR") Options and supply resources (such as generation, active demand resources, imports, incremental offers (virtual supply) to meet the day-ahead FER demand, which is composed of ISO's system-wide load forecast plus cleared export transactions. The EIR option clearing price is paid to all cleared EIR Options and also paid to all day-ahead cleared physical supply. The ISO's White Paper "Energy Security Improvements: Creating Energy Options for New England", section 6 "Energy Imbalance Reserve and the Forecast Energy Requirement", at 105, (at 224 of the ISO-NE filing) describes EIR and FER and the interplay between them. Section 6.4 "The Forecasted Energy Requirement: Details," at 135 of the White Paper (at 254 of the ISO-NE filing) provides the details for the day-ahead clearing of EIR Options and resources to meet the FER constraint.

[4] *See Comments of Public Power*, Docket No. EL18-182, *et al.*, (July 17, 2019).

Q: How did the POE Sector vote on the ESI proposal, including the amendments and the unamended ISO-NE version?

A: The POE Sector voted 16.79% in favor of each of the three amendments and 0.0% in favor of the unamended proposal at the April 2, 2020 NEPOOL Participants Committee meeting.[5]

Q: Please describe each of the amendments that were voted on by the NEPOOL Participants Committee.

A: The NEPOOL Alternative contains three amendments to ISO-NE's proposal. First, it amends the proposed RER provisions to provide for ISO-NE to calculate the RER quantity and resulting costs only for the three winter months of December through February. To effectuate this outcome, the NEPOOL Alternative sets the RER quantity to zero during the nine non-winter months. Second, the NEPOOL Alternative removes from the RER requirements the language that would authorize ISO-NE to increase the RER amount in case its load forecast is in error. To accomplish this change, the NEPOOL Alternative removes ISO-NE's proposed authorizing language altogether. Third, the NEPOOL Alternative revises ISO-NE's proposal by adding $10/MWh to the strike price in all hours.

Q: Regarding using a winter-only RER, please explain why the POE Sector supports this part of the NEPOOL Alternative.

A: ENE and POE Sector members supported the alternate RER design for the three winter-months. This NEPOOL Alternative design is directly responsive to the Commission's directive as provided in this proceeding, while not adding undue costs to consumers. RER in the winter-only months provides additional tools and incentives for electric generation resource owners to manage risks related to securing additional stored fuel or contractual fuel delivery arrangements during the three winter months, the only period in which there is demonstrated fuel security risk in New England. Unlike year-round use of GCR, as explained above, we did not see a similar benefit/need for year-round RER that would

[5] *See Noticed Actions of the NEPOOL Participants Committee*, at 2 (April 3, 2020), https://www.iso-ne.com/static-assets/documents/2020/04/npc-noa-20200402.pdf.

justify its costs to consumers. Under ISO-NE's proposal, RER would be effective for every month of the year, including nine of those in which there is no demonstrated fuel security need, thereby exposing consumers to unnecessary costs with no additional system reliability/fuel security benefit.

Q: Please explain how support for the winter-only RER proposal in the NEPOOL Alternative is consistent with the compliance directive to address regional fuel security concerns.

A: In January 2018, ISO-NE issued its Operational Fuel-Security Analysis ("OFSA") report highlighting winter fuel security concerns in a future winter (2024/2025) as a reference point. In early 2018, ISO-NE also conducted its Mystic Retirement Study. The OFSA report, and the Mystic Retirement Study, illustrating potential future winter fuel security issues, was relied upon by FERC as valid in support of ISO-NE's August 31, 2018 compliance filing (EL18-182-000). That ISO-NE compliance filing, in which ENE participated, did the following: (1) it established tariff language for the triggers used in determining if existing capacity resource(s), which had submitted a retirement delist bid(s) in a Forward Capacity Auction ("FCA"), should be retained for the purpose of fuel security; (2) it implemented short-term Cost Of Service Agreement ("COSA") provisions for resources retained for fuel security; and (3) it provided for treatment of such resources in an FCA, as well as for a cost allocation mechanism for the associated COSA(s). RER implemented for the winter-only months is directly responsive to the OFSA concerns and comports with FERC's compliance directive that ISO-NE develop "permanent Tariff revisions reflecting improvements to its market design to better address regional fuel concerns." ENE and the POE Sector view implementation of RER outside of the three winter months as beyond the scope of what FERC ordered, because it goes beyond the demonstrated fuel security concerns supported by the OFSA report upon which the Commission relied in directing tariff changes. There is not a sufficient good reason for doing so and thereby imposing unjustified substantial extra costs on consumers.

Q: To what extent did ISO-NE demonstrate a reliability need for a year-round implementation of RER?

A: The compliance requirement in the FERC orders is for a long-term market-based solution to address demonstrated winter fuel security concerns. During the ESI NEPOOL stakeholder discussions, ISO-NE presented no evidence of historical record or forecasted expectation that showed that dispatching resources in the non-winter months, for loss of supply in real-time, has been or would be constrained by lack of available fuel stored or otherwise. Conversely, the OFSA report did provide scenarios of expected fuel-based resource constraints during the winter months, which supports RER in the winter months, but we have seen no analysis to support RER beyond the winter months. Absent such a demonstration, we think that imposing tens of millions of dollars of extra costs on consumers for non-winter month fuel security measures is not justified.

Q: To what extent will use of a year-round versus a winter-only RER affect consumer costs?

A: The cost impacts are significant. As provided for in the "Energy Security Improvements Impact Assessment" report, included in ISO-NE's ESI filing, an estimated consumer savings of up to $69 million per year would be realized when limiting RER to winter-only months. Tables 54 and 55 of that report provide estimated consumer savings by setting the RER requirement to zero in the non-winter months. Table 54, Non-Winter Alternative ESI Proposals – LMPs & Payments, Non-Winter Severe Case, establishes consumer savings associated with limiting RER to winter-only months as the difference between non-winter cost of ESI with and without RER. Table 54, therefore, provides the consumer saving of limiting RER to winter-only months as the difference between the non-winter months ESI Central Case cost of $125 million and the No RER Case cost of $56 million, that is: $69 million.[6]

[6] *See Compliance Filing of Energy Security Improvements Addressing New England's Energy Security Problems*, ISO New England, Inc., Docket Nos. EL18-182-000 and ER20-1567-000 (Apr. 15, 2020) (the "April 15, 2020 Filing"), at 35 in Attachment C, (containing the *Energy Security Improvements*

Q: Regarding removal of the Load Forecast Error ("LFE") adjustment to RER, please explain why ENE and the POE Sector supports this part of the NEPOOL Alternative.

A: ENE and POE members supported the removal of the LFE adjustment from the RER design component because ISO-NE did not provide a compelling case for its inclusion that justified its unquestionably higher costs to consumers. ISO-NE proposes in the ESI alternative it favors that it use a 600 MWh LFE adjustment. ISO-NE explained that such an amount is representative of the 95th percentile of ISO-NE's historical load forecast error review.[7] That 95th percentile means that 5% of the time the load forecast was off from actual real-time load by 600MWh. The LFE adjustment would be on top of the proposed RER requirements for RER-90 minute and RER-240 minute reserve. According to ISO-NE's July 9, 2019 presentation, RER-90 and RER-240 are defined as one-half the second largest contingency and one-half the third largest contingency respectively.[8] These values equate to approximately 700 MWh for RER-90 and 650 MWh of additional reserve capability procured in the Day-Ahead Market.

Q: Is there any other reason why the LFE adjustment is not justified?

A: Yes. The ESI design, without LFE, in combination with existing market incentives provides robust incentives for resources to be fully responsive to system contingencies. Structurally, ESI positions the system, coming out of the Day-Ahead market clearing, with sufficient resources and with sufficient incentives to have fuel available to meet their Day-Ahead cleared schedules and ESI options to respond to system contingencies. Tables 62

Impact Assessment, Analysis Group (April 2020) ("Analysis Group ESI Report"), at 102, https://www.iso-ne.com/static-assets/documents/2020/04/energy_security_improvements_filing.pdf.

[7] *NEPOOL Participants Committee Report*, Presentation by ISO New England to the NEPOOL Participants Committee, at 62 (July 9, 2019) (the "July 9, 2019 Presentation") https://www.iso-ne.com/static-assets/documents/2019/07/july-2019-coo-report.pdf.

[8] *The July 9, 2019 Presentation*, at 56–57, https://www.iso-ne.com/static-assets/documents/2019/07/july-2019-coo-report.pdf.

to 64 of the Analysis Group ESI Report illustrate an exponential increase in Net Revenue ($/MW) when compared to the Holding Costs of fuel even without the LFE adder.[9]

Those large incentives, combined with the very substantial existing incentives of up to approximately $8000/MWh provided by the existing Reserve Constraint Penalty Factors, and the effective Pay-For-Performance Rate in the Forward Capacity Market, provide ample motivation for resources to secure fuel and respond to contingencies consistent with NERC and NPCC criteria, and thereby eliminate the need for a LFE adjustment, absent experience showing otherwise.

To further incentive performance, in December 2018 ISO-NE introduced Opportunity Cost Adder incentives for resources, which represent the value of a resource's limited fuel, thru appropriate scarcity-based price formation, increase LMPs, and increase system reliability during anticipated stressed system conditions such as winter cold snaps.[10] ISO-NE calculates resource specific opportunity cost adders, based on expected stressed system conditions over a rolling multi-day forward time horizon, which elevate a resource's energy market reference price, the maximum economic marginal price at which a resource may offer into the energy market. Opportunity cost adders are calculated by ISO-NE and applied automatically to stored fuel resources, such a as oil, dual-fuel,[11] and LNG fired

[9] *See* Analysis Group ESI Report, at 122–23, in Attachment C of the April 15, 2020 Filing, https://www.iso-ne.com/static-assets/documents/2020/04/energy_security_improvements_filing.pdf.

[10] *See* ISO New England Inc., *Opportunity Costs and Energy Market Offers (Phase 1): ISO's Proposal to Estimate Opportunity Costs for Oil and Dual-Fuel Resources with Inter-temporal Production Limits* (November 7–8, 2018), https://www.iso-ne.com/static-assets/documents/2018/11/a6_presentation_opportunity_costs_and_energy_market_offers.pptx.

[11] *See Memorandum re Efficiency and Market Power in Opportunity Cost Modeling,* Memorandum to the NEPOOL Markets Committee, (November 2, 2018), https://www.iso-ne.com/static-assets/documents/2018/11/a6_memo_re_efficiency_and_market_power_in_opportunity_cost_modeling.pdf.

resources[12] and represent a profit maximizing offer structure for the affected resources.[13] The opportunity cost adder adjusted reference prices maximize the value of the resource's fuel, over a rolling time-horizon and relocates the resource in ISO-NE's dispatch stack to a position that provides maximum value to the resource owner and system reliability. Opportunity Cost Adders are included as part of the ISO-NE ESI design.[14]

Lastly, when looking at the totality of incentives to support resource responsiveness to stressed system conditions, I would also note that under the current Market Rules, fast-start pricing also provides incentives for suppliers under stressed system conditions. Generally speaking, "fast-start" applies to resources that can be started in thirty minutes or less, that have a minimum run time of one hour or less, and that have a minimum down time of one hour or less. Under ISO-NE's fast-start pricing mechanism, the fast-start capable resources can be committed and dispatched in real-time. This mechanism provides incentives for all fast-start capable resources during stressed system conditions when reliability risk is higher. Again, this market mechanism is just another tool that ISO-NE already has to manage energy security.

Q: Is there any additional noteworthy reason why the LFE adjustment is not justified?

A: Yes, the LFE adjustment creates unnecessary and substantial consumer costs. As provided for in Table 48, Scenarios Evaluating Alternate ESI Proposals - Prices & Payments, Winter Frequent Case of the Analysis Group ESI Report including ISO-NE's proposed LFE

[12] *See Memorandum re Natural Gas Price Forecast Method for Energy Market Opportunity Costs*, Memorandum to the NEPOOL Markets Committee (October 9, 2018), https://www.iso-ne.com/static-assets/documents/2018/10/a7_memo_re_natural_gas_forecast_method_energy_market_opportunity_costs.pdf.

[13] *See Energy Market Opportunity Costs for Oil and Dual-Fuel Resources with Intertemporal Production Limits*, Presentation by ISO New England Inc. (November 13, 2018; updated December 3, 2019), https://www.iso-ne.com/static-assets/documents/2018/11/20181113-opportunity-cost.pdf.

[14] *See* Analysis Group ESI Report, at 22, in Attachment C of the April 15, 2020 Filing, https://www.iso-ne.com/static assets/documents/2020/04/energy_security_improvements_filing.pdf.

adjustment of up to 600 MWh of added to RER would cost consumers as much as $99 million per year.[15] The estimated $99 million of additional costs to consumers is for the three winter-only months and if applied under a year-round RER the costs faced by consumer would be significantly higher. Table 48 provides estimated consumer cost for including the LFE adder to RER in the winter months by comparing the difference in the change in customer payments between the Central Case value of $132 million per winter period and the RER Plus case value of $231 million, the difference is an increased consumer cost of $99 million. Consumers should not have to pay for an extremely expensive insurance option, which is only loosely-defined, not demonstrated to be needed, and not supported by NEPOOL as the principal stakeholder organization for ISO-NE. ISO-NE has the ability, after experience implementing ESI, to provide evidence of any LFE adjustment need and to use such evidence to bring proposed tariff revisions through the stakeholder process and to the Commission for consideration. ENE and the POE Sector would be open to considering adding a properly defined LFE adjustment in the future, *if experience shows it is needed*.

Q: Please explain how support for the LFE proposal in the NEPOOL Alternative is consistent with the compliance directive to address regional fuel security concerns.

A: As discussed above, RER in the winter months is responsive to the Commission's directive in this proceeding. There is no analysis to support the inclusion of the LFE adjustment to RER, and the removal of the excessive insurance policy provided by the LFE adjustment would not diminish winter-only RER's ability to address the demonstrated fuel security need that was the focus of the Commission's compliance directive. RER without the LFE adjustment provides additional winter fuel security without undue and unsubstantiated costs to consumers.

[15] *See* Analysis Group ESI Report, at 99, in Attachment C of the April 15, 2020 Filing, https://www.iso-ne.com/static-assets/documents/2020/04/energy_security_improvements_filing.pdf.

Q. Regarding the Strike Price $10 Adder, please explain why ENE and the POE Sector supports this part of the NEPOOL Alternative.

A. The Strike Price $10 Adder appropriately limits costs to consumers without adversely affecting fuel security, as clearly stated after analysis by ISO-NE's EMM. ISO-NE's Strike Price design proposal began with static on-peak (16 hour) and off-peak (8 hour) values. After stakeholders expressed concerns with ISO-NE's proposed on-peak and off-peak static strike prices ISO-NE proposed a shaped strike price which is include as part of its ESI filing. ISO-NE's ESI white paper, April 2019-version 1 and the April 15, 2020 Filing describe three important aspects of how strike prices should be addressed in the Day-Ahead Market under the proposed ESI design.[16] The three important aspects are (1) strike prices should be known before market participants submit Energy Call Option Offers for ESI reserve products, (2) the most efficient outcomes with options are when the strike price is set at the approximately expected value (in the case the expected real-time LMP), and (3) strike prices should follow the ISO-NE articulated principle that "close is good enough [because] [i]n practice, setting the strike price precisely 'at the money' doesn't matter much, within limits."[17]

The NEPOOL Alternative's Strike Price $10 Adder applies the same three important aspects of strike prices, as detailed in the April 15, 2020 Filing, to the NEPOOL preferred approach to setting the strike price. The NEPOOL Alternative Strike Price $10 Adder limits costs to consumers without materially adversely affecting the incentives to support resources' responsiveness in system stressed conditions, consistent with the findings of the EMM in its March 20 memo (see below). Tables 62 and 63 of the Analysis Group ESI

[16] *Energy Security Improvements, ISO Discussion Paper version 1*, ISO-New England, at 61 (April 2019), https://www.iso-ne.com/static-assets/documents/2019/04/a00_iso_discussion_paper_energy_security_improvements.pdf; *see also* the April 15, 2020 Filing, at 46, https://www.iso-ne.com/static-assets/documents/2020/04/energy_security_improvements_filing.pdf.

[17] *Energy Security Improvements, ISO Discussion Paper version 1*, ISO-New England, at 61 (April 2019), https://www.iso-ne.com/static-assets/documents/2019/04/a00_iso_discussion_paper_energy_security_improvements.pdf.

Report illustrate very little change in the significantly increased Net Revenue ($/MW), when compared to the Holding Costs of fuel, that resources would receive when comparing the Central Case to the Strike Plus $10 Case for Winter Severe and Winter Extend cases, the periods in which the system is most stressed.[18]

The Strike Price $10 Adder reduces supplier close-out risk resulting in lower close-out risk premiums contained in call option offers, with the result being lower pricing. Those lower prices result in substantial avoided costs to consumers and, as explained by the EMM, they do so without undermining suppliers' incentive to procure fuel to meet ESI cleared options when called.

Q: Would adoption of the Strike Price $10 Adder adversely affect ISO-NE's ability to address demonstrated fuel security concerns?

A: No. I, and the POE members I represent, found very persuasive the March 24, 2020 presentation at the Markets Committee meeting of ISO-NE's EMM. The EMM provided a memorandum, dated March 20, 2020, which laid out the EMM's review of the proposed Strike Price $10 Adder, its impact on close-out costs suppliers would face and its impact on incentives for supplier to secure fuel arrangements to meet day-ahead cleared ESI Options.[19] The EMM supported the Strike Price $10 Adder, finding that this change to ISO-NE's proposal: "would not undermine the market and reliability benefits of satisfying reserve adequacy needs within the market, but [w]ould reduce the likelihood that the day-ahead ancillary services market would lead to excessive costs to consumers to during mild and moderate operating conditions."[20] We look to ISO-NE to explain why added costs to our consumers are justified. Here, their own EMM explained in a compelling way how costs to consumers could be reduced without undermining supplier incentives in ESI. As

[18] *See* Analysis Group ESI Report, at 122–23, in Attachment C of the April 15, 2020 Filing, https://www.iso-ne.com/static-assets/documents/2020/04/energy_security_improvements_filing.pdf.

[19] *Memorandum Re NESCOE Proposal to Raise the Strike Price of Energy Call Options*, Potomac Economics, (March 20, 2020), https://www.newengland-rto.net/static-assets/documents/2020/03/a2_b_vi_emm_memo_re_nescoe_strike_price_amendment.pdf.

[20] *Id.* at 3.

such, we supported this change as a means of reducing costs without diminishing ESI's efficacy in addressing demonstrated fuel security needs.

Q: How would use of the Strike Price $10 Adder affect costs to consumers?

A: The Analysis Group ESI Report provides that the strike price adder would reduce costs to consumers, without undermining suppler incentives, by up to $1 million, $13 million and $15 million in the Winter Months' Frequent, Extended and Infrequent Cases relative to the change in costs associated with the ESI Central Cases, respectively.[21] Consumer cost would be reduced an additional $18 million and $19 million in the Non-Winter months' Moderate and Severe cases relative to the change in costs associated with the ESI Central Cases, respectively.[22]

Conclusion

Q: Do you have any final statement about the two ESI proposals before the Commission?

A: Yes. After spending the last several years immersed in New England fuel security and ESI issues, I can say that the NEPOOL Alternative strikes an appropriate balance between maintaining reliability/fuel security and protecting consumers from unjustified costs.

[21] *See* Analysis Group ESI Report, at 97–98, in Attachment C of the April 15, 2020 Filing, https://www.iso-ne.com/static-assets/documents/2020/04/energy_security_improvements_filing.pdf.

[22] *See* Analysis Group ESI Report, at 101–102, in Attachment C of the April 15, 2020 Filing, https://www.iso-ne.com/static-assets/documents/2020/04/energy_security_improvements_filing.pdf.

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

/s/ David A. Cavanaugh

David A. Cavanaugh

Executed on April 24, 2020.

ATTACHMENT 2 – AFFIDAVIT OF JAMES G. DALY

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

	)	**Docket Nos. EL18-182-000**
ISO New England Inc.	)	**ER20-1567-000**
	)	

AFFIDAVIT OF JAMES G. DALY

Introduction

Q: Please state your name and business address.

A. My name is James G. Daly. My business address is 247 Station Drive, Westwood, Massachusetts 02090.

Q. By whom are you employed and in what capacity?

A. I am the Vice President, Energy Supply for Eversource Energy Service Company, which provides services to Connecticut Light and Power Company, NSTAR Electric Company, Public Service Company of New Hampshire, NSTAR Gas Company and Yankee Gas Company each d/b/a Eversource Energy.

Q. Please describe your education and professional background.

A. I graduated from Trinity College in Dublin, Ireland with a Bachelor's Degree in Electric Engineering and from University College Dublin, Ireland with a Master's Degree in Industrial Engineering. From 1980 through 1988, I held the position of Regional Marketing Engineer with responsibility for supply arrangements with large industrial customers for the Electricity Supply Board in Dublin, Ireland. I joined Unitil Service Corporation in 1988 and served in various positions with Unitil, including Senior Vice President and President of Unitil Power Corporation responsible for the procurement, operations and management of the electric power and natural

gas portfolios. From 2000 through 2001, I held the position of Executive Vice President, Network Operations for Enermetrix.com, Inc., responsible for developing an Internet-based network for large retail customers to procure electricity and natural gas. From 2001 through 2003, I was Vice President/Director of Power Market Development for Sprague Energy Corporation where I was responsible for developing a start-up retail electricity business servicing large commercial and industrial customers. I joined NSTAR Electric and Gas Corporation in July 2003. Following the merger of NSTAR and Northeast Utilities in 2012, I was promoted to my current position as Vice President, Energy Supply.

Q. Please describe your current responsibilities.

A. As Vice President, Energy Supply, I am responsible for securing a reliable and least-cost energy supply for 3.5 million customers of Eversource Energy's subsidiaries through the management of natural gas and power supplies contracts.

Q. Have you previously testified in regulatory proceedings?

A. Yes, I have testified in various proceedings before the Federal Energy Regulatory Commission (FERC or Commission), the Massachusetts Department of Public Utilities, the New Hampshire Public Utilities Commission, the Maine Public Utilities Commission and the Connecticut Public Utilities Regulatory Authority.

Q. In what capacity are you submitting this affidavit?

A: I am submitting this affidavit in my capacity as an Eversource representative, and as a designated member of the NEPOOL Participants Committee for Eversource. In this regard, I am testifying as a representative of a transmission-owning utility that also provides state-regulated

retail energy service (electric and gas), and is therefore sensitive to the challenges of ensuring fuel security at reasonable consumer cost.

Q. What is the purpose of your affidavit?

A: The purpose of my affidavit is to explain Eversource's position on Energy Security Improvements (ESI) for New England. Eversource supported each of the three NEPOOL-approved changes to ISO-NE's ESI proposal, and later voted to support the ESI proposal with those three changes (*i.e.*, the NEPOOL-approved alternative). Eversource views the newly proposed ancillary services to be a good first step that, with the NEPOOL-approved changes, better addresses the demonstrated fuel security needs of the region, while reducing the risk of imposing unnecessary costs on consumers. However, to fully address those fuel security concerns, these new ancillary service market products will only work with a cost effective seasonal forward market and must be supported by a robust market mitigation construct.

Q. Who is Eversource, and what role does it play in the NEPOOL stakeholder process?

A: Eversource is New England's largest energy delivery company. It owns and operates over 4,000 miles of transmission in Connecticut, Massachusetts, and New Hampshire, has electric distribution affiliates in each of these states, has gas distribution companies in Connecticut and Massachusetts, and serves approximately 3.5 million electric and gas customers in New England. Eversource is a member of the Transmission Owner Sector of NEPOOL. Eversource representatives have been actively involved in the discussions of the ESI efforts in the NEPOOL stakeholder process, which began in earnest in 2018, following the Commission's direction to ISO New England Inc. (ISO-NE) either to explain why the New England markets did

not require change to assure fuel security or to change the markets to better address fuel security concerns.

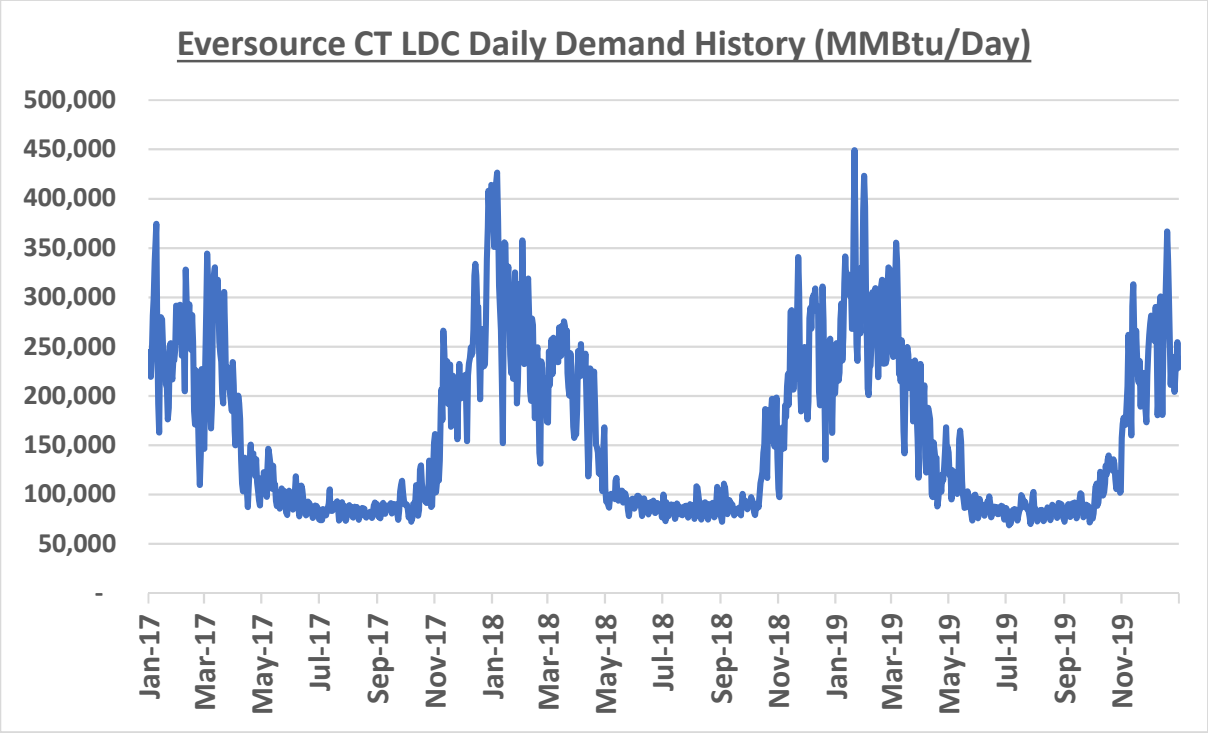
Q: Why did you support the NEPOOL-approved alternative over the ISO-NE proposal?

A: The benefit of the NEPOOL-approved alternative relates primarily to one of the three ancillary services proposed in the ISO-NE ESI proposal. Specifically, we believe that the Replacement Energy Reserves (RER) concept put forth by the ISO-NE imposes ancillary service costs on consumers for nine months when there is no demonstrated fuel security concern. It seeks to convert a winter-only issue into a year-round call option for committing day-ahead for replacement reserves. The NEPOOL-approved alternative modifies the RER to appropriately apply in the winter only.

Q: Why is a year-round RER call option objectionable?

A: The demonstrated concern that prompted work on ESI grew out of the ISO-NE's 2018 Operational Fuel-Security Analysis (OFSA), and the related fuel security analyses that have been performed since then. These studies identified the possibility that power plants would not be able to acquire the fuel supplies necessary to operate *during the winter months* as the biggest challenge to the reliability of New England's power grid. As someone who has been involved in procuring natural gas supplies for our customers year round, I appreciate why that concern is limited to the winter months. The system-wide gas demand of our customers is at its peak during these months, and is much lower during the other months of the year as shown in the graph below.

I further understand that this emphasis on winter reliability formed the basis of the Commission's July 2, 2018 Order directing the ISO-NE to propose improvements to the New England market design to better address fuel security concerns during the winter months. The ESI proposal should therefore be aimed at addressing these identified fuel security challenges. Without the NEPOOL-approved alternative, ISO-NE's RER proposal is a 12-month solution to a three-month-a-year problem.



Q: Why is it important to limit RER to the winter months?

A: As designed, RER addresses the regional energy gap that ISO-NE projects day ahead may occur if generation contingency reserve (GCR) units are dispatched, and the reserves need to be restored in real time. This new ancillary service product is above and beyond what has been required for reliable system operations and its added costs should be limited to times of demonstrated need. At the present time, the demonstrated fuel security need for procuring RER

is for the winter only, not year-round Limiting RER to winter months ensures that the region only pays for the services it needs, and does not pay for services in times where there are no demonstrated benefits.

Q: What is your basis for this conclusion?

A: As I noted previously, concerns about fuel security are limited to the most severe peak winter days. During these times, electric loads are at seasonally high levels, and the available natural gas supplies into New England are being used for firm gas customers to primarily heat their homes, offices and factories. Generators that lack firm pipeline capacity are limited in their ability to get enough fuel to operate at desired levels during these periods. While dual-fuel units may avail themselves of oil supplies during these circumstances, inventories are limited, as is the potential ability to refill tanks during the winter months. Eversource is not opposed to paying for RER as a new ancillary service during the winter heating season when pipe line gas demand is at its highest. However, unless these same concerns are demonstrated to exist during the non-winter months as well, consumers should not be required to pay for services that they do not need.

Q: What costs would be incurred to maintain an RER call option during the non-winter months?

A: If there are no pipeline gas constraints outside the winter months, there should be little difficulty sourcing the energy needed to address the RER reliability concern. However, as proposed, the RER call option would require generators to submit priced option offers which, among other considerations, cover the exposure to "close out" (settlement) costs when the generation is not dispatched, and when the locational marginal prices (LMPs) are higher than the

strike prices. Thus, the market design creates material costs to meet RER when actual costs to meet the underlying reliability requirements are, in fact, negligible.

Q: NEPOOL has approved three modifications to the ISO-NE's ESI proposal. The first is to make RER a seasonal ancillary service product. What is Eversource's position on the other two modifications?

A: Eversource voted in favor of all three modifications. The first, as we have discussed, is the "RER winter-only" issue. The other two involve removing the ISO-NE's discretion to purchase RER quantities to cover the potential to under-forecast load, and mitigating the additional costs to consumers that are associated with the strike price concept.

With respect to the modification to limit the ISO-NE's discretion, Eversource shares the concern expressed by many NEPOOL members that there would be no limits or guidance on ISO-NE's discretion to purchase additional RER quantities. As with the ISO-NE-preferred RER proposal, there is a risk that consumers will be obligated to pay for additional ancillary services without any demonstrated need.

Similarly, as it relates to the strike price, Eversource agrees that the level at which it is set will also have negative consumer impacts. For instance, if the price is too low, the risk to generators of the option having a close out cost is higher, and the option will therefore be more expensive. By adding $10/MWh to the strike price, as the NEPOOL-approved alternative does, the risk that there will be close out costs decreases, which will correspondingly decrease the cost of the option to consumers. If reliable data however indicates that the $10/MWh adder provides inadequate energy call options in the market when needed, then the adder can be reduced.

Q. Are there other concerns you have with solving the ESI issue in New England?

A: Yes. While Eversource supports the NEPOOL-approved proposal, it believes that both alternative proposals submitted in the April 15 Filing do not fully address the fuel security concerns in New England. While an important first step in solving the problem, Eversource believes that the new day-ahead ancillary service market will only work in tandem with a cost-effective seasonal forward market during the winter months. Importantly, the ISO-NE has committed to develop the details of such a seasonal forward construct with the region's stakeholders.

Second, with the implementation of any new wholesale market services, Eversource needs the assurance of an effective market power mitigation mechanism consistent with the Commission's just and reasonable mandate. Such a regime needs to be developed over the next year, and must be made effective prior to the implementation of the new day-ahead ancillary services (which is currently contemplated for June 1, 2024).

Eversource accordingly reserves judgement on the overall ESI design until these additional pieces are finalized within the NEPOOL stakeholder process, and are subsequently submitted to the Commission for approval.

Q: Does this conclude your affidavit?

A: Yes.

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

/s/ James G. Daly
James G. Daly

Executed on April 24, 2020.

ATTACHMENT 3 – AFFIDAVIT OF BENJAMIN W. GRIFFITHS

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

ISO New England Inc. **Docket No. EL18-182-000**
ER20-1567-000

AFFIDAVIT OF BENJAMIN W. GRIFFITHS

I: INTRODUCTION, QUALIFICATIONS AND PURPOSE OF AFFIDAVIT

Q: Please provide you name, title, and company description.

A: My name is Benjamin W. Griffiths. I am an Energy Analyst working for the Massachusetts Attorney General's Office ("AGO") in the Energy and Telecommunications Division. My business address is One Ashburton Place, Boston, MA, 02108. The Massachusetts Attorney General represents the Commonwealth of Massachusetts, the public interest and the people of the Commonwealth with respect to electric industry matters that affect consumers in Massachusetts. She is authorized expressly by statute to intervene on behalf of public utility ratepayers in proceedings before the Commission.

Q: Please describe your relevant work experience and education.

A: My primarily responsibility at the Massachusetts AGO is to provide qualitative and quantitative analysis of proposals by ISO New England ("ISO-NE") and New England Power POOL ("NEPOOL") stakeholders. I am a voting member at the NEPOOL Transmission and Reliability Committees and an alternate member at the NEPOOL Markets and Participants Committees. I was the principle author of an amendment to ISO-NE's Energy Security Improvements ("ESI") design that proposed to eliminate one component of the design entirely, which I will discuss in more detail below.

Prior to joining the AGO in 2018, I was employed by Resource Insight, Inc. where I worked on resource planning and utility rate design issues. In 2017, I received an M.S. in Energy & Earth Resources from the University of Texas at Austin. I have authored or co-authored reports, whitepapers, and a peer-reviewed journal article on various electricity-related topics. I have worked on technical and policy energy issues

since 2012. I previously filed testimony in FERC Docket No. ER19-1428 on behalf of the Massachusetts AGO on the subject of ISO-NE's Inventoried Energy Program.

Q: For whom are you testifying in this proceeding?

A: I am testifying on behalf of the Massachusetts Attorney General's Energy and Telecommunications Division Office of Ratepayer Advocacy in support of the NEPOOL-approved ESI proposal.

Q. What is the purpose of your affidavit?

A: The purpose of this affidavit is to:

1) Outline the overall position of the Massachusetts AGO on ISO-NE's ESI project and explain why the AGO supported the NEPOOL-approved proposal, but opposed the version proposed by ISONE.

2) Describe amendments that the AGO developed and presented to the NEPOOL Markets Committee ("MC") in Fall 2019 through Spring 2020, which sought to improve oversight of new ESI markets and modify the scope of the ESI design to better align costs and benefits of the ISO-NE-favored proposal.

3) Recapitulate arguments and analyses the AGO presented to NEPOOL in support of an AGO proposed amendment seeking the elimination of one component of the ISO-NE design, which also support NEPOOL's proposed modifications to the ESI design.

4) To assist the Commission in understanding why the NEPOOL-approved ESI proposal is more appropriate for New England than ISO-NE's proposal.

Q: How is your affidavit organized?

A: Section II describes ISO-NE's ESI project. Section III summarizes the three changes to the ISO-NE ESI design that NEPOOL approved. Sections IV and V explain why prospective and retrospective data indicate that the NEPOOL-approved alternative provides the same demonstrated reliability and efficiency benefits as the ISO-NE favored

design, at around one half the cost. Section VI concludes the affidavit and summarizes why the AGO voted against the ISO-NE favored proposal but supported the NEPOOL-approved alternative.

II. BACKGROUND ON THE OVERALL ISO NEW ENGLAND'S ENERGY SECURITY IMPROVEMENTS PROJECT.

Q: Please summarize the goals of, and rationale for, ISO-NE's ESI project.

A: In response to the Commission's Order of July 2, 2018 instituting a Section 206 proceeding, ISO-NE began an examination of market changes which would improve *fuel*—and later *energy*—security.[1] In its original Discussion Paper, ISO-NE identified three interrelated energy security problems.[2] Problem 1: misaligned incentives, where market participants whose resources face production uncertainty may have insufficient incentive to invest in energy supply arrangements (e.g., LNG contracts or oil deliveries)—even when those arrangements would be of benefit to society. Problem 2: operational uncertainty, where there could be insufficient energy available to the system operators to withstand an unexpected or extended outage of a supply resource. Problem 3: inefficient schedules, where the power system may deplete limited energy reserves more quickly than is efficient without out-of-market intervention such as operators posturing units.

The first two problems are reiterated in the present filing, but Problem 3 is reformulated as "insufficient day-ahead scheduling, which occurs when Market Participants procure less energy in the Day-Ahead Energy Market than the ISO's forecast

[1] Order Denying Waiver Request, Instituting Section 206 Proceeding, and Extending Deadlines, 164 FERC ¶ 61,003, at P 2 (July 2, 2018).

[2] ISO-NE, *Energy Security Improvements Discussion Paper*, April 2019 ("ISO-NE Discussion Paper"), at 10. Available at: https://www.iso-ne.com/static-assets/documents/2019/04/a00_iso_discussion_paper_energy_security_improvements.pdf

energy demand for the next Operating Day." [3] The modification to Problem 3 is the result of ISO-NE's deprioritizing of the multi-day component of the ESI design (see below).

Q: How does ISO-NE propose to address these problems?

A: ISO-NE initially proposed three core components to address the energy security problems it has identified.[4] First, a suite of new ancillary services for the day-ahead market that "provide, and compensate for, the flexibility of energy 'on demand' to manage uncertainties each operating day." [5] Second, a seasonal forward market for those new ancillary services. [6] Third, a multi-day ahead market, which would extend today's one-day ahead market and enable the system to optimize the use of energy limited resources.[7]

Q: What market changes is ISO-NE proposing in this filing?

A: In its April 15, 2020 filing, ISO-NE is seeking Commission approval of the new day-ahead ancillary services. ISO-NE has been "exploring the potential of a seasonal forward market, and, at this time, it intends to pursue a forward element to complement the Energy Security Improvements' Day-Ahead Ancillary Services" in 2021.[8] ISO-NE has indefinitely postponed work on the multi-day market component of ESI.

Q: Please describe the new day-ahead ancillary services proposed in this filing.

A: ISO-NE is proposing three distinct types of ancillary services to address what it characterizes as different system "needs."[9] These are:

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[3] *See* ISO-NE Filing Letter, April 15,2020, ("ISO-NE Filing Letter") at 13–14; *cf.* ISO-NE, *Energy Security Improvements: Creating Energy Options for New England,* provided as Attachment B of the ISO-NE filing ("ISO-NE White Paper"), Section 2.

[4] ISO-NE Discussion Paper at 5.

[5] Ibid.

[6] Ibid.

[7] Ibid.

[8] ISO-NE Filing Letter at 71f.

[9] ISO-NE Filing Letter at 21.

Generation Contingency Reserve ("GCR") is the day-ahead extension of today's real-time operating reserves. GCR is split into three subcomponents mirroring today's operating reserve products: Ten-Minute Spinning Reserve (TMSR), Ten-Minute Non-Spinning Reserve (TMNSR), Thirty-Minute Operating Reserve (TMOR).

Replacement Energy Reserves ("RER") are designed to ensure that there is enough energy to recover *reserves*, in the event of a contingency. RER is effectively a reserve for reserves. This product will also be used to cover ISO-NE's load forecasting error ("LFE"). RER is a totally new kind of reserve product and its scope goes above and beyond the operating reserves historically used in New England and, to my knowledge, anywhere else in the country.

Energy Imbalance Reserves ("EIR") covers the load-balance gap in an hour when the total day-ahead cleared physical energy supply schedule amount is less than the ISO's energy forecast for that hour. EIR can be thought of as a market mechanism to procure energy that is currently scheduled through the Resource Adequacy Assessment process.

Q: How will ISO-NE acquire these new ancillary services?

A: Each of these new day-ahead ancillary services takes the form of an energy "call option," rather than a day-ahead commitment to provide a specific real-time product. ISO-NE will co-optimize the purchase of energy with GCR, RER, and EIR in the day-ahead market.[10] Resources providing these different services will be compensated for the services provided, including an accounting for inter-product opportunity costs when/as appropriate. Because different resources may be eligible to provide different quantities of the new ancillary services, the day-ahead prices for GCR, RER, and EIR may vary.

[10] ISO-NE Filing Letter at 22.

Q: Please summarize how resources that receive a day-ahead option are compensated, and the settlement mechanics to which they are subject.

A: Regardless of the ancillary service for which the option is cleared, or the day-ahead price paid for the option, the same settlement terms apply.[11] The settlement involves three components: (a) the option price that the resource receives in the day-ahead market, which reflects the price of the marginal offer cleared to meet a given product; (b) the real-time option closeout; and (c) the real-time price of energy. A resource will always receive the day-ahead option price, but the real-time option closeout mechanics depend on the relative costs of the real-time LMP and the option's strike price. The strike price is a sort of "threshold" price, known in advance, above which the option closeout is greater than zero.

Like a forward sale of energy, a call option involves both a day-ahead and a real-time settlement. The day-ahead settlement is a payment to the seller at the day-ahead option clearing price, for each MWh of the option sold. The real-time settlement is based on what the seller delivers in real-time (if anything) and has two parts. The first part is a charge, for each MWh of the option sold day-ahead, equal to the real-time LMP *minus* the strike price, if that difference is positive. The second part of the real-time settlement is a credit, at the real-time LMP, for the MWh the resource actually produces.

III: SPECIFIC ELEMENTS OF NEPOOL-APPROVED ALTERNATIVE: (1) RER ELIMINATION IN NON-WINTER MONTHS; (2) ELIMINATION OF LFE YEAR-ROUND; AND (3) A $10 ADDER TO THE STRIKE PRICE

Q: What are the three components of the alternative proposal approved by NEPOOL?

A: NEPOOL stakeholders, including the Massachusetts AGO, supported three modifications to the ESI proposal favored by ISO-NE.[12] Two amendments reduced the scope of the untested and expansive Replacement Energy Reserve ("RER") ancillary service. The first of these amendments limits RER to a winter-only product by setting the procurement

[11] ISO-NE Filing Letter at 22–23. Cf. ISO-NE White Paper Sections 4.2 and 4.3.

[12] New England Power Pool Participants Committee, Comments in Support of the NEPOOL-Approved ESI Proposal at Section III; *cf.* ISO-NE Filing Letter at 41ff.

quantity of the RER to zero in non-winter months (March-November). A second amendment removes an allowance for load forecast error from the hourly RER procurement quantity. Separately, a third successful amendment sets the strike price used for ESI option settlement to $10/MWh above ISO-NE's forecasted price of energy in that hour. Each of these amendments received the supermajority support required from the NEPOOL Participants at the April 2nd NEPOOL Participants Committee meeting to be approved by NEPOOL, and the proposal with all three amendments also received the required supermajority NEPOOL support for approval.

Q: Did the Massachusetts AGO also propose ESI amendments for consideration by NEPOOL?

A: Yes, three for consideration by the NEPOOL Markets Committee. First, the AGO proposed the total elimination of the RER product. Second, jointly with the New England States Committee on Electricity ("NESCOE"), the AGO proposed two amendments designed to assess ESI efficacy: one obligating the Internal Market Monitor ("IMM") to conduct a comprehensive evaluation or look-back of ESI's performance after three years and another amendment requiring the IMM to report on and certify the competitiveness of energy call option offers.

The three amendments were presented and discussed at four Markets Committee meetings over the winter and spring of 2020.[13]

Q: Why did the AGO sponsor these amendments?

[13] AGO MC Presentation, 3–4 September 2019. Available at: https://www.iso-ne.com/static-assets/documents/2019/08/a2_e_4_ma_ago_presentation_amendments_esi.pdf

AGO MC Presentation, 14–15 January 2020. Available at: https://www.iso-ne.com/static-assets/documents/2020/01/a5_b_ii_ma_ago_presentation_esi_amendments.pptx

AGO MC Presentation, 11–13 February 2020. Available at: https://www.iso-ne.com/static-assets/documents/2020/02/a4_d_i_ma_ago_presentation_esi_amendments.pptx

AGO MC Presentation, 10–11 March 2020. Available at: https://www.iso-ne.com/static-assets/documents/2020/03/a5_c_ii_presentation_nescoe_ma_ago_esi_amendments.pptx and https://www.iso-ne.com/static-assets/documents/2020/03/a5_c_i_presentation_ma_ago_amendment_removing_rer.pdf

AGO MC Presentation, 24 March 2020. Available at: https://www.iso-ne.com/static-assets/documents/2020/03/a2_b_v_presentation_joint_nescoe_ma_ag_amendment_look_back_amendment.pptx and https://www.iso-ne.com/static-assets/documents/2020/03/a2_b_iii_ma_ag_presentation_no_rer_amendment.pdf.

A: The Massachusetts AGO sponsored its three amendments to introduce accountability to the design process and to mitigate the RER component, which is unnecessary and disproportionately expensive. The AGO recognizes that a safe, reliable, and affordable power system is in the interests of ratepayers. It is also mindful of the impacts that the costs of new market programs in support of reliability can have on the residents of Massachusetts.

In its evaluation of the ESI design, the AGO noted several potential benefits, including improved energy-security-related price formation, a method to provide day-ahead operating reserves and possible reliability improvements. Nonetheless, while ESI has some attractive theoretical benefits and may possibly provide enhanced energy security and reliability, the AGO was and remains skeptical that ESI will provide benefits commensurate with its costs and remains uncertain that it will perform as intended. The AGO sponsored the look-back proposal and the competitiveness review amendment to ensure that the performance of ESI would be evaluated against ISO-NE's representations about the operational, market, reliability, energy security and other goals and objectives of the program. The AGO proposed its amendment eliminating RER because the ISO-NE sponsored Impact Assessment developed by the Analysis Group consistently indicated that the RER product doubles program costs without providing any measurable reliability or efficiency benefits. Taken together, the three AGO sponsored amendments were intended to improve ESI by ensuring accountability and mitigating the risks and costs to ratepayers.

Q: **What was the outcome of the AGO sponsored amendments?**

A: The need for the AGO/NESCOE sponsored amendments proposing a comprehensive evaluation of ESI and a quarterly competitiveness review was obviated by ISO-NE's late adoption of a new Section III.A.17.2.5 to Appendix A of Market Rule 1 incorporating these ideas. As a result, the AGO and NESCOE withdrew these two amendments. The AGO appreciates ISO-NE's ultimate recognition of the necessity and value of the performance reviews that it advocated. The AGO also withdrew its RER elimination amendment at

the March 24th Markets Committee Meeting, after NEPOOL voted in favor of a related, albeit smaller scoped, RER amendment proposed by NESCOE.

Q: **Why did the AGO ultimately support the NEPOOL adopted RER amendments instead of its own?**

A: The two RER amendments adopted by NEPOOL go a long way towards "right-sizing" the ESI design. While the AGO championed the total removal of the RER product (including LFE) from the ESI design, the AGO recognizes that other NEPOOL stakeholders believe that RER may have some value in the winter months. The adopted amendments eliminating day-ahead procurements for LFE year-round and eliminating RER in non-winter months provide a reasonable middle-ground between the total elimination of RER preferred by the AGO and ISO-NE favored design.

While the AGO remains uncertain that ESI will perform as intended, as I detail below, the elimination of RER in non-winter months and the elimination of the allowance for load-forecast error both curtail the excesses of the ISO-NE favored design.

IV. THE RER PRODUCT IS EXPENSIVE AND UNNECESSARY. THE ADOPTED NEPOOL AMENDMENTS WHICH (A) RESTRICT RER TO WINTER MONTHS AND (B) ELIMINATE THE ALLOWANCE FOR LOAD-FORECAST-ERROR YEAR-ROUND ARE REASONABLE.

Q: Why does the AGO believe that the RER product is unnecessary and should, at a minimum, be downsized?

A: Since the fall of 2019, the AGO has consistently argued that the RER product is unnecessary and expensive. Each of the successive points will be discussed in detail below, but to summarize the AGO position on RER:

- ISO-NE implicitly concedes that energy security challenges are disproportionately winter phenomena.[14] Removing RER in non-winter months is unlikely to affect reliable system operations.

- RER is permissible, but not obligatory under NPCC and NERC reliability requirements.

- The Impact Assessment *does not* demonstrate that RER improves market efficiency or reliability.

- The Impact Assessment *does* indicate that RER's cost to consumers is unreasonably high – high both in absolute terms, and in terms of consumer value.

- The value of RER is already priced into ISO-NE markets via Pay for Performance ("PfP") in the Forward Capacity Market and Reserve Constraint Penalty Factors ("RCPFs") in the energy market.

IV. A RER IS NOT REQUIRED TO ENSURE RELIABLE SYSTEM OPERATION

Q: Would the NEPOOL adopted amendment limiting RER to winter months cause ISO-NE to be in violation of NPCC or NERC reliability requirements?

A: No. The AGO recognizes that ISO-NE is subject to NPCC and NERC reliability requirements. However, the regulations codified in NPCC Directory 5 "Reserves" and NERC-TOP-002-4 "Operations Planning" afford ISO-NE a number of methods to ensure reliability. An RER style product is not *required* to comply with NPCC's reserve restoration requirements.

[14] Throughout the Filing Letter and White Paper, ISO-NE refers to its energy security challenges as winter phenomena and provides many references to scarcity being driven by winter weather "cold snaps." ISO-NE Filing letter at 4,11,13,16,19,20; ISO-NE White Paper at 1–3. ISO-NE suggests that "energy security currently poses the most pressing challenges to New England in these months." ISO-NE Filing letter at 27.

Q: What are the options available to ISO-NE to comply with NPCC and NERC reliability requirements?

A: ISO-NE's July 3 2019 memo "Reliability Standards Supporting Day-Ahead Ancillary Services Requirements" outlines the obligations and timeframes for reserve restoration to which it is subject.[15] In the RER section, ISO-NE provides a reference to NPCC Directory 5, identifying actions a Balancing Authority may implement to bring its system back into balance after a major contingency. This list of actions for minimizing or eliminating a ten-minute reserve deficiency is reproduced below (the actions for recovering 30-minute reserves are analogous):

- Commit sufficient off-line supply-side resources to create additional ten-minute reserve within the restoration period.
- Recall applicable exports . . .
- Obtain additional resources from outside the Balancing Authority . . .
- Recall planned generator outages and coordinate with the Reliability Coordinator for possible assistance available by recalling transmission outages . . .
- Count interruptible customer load that can be interrupted within ten minutes in its ten-minute reserve . . . if it has not already been counted.
- Count voltage reduction that can be implemented within ten minutes in its ten-minute reserve . . . if it has not already been counted.
- Consider the use of Public Appeals if sufficient time exists to activate them, or if the shortage is expected to last for an extended period.[16]

A plain reading of NPCC Directory 5, Appendix B, Sections 3-4 makes it clear that ISO-NE has a wide range of tools to meet these reliability challenges. Extra-commitments in the spirit of RER (bullet 1), are permissible, but certainly not obligatory. System operators have multiple other options to meet the challenges of restoring reserves after a contingency.

[15] ISO-NE, *Reliability Standards Supporting Day-Ahead Ancillary Services Requirements*. Available at: https://www.iso-ne.com/static-assets/documents/2019/07/a4b_iso_memo_reliability_standards_supporting_day_ahead_ancillary_services_requirements.pdf

[16] NPCC, *Regional Reliability Reference Directory #5 – Reserve*, Appendix B, Section 3 & Section 4. Available at: https://www.npcc.org/Standards/Directories/Directory%205%20-%20Reserve_20200116.pdf.

Moreover, the NPCC Directory 5 obligations and remedy methods have remained consistent since at least 2012.[17] The Directory was updated in 2019 to clarify *existing* requirements but did not impose new requirements or obligations. The 2019 modifications made no changes to Ten-Minute or Thirty-Minute Reserve restoration requirements or changes to possible methods to mitigate a Reserve Deficiency. Instead of causing ISO-NE to be in violation of the above NPCC and NERC reliability requirements, the NEPOOL winter-only RER amendment simply will allow ISO-NE to continue to rely on the same toolkit to maintain system reliability which it has successfully applied over the past decade.

Q: Would the NEPOOL adopted LFE amendment eliminating Load Forecast Error component of RER cause ISO-NE to be in violation of NPCC or NERC reliability requirements?

A: No. This NEPOOL-adopted amendment would allow ISO-NE to meet its requirements using exactly the same tools that it uses today to manage load forecast error. Unlike the more explicit reserve restoration requirements set forth in NPCC Directory 5, the obligation to account for LFE is more implied. In the same July 3, 2019, memorandum on reliability standards, ISO-NE notes its current practices for developing a reliable operating plan are grounded in NERC-TOP-002-4, Requirement R.4.[18] This requires that each Balancing Authority have an Operating Plan for the next day that addresses "expected generation resource commitment and dispatch, interchange scheduling, demand patterns, and capacity and energy reserve requirements." ISO-NE currently uses 30-minute reserves to help account for load-forecast error.[19]

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[17] *See* NPCC Directory 5, (Version approved 10/12/2012), https://www.npcc.org/Standards/SitePages/DevStandardDetail.aspx?DevDocumentId=110.

Compare Section 5.2 (2012) with Requirement R1 (2019); Section 5.4 (2012) with Requirement R2 (2019); and Appendix 3 Sections 3 (2012) with Appendix B Section 3 and 4 (2019).

[18] ISO-NE Filing Letter at 17. Cf. Brandien Testimony, provided as Attachment A of the ISO-NE filing, at 6ff.

[19] ISO-NE, February 2020 MC Presentation, at 11. Available at: https://www.iso-ne.com/static-assets/documents/2020/02/a4_a_ii_esi_rer_goal2_accounting_for_load_forecast_error.pptx.

ISO-NE does not provide any data on how it complies with LFE on a day-to-day basis, when and whether (if ever) it has needed to commit resources beyond 30-minute reserves to meet LFE, or, if so, the magnitude of any such commitments. Given the paucity of data and unsubstantiated claims that ISO-NE's proposed approach is superior to the status quo, the NEPOOL amendment eliminating LFE merely reaffirms the ISO's existing practices.

Q: Does the Impact Assessment done on behalf of ISO-NE indicate that RER will provide any prospective reliability benefits?

A: None or very few. Based on the data provided, the Impact Assessment suggests that eliminating the allowance for LFE in the winter months, and entirely eliminating RER, including LFE, in the non-winter months, will not affect system reliability. While we do not have an exhaustive suite of scenarios assessing how ESI would fare without RER, given the general lack of reserve deficiencies under ESI or current market rules, as modeled by Analysis Group, we can infer from these results that the system can meet its reliability obligations with or without ESI as a whole.[20] The NEPOOL-approved alternative will not change these findings. One caveat on the results I discuss below: it is important to note that the Impact Assessment is based on an *economic* model not a *reliability* model, but the model *does* assess reserve deficiencies, and it is the only modeling available to guide our assessment of the ESI design.[21]

Q: What were the reliability risks identified by the Impact Assessment?

A: Analysis Group's Impact Assessment simulated 116,640 hours of winter operation and 39,600 hours of non-winter operation—under variety of configurations.[22] Analysis Group ran 18 scenarios for each of the three winter seasons selected (2,160 hours per

[20] The AGO, New Hampshire Office of the Consumer Advocate and Power Options asked for a constituent part analysis as early as 6 August 2019, with the hopes of being able to tease out the relative benefits of different ESI subcomponents. See: *Scenario Request for Impact Analysis for Long-Term Energy Inventory Security Proposal*, available at: https://www.iso-ne.com/static-assets/documents/2019/08/a2_d_joint_scenario_analysis_request.pdf.

[21] Analysis Group, *Energy Security Improvements Impact Assessment*, April 2020, ("Impact Assessment"), at 13–16.

[22] Impact Assessment, Tables 45–47, 51–53; for non-winter see page 101.

scenario and season), and 3 scenarios for both non-winter periods (6,600 hours per scenario/period). It assessed how ESI would fare under different weather conditions, different resource mixes, and different fueling rates. Across all scenarios, the model results indicate three hours of operating reserve shortages in the winter months under current market rules ("CMR") and no scarcity in non-winter months (0.0026% in winter hours; 0% non-winter).[23] The model does not indicate that load shedding ever occurs.

The three hours of reserve deficiency that Analysis Group identified occurred under current market rules in the "Shock HQ 5 Days" case in the "Frequent Winter" season.[24] Analysis Group does not identify whether the deficiency is for 10- or 30-minute reserves and it does not identify the magnitude of the deficiency.

Q: Did Analysis Group run a scenario that excluded RER from the ESI design?

A: Analysis Group ran a single scenario where RER was excluded from the ESI design and found that there were no periods of reserve deficiency in any of the modeled seasons.[25]

Q: Did Analysis Group offer any insights on the reliability value of ESI (or RER) in non-winter months?

A: Analysis Group's modeling suggested that the system operated exactly the same under current market rules as under ESI in the non-winter months. They note:

> [B]ecause fuel supply during non-winter months does not face the constraints experienced in winter months, comparable shifts in fuel consumption between CMR [current market rules] and ESI cases do not occur in the non-winter month analyses. Given these factors, our quantitative analysis of real-time market outcomes produces the same outcomes in the CMR and ESI cases. *As a result, impacts that are based on changes in real-time outcomes (e.g., production costs and operational benefits) are not assessed because our analysis would not quantify any change that may occur.*[26]

[23] Ibid.

[24] Impact Assessment Table 45.

[25] Ibid.

[26] Impact Assessment at 78. (Internal footnote omitted, bracketed information added, emphasis added.)

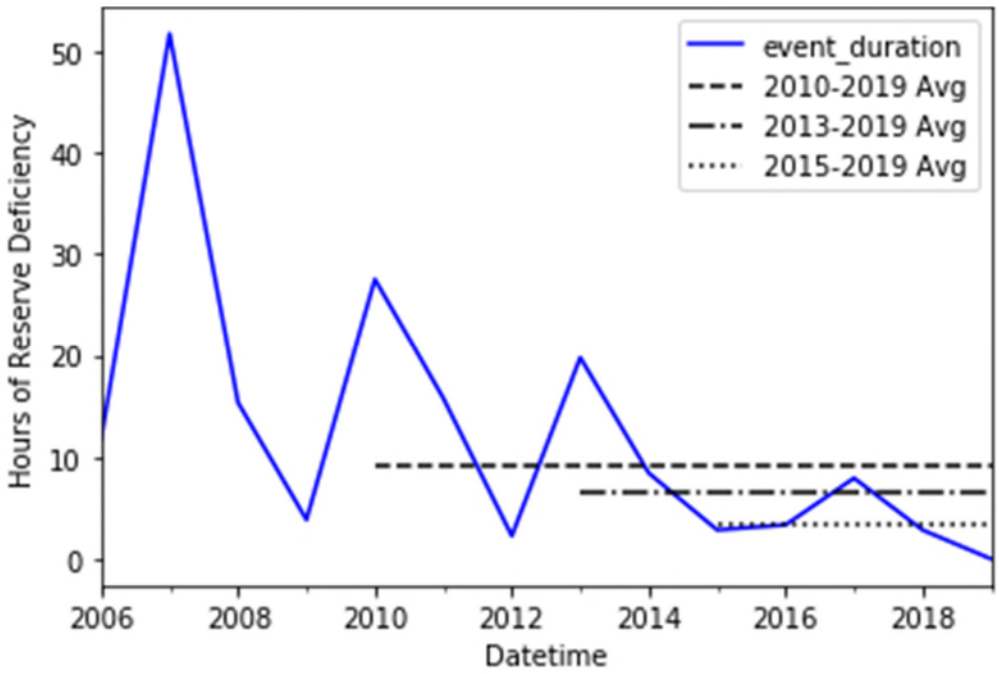
This comment makes clear that ESI as a whole, or any scaled down version of it, offers no demonstrated reliability benefits outside of the winter months (when the modeling suggests it does offer *de minimis* but positive benefits). As the NEPOOL proposal removes RER only in the non-winter months, the Impact Assessment confirms that this change will not reduce system reliability compared to ISO-NE's proposal.

Q: Does a review of the past decade of ISO-NE system performance suggest that the system has historically had trouble restoring reserves after a contingency?

A: Historically speaking, reserve deficiencies are uncommon in ISO-NE, which implies that the utility of RER would be low. I reviewed ISO-NE data on periods when the system had a reserve deficiency, over the past decade, to provide some context on when RER *could* have been helpful in the recent past.[27] Reserve deficiencies can exist for 10- or 30-minute reserves and can exist on a local or zonal basis. I combined all of these kinds of reserve deficiencies into a single metric: annual hours of deficiency, summed across of all periods with 10- or 30-minute reserve deficiencies at local or system level. I chose this metric specifically because it is expansive and counts all deficiencies equally. Figure 1 depicts how this metric varies by year from 2006 through 2019.

Figure 1: Hours of Reserve Deficiency by Year

[27] ISO-NE, *Operating Reserve Deficiency Information – Historical Data* [dataset], https://www.iso-ne.com/static-assets/documents/2017/01/rcpf_activation_data_2006_10_thru_present.zip



Based on my analysis of past reserve deficiencies, I conclude that the system is becoming more reliable on an annual basis. Both the duration of deficiencies, and their magnitude, have decreased over time. Over the period 2010–2019, the system had an average of 9.06 hours of deficiency annually, with a time-weighted magnitude of 280 MW. Over the 2015–2019 timeframe, the duration of shortage fell to 3.38 hours/year and the average magnitude of deficiency fell to 183 MW.[28]

Q: Are you able to conclude why the duration and magnitude of reserve deficiencies has declined over the past decade?

A: It is difficult to assess exactly why this trend exists but it does appear that there have been significant improvements induced by other market changes such as the December 2014 effective date of the Energy Market Offer Flexibility project (Docket No. ER-13-1877), 2018's start of PfP, or the older winter-period Winter Reliability Programs. Results may also be affected by declining unit forced outage rates, seasonal weather patterns, and other drivers.

[28] Calculations mine, based on the *Operating Reserve Deficiency Information* dataset.

Finally, it is certainly possible that operator actions helped shorten the duration of some historic deficiencies, but we do not have a counter-factual dataset to assess how long these outages would have been otherwise. In some instances, operator action may have been critical to successfully managing the shortage. In others, however, such as a deficiency occurring just as load organically declines in the evening hours, a contingency might have resolved itself without any intervention at all.

Q: What does your review of historic reserve deficiency periods suggest?

A: The results imply that ISO-NE can avoid reserve deficiencies 99.96% of the time, even in winter, and that it does not have persistent problems recovering reserves.[29] This, in turn, suggests that RER would offer a form of expensive insurance to ameliorate a risk that is immaterial in the first place.

Q: Based on your review of *prospective* reliability data from the Impact Assessment, and *retrospective* data on the system's actual performance, is it fair to say that RER has no demonstrated value?

A: Correct.

Q: Does it matter that the Impact Assessment shows that including RER increases fuel availability under ESI?

A: No, for two reasons. First, the NEPOOL amendments do not reduce the incentives identified by Analysis Group in the winter months, because the NEPOOL amendments do not change winter period operation of ESI. To the extent that ESI increases fuel availability—which *may* help with reliability—these incentives are unchanged under the NEPOOL-approved ESI alternative.

Second, despite the fuel security objective with which the Commission tasked ISO-NE, Analysis Group does not persuasively demonstrate that increased fuel availability under ESI provides a corresponding increase in reliability. In the executive summary, Analysis Group tentatively notes: "ESI's collective impact . . . *would be*

[29] 99.96% = 1 – (3.38 Hours of Annual Deficiency divided by 8760 hours per year).

expected to improve reliability outcomes, particularly during winter periods."[30] Yet, this claim is not substantiated by the remainder of their report. Analysis Group goes on to conflate fuel availability with reliability, without proving a data-supported link between them. It writes:

> The analysis shows that incremental inventoried energy incented by ESI would reduce use of the natural gas pipeline system during tight market conditions, increase aggregate fuel oil inventories, and reduce the rate at which fuel supplies are depleted under stressed conditions. These results are consistent with more reliable electricity system outcomes, particularly during periods of greater fuel system stress." [31]

More money for fossil fuel generators could increase the quantity of fossil fuels on the system. But the final sentence posits a conclusion that is not borne out by the modeling. Nowhere in the Impact Assessment does Analysis Group show that more fuel is consistent with "more reliable electricity system outcomes." Moreover, Analysis Group does not even define what it means by "reliability outcomes." To the AGO, the only sensible definition of this term would be quantity of reserve deficiency or load shedding avoided—with load shedding being a real and detrimental "reliability outcome."

However, as noted above, the Impact Assessment only identified three hours of reserve deficiency avoided by ESI in a single side-case.[32] Avoiding this simulated, *de minimis* deficiency—not even load shedding—is a very modest accomplishment given the scope of, and ambitions for, ESI. It seems possible that ESI as a whole *could* improve reliability, but the Analysis Group modeling shows that the system is reliable with or without incremental fuel; with or without RER, and with or without ESI as a whole. The Impact Assessment is not able to establish, and the Commission should not assume, without a demonstrable link, that more fuel necessarily equates to a corresponding increase in reliability that will adequately address New England energy security issues.

[30] Impact Assessment at 7 (emphasis added).

[31] Ibid.

[32] Impact Assessment, Tables 45–47, 51–53.

Moreover, any increase in reliability must also be measured against the costs of providing that benefit.

IV. B THE NEPOOL RER AMENDMENTS WOULD NOT ADVERSELY AFFECT, AND MAY IMPROVE, SYSTEM EFFICIENCY

Q: Analysis Group offers a key finding that "ESI would be expected to improve efficiency and lower production costs under stressed market conditions when the increase in energy inventory reduces energy production from less efficient suppliers and higher cost fuels." Would the NEPOOL amendments on RER reduce market efficiency?

A: No. The quote implies, and Analysis Group confirms, that the identified efficiency benefits are winter only.[33] Because the identified efficiency benefits are winter only, eliminating RER in the non-winter months will do nothing to reduce possible efficiency gains. Indeed, from the standpoint of market efficiency, the Analysis Group results imply that the entire ESI design could be eliminated in non-winter months with no ill-effect on production costs.

As an aside, Analysis Group does not define "market efficiency" beyond "production costs," so it is not clear why the above quote is touting these as two separate benefits when they are one-and-the-same based on Analysis Group's own definition.[34]

Q: Do you have any concerns with how Analysis Group has formulated its definition of efficiency or how it has calculated changes in market efficiency?

A: Yes. Analysis Group is measuring efficiency from the perspective of producers (i.e., production costs), rather than from the perspective of society writ large (e.g., maximizing social surplus or reducing dead-weight loss). The Impact Assessment measures efficiency based on producer-side costs, calculated as the summed fuel costs and variable O&M of all power plants generating electricity in the real-time market.[35] Analysis Group

[33] Impact Assessment at 78.

[34] Impact Assessment at 68–69.

[35] Impact Assessment at 67.

acknowledges the limitations of using total cost of production to estimate changes in welfare, writing: "production costs may not capture certain financial costs and changes in utility, although capturing these effects would be very challenging and beyond the scope of our analysis."[36] Thereafter, Analysis Group makes the claim that "results show that ESI operates in a manner similar to insurance with respect to total economic costs,"[37] while failing to show that the region is buying the right amount of "insurance."

ISO-NE uses somewhat more tentative language when translating from production costs to market efficiency, noting that "[i]f a design proposal lowers production costs, that may signal that the design helps to improve market efficiency."[38]

Analysis Group's formulation of efficiency leads to an outcome that is counter-intuitive at best, namely that "market efficiency" never decreases as ISO-NE buys more and more ESI options. An example: in the summer months, the Impact Analysis indicated that the purchase of approximately 4 GW/h of ESI options had no effect on production costs, and therefore market efficiency using this metric.[39] Under this logic, the region could purchase 40 GW/h of options or 4 TW/h of options and "market efficiency" would not change because the production costs are invariant. I find it difficult to believe that buying 4 TW/h of options all summer long would not harm societal welfare—but, all the same, this is the position Analysis Group has taken. This outcome leads me to wonder whether a more holistic accounting of the total economic cost of ESI would find that a smaller quantity of options procured in the non-winter months would be less societally expensive.

Q: Would the NEPOOL amendments affect incentives for energy secure resources to procure fuel or perform in real-time?

[36] Ibid.

[37] Impact Assessment at 68–69.

[38] ISO-NE Filing Letter at 32.

[39] Impact Assessment at 67.

A: No. The NEPOOL amendments would not affect the winter-period incentives depicted in the Impact Assessment. There is a slight mis-match between what Analysis Group modeled and what ISO-NE is actually proposing: no Impact Assessment runs except for the "RER Plus" scenario include an allowance for LFE, even though the ISO-NE proposal will include some quantity of LFE. The NEPOOL-approved ESI alternative, which also excludes an allowance for LFE, is equivalent to what the Analysis Group actually modeled in its winter runs. So, the incentives identified in its report are the same incentives that the NEPOOL-approved alternative would be expected to confer. [40] Incidentally, the Impact Assessment also indicates that RER could be removed year-round and all assessed resources would have directionally correct incentives.[41]

Q: Does the AGO have concerns about how Analysis Group has defined and measured incentives?

A: Yes. Notwithstanding the fact that the Impact Assessment shows that the NEPOOL amendments would not reduce ESI incentives, the AGO rejects the analytical approach taken by Analysis Group and ISO-NE in calculating these incentives in the first place. Analysis Group and ISO-NE have framed incentives as a change in revenue, rather than a change in behavior. For example, in March 24 2020 presentation, ISO-NE notes that "Incentives to hold oil increase with higher RER, decrease with higher strike price or elimination of RER." This framing suggests that more money for generators is strictly better than less. But, the fallacy of this reductive conclusion can be demonstrated with the question "*Would creating incentives to procure fuel worth a billion dollars per MWh actually change behavior any more than a billion dollars less one*?" Almost assuredly not.

The limitations of the Analysis Group approach were made clear part-way through the ESI stakeholder process. In September 2019, Analysis Group presented preliminary results that showed that incentives to act could run in the opposite direction of net financial position. Namely, that a resource could end up worse-off under ESI than

[40] Impact Assessment at Tables 62–64.

[41] Ibid.

under current market rules, but still have a strong incentive to procure fuel because a failure to procure the fuel would lead to an even worse outcome for the generator.[42] In this preliminary example, Analysis Group found that an Oil steam resource would make $16,159/MW under current market rules, but only $14,128/MW under ESI (a reduction of $2,031/MW). In both cases, however, the unit had positive net revenues—meaning that the resource had incentives to procure fuel and sell ESI options. The specific results in the Impact Assessment have changed since that September 2019 presentation, but the salient insight remains: incentives to *act* are related to, but separate from, overall changes in financial wellbeing.

Q: What does your review of the Impact Assessment suggest about the overall efficiency of the NEPOOL-approved ESI alternative and the ability of that alternative to create incentives for energy secure resources to procure fuel or perform in real-time?

A: First, the Impact Assessment indicates that the NEPOOL amendments would not change production costs of the ISO-NE market so, by this metric, the NEPOOL-approved alternative is just as efficient as the ISO-NE favored alternative. Second, the Impact Assessment results depict how the NEPOOL-approved alternative would work during the winter months, so all incentives for generators identified by Analysis Group are present in that alternative. Thus, while the AGO has misgivings about how efficiency was measured in the impact analysis, it is also confident that the NEPOOL-approved alternative effectively captures and maintains the market efficiencies and incentive efficiencies demonstrated by Analysis Group in their Impact Assessment (such as it is).

[42] Analysis Group, *Impact Analysis* Presentation, 4 September 2019, Slides 12–13. Available at: https://www.iso-ne.com/static-assets/documents/2019/08/a2_f_presentation_esi_impact_analysis.pdf

IV. C THE ISO-FAVORED ESI ALTERNATIVE, WITHOUT THE NEPOOL AMENDMENTS ON RER, IS UNREASONABLY EXPENSIVE AND OFFERS POOR VALUE FOR MONEY.

Q: Does the Impact Assessment indicate that RER will increase program costs?

A: Yes. RER as favored by ISO-NE will effectively double the cost of the ESI design, increasing costs to consumers by more than $82 million per year on average (compared to the NEPOOL-approved alternative). The left portion of Table 1 uses Analysis Group data and compares how net ESI costs vary across three different configurations. The values presented provide the relative change in cost for ESI, compared to current market rules—not the total cost of the market.

The first configuration is the "central case" of the Impact Assessment and includes 1,200 MW/h of RER but no allowance for load forecast error. The second configuration, "No RER", removes RER in all hours (also no LFE). The final case, "RER Plus" includes an additional 600 MW/h of RER in addition to the first 1,200 MW/h. This RER Plus case can be thought of as incorporating the load forecast error component of RER, albeit at a higher quantity than the ~360 MW/h ISO-NE is now considering.

Table 1: ESI Costs of ISO-NE and NEPOOL Proposals, by Season ($ million per period)[43]

	No RER	Central	RER Plus	ISO-NE –Favored Proposal	NEPOOL-Approved Alternative	NEPOOL Savings
	(A)	(B)	(C)	(D) = Avg [(B), (C)]	(E)	(F) = (D) - (E)
Winter	**-$10.67**	**$32.67**	**$87.67**	**$60.17**	**$32.67**	**$27.50[44]**
Frequent	$59.00	$132.00	$231.00	$181.50	$132.00	$49.50
Extended	-$117.00	-$69.00	-$19.00	-$44.00	-$69.00	$25.00
Infrequent	$26.00	$35.00	$51.00	$43.00	$35.00	$8.00
Non-Winter	**$52.00**	**$107.00**	**≥$107.00**	**≥$107.00**	**$52.00**	**≥$55.00[45]**
Severe	$56.00	$125.00	≥$125.00	≥$125.00	$56.00	≥$69.00
Moderate	$48.00	$89.00	≥ $89.00	≥ $89.00	$48.00	≥$41.00
Annual	**$41.33**	**$139.67**	**≥$194.67**	**≥$167.17**	**$84.67**	**≥$82.50**

Source: Impact Assessment, Tables 48–50, 54–55.

Q: What do the values on the left portion of Table 1 show?

A: The left portion of Table 1 shows that the central case (1,200 MW/h of RER, no LFE) would cost New England consumers about $140 million per year (assuming the seasons are equally likely); that increasing RER by 600 MW/h increases costs to $195 million per year (an increase of 39% or $55 million). Eliminating RER year-round would result in an

[43] Table 1 costs are imprecise because even after a year of modeling work, certain key information remains unknown. First, Analysis Group did not run the "RER Plus" in the non-winter seasons, so one cannot assess the cost of the program which ISO-NE is actually proposing in this filing. One must rely on the central case for non-winter months, implicitly assuming that the cost of LFE in non-winter months is greater than or equal to zero. (Based on the winter-time data, LFE could impose material costs). Second, because this was a deterministic analysis, ISO-NE and AG did not provide the relative likelihoods of different seasons occurring. To improve clarity, I provide indicative expected seasonal costs using the simple average of the different modeled seasons, but I recognize that season-to-season costs may vary significantly.

[44] Column F winter values assume that ISO-NE settles on an LFE allowance around 300 MW/h (see discussion on subsequent pages). If LFE quantities are ultimately set at the full 600 MW/h included in the "RER Plus" scenario, then the NEPOOL alternative would offer more savings than shown. For example, under the Frequent Winter case, removing a 600 MW/h LFE would save $99 million per season ($231 million less $132 million).

[45] Cf. Impact Assessment at 101–102. Note that Analysis Group did not assess the cost of LFE in the non-winter period, so the NEPOOL savings are *at least* $69 million in the "Severe" non-winter period and *at least* $41 million in the "Moderate" non-winter period.

estimated cost to consumers of only $41 million per year (a 70% reduction from the central case).

Q: What do the values on the right portion of Table 1 show?

A: On the right, I calculate approximate costs of the ISO-NE-favored proposal and the NEPOOL-approved alternative. I am taking the mid-point average of the Central and RER Plus cases – because ISO-NE's current thinking on potential LFE quantities is approximately 360 MW/h and this is about half-way between the LFE procurement in the central case (LFE = 0) and the extra RER procured in the RER Plus case (+600 MW/h). I estimate the cost of the NEPOOL-approved alternative as equal to the "central case" for winter months and the "No RER" case in the non-winter.

Looking across the different seasons, ISO-NE's favored proposal would cost an average $167 million per year while the NEPOOL-approved alternative would cost about $85 million per year—a reduction of $82.5 million. Winter period costs are reduced by $27.5 million due to the elimination of LFE while non-winter costs are reduced by $55 million due to the elimination of RER in totality during these three seasons. These costs will vary year-to-year, sometimes dramatically, due to different weather conditions. Note that the non-winter cost reductions of the NEPOOL-approved alternative are *understated* because they do not include savings from the avoidance of costs associated with procurement of LFE in these months. As demonstrated in Table 1, the NEPOOL-approved ESI alternative reduces costs by half without affecting efficiency or reliability.

Q: Can the high costs associated with the proposal that ISO-NE favors be justified by a reduction in reserve deficiencies (or an increase in system reliability)?

A: I do not believe so, but it is hard to say for certain given the gaps in the Analysis Group report.[46] Based on the data that *is* provided, however, I will now provide a directional cost/benefit analysis of the ISO-NE proposal.

[46] The AGO will be the first to acknowledge that the calculations to come are offered in broad strokes, because neither ISO-NE nor Analysis Group made any effort to offer a cost-benefit analysis, nor did they run any analysis to

Q: How do you compute the incremental value of the ISO-NE favored ESI design?

A: Let's assume for sake of argument that the alternative proposal ISO-NE favors is able to avoid the few instances of reserve shortages that we have observed historically and which the Impact Assessment suggests may occur prospectively. Further, let's assume that the NEPOOL-approved alternative cannot avoid these shortages. (To be clear, this is an extreme assumption and gives the benefit of the doubt to the ISO-NE's preferred proposal.)

Recall that in Section IV.A, I show reserve deficiencies are uncommon historically or prospectively.

1. The historic reserve deficiency data (duration and magnitude) previously discussed indicated that over the 2010–2019 period, there were an average of 9.06 hours of reserve deficiency somewhere on the ISO-NE system, and that the average magnitude of that deficiency was 280 MW. Over the 2015–2019 period, these values fell to 3.38 hours and 183 MWs, respectively.

2. The prospective reserve deficiency data from the Impact Assessment showed that there was a single scenario in a single season where ESI was able to avoid reserve deficiencies (3 hours total). In the extreme case, let's assume that ESI can avoid three hours of reserve deficiency on average each year. Alternatively, assuming that all scenarios within each season are equally likely, then ESI would avoid just 0.06 hours of expected reserve deficiency each year.[47] Because the Impact Assessment does not provide the *magnitudes* of deficiency, we assume 500 MW/h (higher than was observed in the historic dataset).

show the constituent benefits of the different ESI products as the AGO asked as early as August 2019. For that request, see *Scenario Request for Impact Analysis for Long-Term Energy Inventory Security Proposal*, available at: https://www.iso-ne.com/static-assets/documents/2019/08/a2_d_joint_scenario_analysis_request.pdf

[47] $0.06 \frac{Defic.\ Hrs}{Year} = \frac{2{,}160\ Winter\ Hrs}{8{,}760\ Annual\ Hrs} \times \frac{3\ Hrs\ Defic.\ in\ Winter}{116{,}640\ Winter\ Hrs} + \frac{6{,}600\ Non{-}Winter\ Hrs}{8{,}760\ Annual\ Hrs} \times \frac{0\ Hrs\ Defic.\ in\ Non{-}Winter}{39{,}600\ Non{-}Winter\ Hrs}$

Recall also that in Section IV.C, I showed that the incremental cost of the proposal favored by ISO-NE, over and above the NEPOOL-approved alternative was an expected $82.5 million (with significant fluctuations from year to year).

Using ISO-NE reserve deficiency data and multiplying the hours of reserve deficiency by their average magnitude provides the MWh of deficiency on a prospective and retrospective basis. Dividing the $82.5 million/year incremental cost of ISO-NE's preferred proposal (as shown in Section IV.C) by the MWh of reserve deficiency gives a value in units of dollar-per-MWh-avoided. Table 2 reflects this computation.

Table 2: Value of ISO-NE's Proposed Incremental ESI Costs

		Reserve Def.		Cost per MWh Avoided
Period	**Hours**	**Depth (MW)**	**MWh**	
2010–2019	9.06	280	2536	$32,532
2015–2019	3.38	183	619	$133,279
Prospective	3.00	500	1500	$55,000
Prospective	0.06	500	28	$2,946,429

Table 2 indicates that the cost per MWh of deficiency avoided by ISO-NE's favored ESI proposal ranges from $32,532/MWh to $2.9 million/MWh.

Q: How do the values in Table 2 compare to estimates of the value of lost load?

A: These numbers are 3.6 to 327 times larger than the real-time Value of Lost Load in ISO-NE or ERCOT, which are both around $9,000/MWh.[48] The value of lost load must be greater than the value of avoided reserve deficiency because reserve deficiencies precede load shedding, so the estimates in Table 2 most likely *understate* the costs of avoiding reserve deficiencies using the ISO-NE design. So, even if the above estimates of the value of reserve deficiency MWhs are off by a factor of two or three, the implications are

[48] The maximum real-time price in ISO-NE about $8,955/MWh (energy offer cap of $1000/MWh, plus the reserve constraint penalty factor of $1,500/MWh for ten-minute non-spinning reserve, plus the $1,000/MWh RCPF for thirty-minute operating reserves, plus the full, phased in value of $5,455/MWh for PfP). ERCOT's Value of Lost Load is $9,000/MWh.

the same. Put simply, the ESI proposal favored by ISO-NE offers poor value for money, with incremental costs well above estimates of the value of lost load. The NEPOOL-approved alternative would fare better under these calculations, because it has the same modeled reliability as the ISO-NE's desired alternative, but much lower costs.

IV.D PRICE FORMATION CONSIDERATIONS DO NOT JUSTIFY THE ISO-NE-FAVORED ALTERNATIVE PROPOSAL

Q: Does ISO-NE offer any explanation for why RER should be adopted beyond its underlying reliability "benefits"?

A: Yes. ISO-NE, in discussing why it does not support the NEPOOL-approved alternative on RER notes that " [f]ormalizing the RER in the Day-Ahead Energy Market is consistent with the Commission's directive, and the ISO's objective, to transparently price, through the markets, the costs of operating a reliable power system in accordance with reliability needs of the power system."[49] Put more succinctly, ISO-NE argues that RER should be included year round to enhance market price formation.

Q: Do price formation considerations about RER justify this increase in cost to load?

A: No. As I noted above, RER is disproportionately expensive and has the added drawback of being duplicative of other market products today. The AGO agrees with NESCOE that the value of RER is already priced into the market using high real-time energy prices during scarcity via Reserve Constraint Penalty Factors and the PfP incentives embedded in our capacity payments.[50] These elements, combined, offer incentives worth thousands of dollars per MWh to alleviate reserve deficiencies—the same goal of RER.

Even though ISO-NE argues that PfP doesn't solve the mis-aligned incentives problem that it has identified in the ESI process,[51] some of the *goals* of, and rationale for,

[49] Filing Letter at 41.

[50] NESCOE, 24 March 2020 MC Presentation, slide 10. Available at: https://www.iso-ne.com/static-assets/documents/2020/03/a2_b_i_ii_and_vi_nescoe_presentation_for_its_amendments.pptx.

[51] See ESI White Paper Section 2.4.2.

PfP are nearly identical to those of ESI. To quote from ISO-NE Chief Economist Matthew White's 2014 PfP testimony (Docket No. ER14-1050):

> The New England power system faces significant and growing reliability risks. These include, in brief:
>
> - System operators' concern that the regions' gas-fired generating units, which rely on a frequently constrained, "just-in-time" pipeline supply system, lack the fuel supply arrangements and backup fuel capabilities necessary to assure they can deliver power during stressed system conditions.
>
> . . .
>
> - Recurring events in which a broad array of generation resources performs poorly when requested to deliver additional energy following major system contingencies.[52]

These identified problems in the PfP docket are closely related to those outlined in the April 2019 ESI Discussion Paper and described in Section II of my affidavit.[53] Dr. White goes on to explain in ER14-1050 that PfP can provide simple, strong, and direct financial incentives for suppliers to make investments that ensure they can perform during periods of scarcity.[54] Analysis Group's Todd Schatzki and Paul Hibbard analyzed the PfP program and found that:

> FCM PI [PfP] would induce actions aimed at mitigating performance risks associated with gas supply curtailments, particularly during the winter gas season. The analysis finds that increased dual fuel capability provides the most cost-effective option to mitigate these risks. To the extent that other options (e.g., contracts with existing LNG resources, new pipeline capacity dedicated for electricity generation) become less costly to market participants than dual-fuel upgrades, our analysis would understate investment in reliability solutions . . . . [PfP] would also mitigate any further mothballing of dual-fuel capability that would likely occur absent market incentives, although the analysis does not quantify this risk to reliability (absent FCM PI).[55]

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[52] ISO New England Inc., Filings of Market Rule Changes To Implement Pay For Performance in the Forward Capacity Market, *ISO New England Inc.*, Docket No. ER14-1050, (January 17, 2014) (ISO-NE PfP Filing), Testimony of Matthew White at 7. Available at: https://www.iso-ne.com/static-assets/documents/regulatory/ferc/filings/2014/jan/er14_1050_000_1_17_14_pay_for_performace_part_1.pdf

[53] Discussion Paper Section 2 (pages 10-17).

[54] ISO-NE PfP Filing. Testimony of Matthew White at 42-3, 46, 54, 116ff. Cf. Joint Testimony of David LaPlante and Seyed Parviz Gheblealivand at 6-9.

[55] ISO-NE PfP Filing Todd Schatzki and Paul Hibbard, *Assessment of the Impact of ISO-NE's Proposed Forward Capacity Market Performance Incentives* at 4-5. (bracketed material added).

Q: Is your conclusion that consumers would be paying twice or three times over for reserve restoration through the RER product?

A: Yes. PfP, along with RCPFs in the energy market, price reserve restoration into ISO-NE's markets, today. RER is a redundant mechanism to price something into the market which is supposedly already priced. The AGO agrees that there are differences in the specific pricing mechanisms of RER and PfP, but it is inaccurate to assume that RER is pricing a new benefit into the region's wholesale markets. An alternative interpretation of PfP is that the "right" price for ensuring reserve restoration is simply very low and that RER significantly *overcompensates* for this service.

V. THE NEPOOL AMENDMENT WHICH INCLUDES A $10 ADDER TO THE ESI OPTION STRIKE PRICE WOULD HELP PROTECT CONSUMERS FROM UNNECESSARY AND EXPENSIVE SUPPLIER RISK PREMIUMS WHEN THE SYSTEM IS NOT STRESSED.

Q: What is the Position of Massachusetts AGO on the upward bias to the ESI Option Strike Price?

A: The AGO is persuaded by comments from NESCOE and ISO New England's External Market Monitor (EMM) on the beneficial effects of adding an upward bias to the strike price. The upward strike-price bias may provide an additional mechanism to ensure that consumers do not over-pay for the ESI products when the system is not actually stressed. NESCOE has provided analysis that the adder would reduce the cost and risk associated with the selling of ESI options which, in turn, may reduce consumer costs.[56] The EMM concluded that the adder would "not undermine the market and reliability benefits of satisfying reserve adequacy needs within the market, but [w]ould reduce the likelihood

[56] NESCOE, 24 March 2020 MC Presentation, slides 5–7. Available at: https://www.iso-ne.com/static-assets/documents/2020/03/a2_b_i_ii_and_vi_nescoe_presentation_for_its_amendments.pptx.

that the day-ahead ancillary services market would lead to excessive costs to consumers to during mild and moderate operating conditions."[57]

The Impact Assessment indicates that the $10 strike price adder would have no effect on reliability and modest effect on natural gas consumption during the most severe winter scenario.[58] Analysis Group provided analysis which suggests that the ten dollar strike price adder *could* affect incentives for fuel-secure generators but did not provide any estimate of the magnitude (or materiality) of this adverse effect. For example, in the modeled Frequent Winter, a dual-fuel combined cycle power plant would have a $5,577/MW increase in revenue under the "central case" proposal but only $5,537 increase with the strike price adder—a reduction of less than one percent.[59] Changes are generally small for other types of power plant and in other modeled seasons.[60]

In addition, ISO-NE repeatedly took the position that "close is good enough" for the strike price—and has provided no data to suggest that expected LMP + $10 is not "close enough."[61] ISO-NE changed this guidance to "accurate, within limits" in the filed White Paper, but the same argument applies.[62]

Because the adder is fixed at $10/MWh, the impact of the adder diminishes as system conditions grow tighter and prices rise. The adder is intended to reduce "noise" (closeout cost volatility) and risk in the settlement of the ESI options during periods without system stress, while maintaining incentives as energy prices rise. The AGO agrees with NESCOE and the EMM that this aspect of the design could reduce risk for suppliers, reduce costs for consumers, and maintain system reliability.

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[57] David B. Patton and Pallas Lee VanSchaick, Potomac Economics, Memorandum "Re: NESCOE Proposal to Raise the Strike Price of Energy Call Options". Available at: https://www.iso-ne.com/static-assets/documents/2020/03/a2_b_vi_emm_memo_re_nescoe_strike_price_amendment.pdf.

[58] Impact Assessment Tables 51–53

[59] Impact Assessment Table 62.

[60] Impact Assessment Tables 62–64

[61] ISO-NE Discussion Paper at 61.

[62] ESI White Paper at 74 and 76.

VI. CONCLUSION

Q: Please summarize why the Massachusetts AGO opposes the ESI proposal preferred by ISO-NE but supports the NEPOOL-approved alternative.

A: The AGO voted against the ISO-NE's preferred proposal because it thinks the program reflected in that proposal is too large, too expensive, and its benefits too uncertain. It is unclear whether ESI will actually, and materially, change resource behavior and improve system reliability. ESI would offer poor value for money, if all components were implemented year-round, as ISO-NE prefers. Ratepayers require a reliable power system. The NEPOOL-approved alternative ESI proposal filed by ISO-NE better ensures that this reliability is obtained at reasonable cost. The ISO-NE favors a proposal that effectively doubles the cost of ESI—relative to the NEPOOL-approved alternative—but offers no demonstrated benefits beyond those already captured by NEPOOL-approved alternative. Greatly increasing costs without increasing benefits is not reasonable.

The NEPOOL-approved alternative filed by ISO-NE offers most of the same benefits of the proposal ISO-NE favors:

- Pricing Day-Ahead operating reserves via GCR;
- Pricing the supplemental commitments which occur in today's Resource Adequacy Assessment via EIR; and,
- Procuring additional reserves in the winter months to provide *additional* incentive to procure fuel via RER.

At the same time, the NEPOOL-approved alternative foregoes some of ISO-NE's preferred excesses:

- Procuring ~ 1,200 MW/h of RER in non-winter months when the region does not have demonstrated challenges with energy security; and,
- Procuring ~360 MW/h of load-forecast error in all hours of the year, when ISO-NE has not demonstrated that it has a problem with LFE, or that the status quo tools for addressing LFE are inadequate.

These excessive requirements increase costs without improving system reliability.

Q: Does this conclude your affidavit?

A: Yes.

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

/s/ Benjamin W. Griffiths
Benjamin W. Griffiths

Executed on April 24, 2020.

ATTACHMENT 4 – VOTE TABULATION

APRIL 2, 2020 PARTICIPANTS COMMITTEE MEETING
VOTES TAKEN ON ESI ALTERNATIVES

TOTAL

Sector	NEPOOL Alternative	ISO-NE Alternative
GENERATION	0.00	14.39
TRANSMISSION	16.79	0.00
SUPPLIER	3.54	12.59
ALTERNATIVE RESOURCES	7.79	12.61
PUBLICLY OWNED ENTITY	16.79	0.00
END USER	16.79	0.00
% IN FAVOR	**61.70**	**39.59**

GENERATION SECTOR

Participant Name	NEPOOL Alternative	ISO-NE Alternative
CPV Towantic, LLC	O	F
Dominion Energy Generation Mktg.	O	F
FirstLight Power Resources Mgmt.	O	F
Generation Group Member	O	F
Nautilus Power, LLC	O	F
NextEra Energy Resources, LLC	O	F
NRG Power Marketing, LLC	O	O
IN FAVOR (F)	0	6
OPPOSED (O)	7	1
TOTAL VOTES	7	7
ABSTENTIONS (A)	0	0

TRANSMISSION SECTOR

Participant Name	NEPOOL Alternative	ISO-NE Alternative
Avangrid (CMP/UI)	A	O
Emera Maine	A	A
Eversource Energy	F	A
National Grid	F	A
Vermont Electric Power Co.	F	A
IN FAVOR (F)	3	0
OPPOSED	0	1
TOTAL VOTES	3	1
ABSTENTIONS (A)	2	4

ALTERNATIVE RESOURCES SECTOR

Participant Name	NEPOOL Alternative	ISO-NE Alternative
Renewable Generation Sub-Sector		
Central Rivers Power	O	F
ENGIE Energy Marketing NA	O	F
Great River Hydro	O	F
Jericho Power	O	F
Wheelabrator/Macquarie	O	F
Small RG Group Member	A	A
Distributed Gen. Sub-Sector		
CLEAResult Consulting, Inc.	A	A
Sunrun Inc.	F	F

SUPPLIER SECTOR

Participant Name	NEPOOL Alternative	ISO-NE Alternative
American PowerNet Management	F	O
BP Energy Company	O	F
Brookfield Energy Marketing Inc.	O	F
C.N. Brown Electricity, LLC	F	O
Calpine Energy Services, LP	O	F
Castleton Comm. Merchant Trading	O	F
Competitive Energy Services, LLC	O	F
Consolidated Edison Energy, Inc.	O	A
Cross-Sound Cable Company	A	A
DC Energy, LLC	A	A
Direct Energy Business, LLC	O	F
Dynegy Marketing and Trade, LLC	O	F
Emera Energy Companies	O	F
Exelon Generation Company	O	A
Galt Power, Inc.	O	F
H.Q. Energy Services (U.S.) Inc.	O	F
IDT Energy, LLC	A	A
LIPA	A	A
Maine Power, LLC	F	O
Marble River, LLC	O	--
Mercuria Energy America, Inc	O	F
PNE Energy Supply LLC	F	O
PSEG Energy Resources & Trade	O	F
IN FAVOR (F)	4	12
OPPOSED	15	4
TOTAL VOTES	19	16
ABSTENTIONS (A)	4	6

ALTERNATIVE RESOURCES SECTOR (cont.)

Participant Name	NEPOOL Alternative	ISO-NE Alternative
Load Response Sub-Sector		
Enel X North America, Inc.	F	A
Maple Energy	F	O
Vermont Energy Investment Corp.	F	O
Small LR Group Member	A	Split
Energy Federation Inc.		O
Tangent Energy Solutions, Inc.		F
IN FAVOR (F)	4	6.5
OPPOSED	5	2.5
TOTAL VOTES	9	9
ABSTENTIONS (A)	3	3

APRIL 2, 2020 PARTICIPANTS COMMITTEE MEETING
VOTES TAKEN ON ESI ALTERNATIVES

END USER SECTOR

Participant Name	NEPOOL Alternative	ISO-NE Alternative
Acadia Center	A	O
Associated Industries of Mass.	F	O
Bath Iron Works Corporation	F	O
Conn. Office of Consumer Counsel	F	O
Conservation Law Foundation	A	O
Durgin and Crowell Lumber Co.	F	O
Elektrisola, Inc.	F	O
Environmental Defense Fund	F	A
Garland Manufacturing Co.	F	O
Hammond Lumber Company	F	O
Harvard Dedicated Energy Limited	F	O
High Liner Foods (USA) Inc.	F	O
Industrial Energy Consumer Group	F	O
King Forest Industries, Inc.	F	O
Michael Kuser	A	A
Maine Public Advocate Office	F	O
Maine Skiing, Inc.	F	O
Mass. Attorney General's Office	F	O
Moore Company	F	O
Natural Resources Defense Council	A	O
NH Office of Consumer Advocate	F	O
Nylon Corporation of America	F	O
PowerOptions, Inc.	F	O
St. Anselm College	F	O
The Energy Consortium	F	O
Z-TECH, LLC	F	O
IN FAVOR (F)	22	0
OPPOSED	0	24
TOTAL VOTES	22	24
ABSTENTIONS (A)	4	2

PUBLICLY OWNED ENTITY SECTOR

Participant Name	NEPOOL Alternative	ISO-NE Alternative
Ashburnham Municipal Light Plant	A	O
Belmont Municipal Light Dept.	F	O
Block Island Utility District	F	O
Boylston Municipal Light Dept.	A	O
Braintree Electric Light Dept.	F	O
Chester Municipal Light Dept.	F	O
Chicopee Municipal Lighting Plant	A	O
Concord Municipal Light Plant	F	O
Conn. Mun. Electric Energy Coop.	F	O
Danvers Electric Division	F	O
Georgetown Municipal Light Dept.	F	O
Groton Electric Light Dept.	A	O
Groveland Electric Light Dept.	F	O

PUBLICLY OWNED ENTITY SECTOR (cont.)

Participant Name	NEPOOL Alternative	ISO-NE Alternative
Hingham Municipal Lighting Plant	F	O
Holden Municipal Light Dept.	A	O
Holyoke Gas & Electric Dept.	A	O
Hull Municipal Lighting Plant	A	O
Ipswich Municipal Light Dept.	A	O
Littleton (MA) Electric Light Dept.	F	O
Littleton (NH) Water & Light Dept.	F	O
Mansfield Municipal Electric Dept.	A	O
Marblehead Municipal Light Dept.	A	O
Mass. Bay Transportation Authority	F	O
Mass. Mun. Wholesale Electric Co.	A	O
Merrimac Municipal Light Dept.	F	O
Middleborough Gas and Elec. Dept.	F	O
Middleton Municipal Electric Dept.	F	O
New Hampshire Electric Cooperative	F	O
Norwood Municipal Light Dept.	F	O
Pascoag Utility District	F	O
Paxton Municipal Light Dept.	A	O
Peabody Municipal Light Plant	A	O
Princeton Municipal Light Dept.	A	O
Reading Municipal Light Dept.	F	O
Rowley Municipal Lighting Plant	F	O
Russell Municipal Light Dept.	A	O
Shrewsbury's Elec. & Cable Ops.	A	O
South Hadley Electric Light Dept.	A	O
Sterling Municipal Electric Light Dept.	A	O
Stowe (VT) Electric Dept.	F	O
Taunton Municipal Lighting Plant	F	O
Templeton Municipal Lighting Plant	A	O
Vermont Electric Cooperative	F	O
Village of Hyde Park (VT) Elec. Dept.	F	O
VT Public Power Supply Authority	F	O
VT Public Power Supply Authority	F	O
Wakefield Mun. Gas and Light Dept.	A	O
Wallingford, Town of	F	O
Wellesley Municipal Light Plant	F	O
West Boylston Mun. Lighting Plant	A	O
Westfield Gas & Electric Light Dept.	F	O
IN FAVOR (F)	30	0
OPPOSED	0	51
TOTAL VOTES	30	51
ABSTENTIONS (A)	21	0

CERTIFICATE OF SERVICE

I hereby certify that I caused a copy of the foregoing document to be served electronically upon each person designated on the official service list compiled by the Secretary of the Federal Energy Regulatory Commission.

Dated at Hartford, Connecticut this 24th day of April, 2020.

/s/ *Rosendo Garza, Jr.*
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