UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

New England Winter Gas-Electric Forum	)	Docket No. AD22-9-000
	)	

COMMENTS OF THE NEW ENGLAND STATES COMMITTEE ON ELECTRICITY

The New England States Committee on Electricity ("NESCOE")[1] provides these comments to the Federal Energy Regulatory Commission ("FERC" or "Commission") in response to the Notice of Request for Comments following a September 8, 2022 forum in Vermont ("New England Forum") that the Commission convened "to discuss the electricity and natural gas challenges facing the New England region."[2] Several New England state officials participated in the New England Forum, including those who also serve on NESCOE's board of managers. NESCOE appreciates the Commission's close engagement on these critical issues with cross-jurisdictional components and the opportunity to share our perspective.

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[1] NESCOE is the Regional State Committee for New England. It is governed by a board of managers appointed by the Governors of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont and is funded through a regional tariff that ISO New England Inc. ("ISO-NE") administers. NESCOE's mission is to represent the interests of the citizens of the New England region by advancing policies that will provide electricity at the lowest possible price over the long term, consistent with maintaining reliable service and environmental quality.

[2] *New England Winter Gas-Electric Forum*, Notice of Request for Comments, AD22-9-000 (Sept. 21, 2022).

Capitalized terms not defined in this filing are intended to have the meaning given to such terms in the ISO-NE Transmission, Markets and Services Tariff.

I. EXECUTIVE SUMMARY

NESCOE's comments below are primarily directed in two related areas:

Clarity and Focused Regional Discussion

- The need for uniformity and consistency in delineating time horizons for discussion of winter reliability challenges and solutions, set forth in detail below as immediate-term, short-term, medium-term, and longer-term.

- The need for metrics to define and measure "energy adequacy."

- The importance of clarity in discussing the interdependence of the gas and electric systems, including ensuring that needs or gaps identified in gas-centric terminology (billion cubic feet or "Bcf") are translated to electric system capabilities (megawatts ("MW") or megawatt-hours ("MWh")) to promote the broadest possible solution set.

- Confirming that ISO-NE has primary responsibility for regional resource adequacy.

Next Steps

- **Upcoming Winter Season**
  - In coordination with the U.S. Department of Energy ("DOE") and the New England states, the Commission, ISO-NE, and other entities with responsibilities for electric grid reliability can provide support and technical assistance in connection with a Jones Act waiver request in response to emergency conditions.

- **Short- and Medium-Terms**
  - Collaboration among the New England states, U.S. DOE, the Commission, and ISO-NE on the technical specifications and legal implications of a modern strategic energy reserve.
  - The Commission should direct ISO-NE to file annual reports on winter reliability until a long-term solution is in place.

- **Short- to Longer-Term**
  - Our region must aggressively pursue a durable, long-term solution to winter reliability risks. NESCOE supports ISO-NE's development of market-based solutions to address winter challenges, including exploring a seasonal capacity market. ISO-NE should consider expediting its evaluation of such a seasonal market.

II. INTRODUCTION

As New England approaches the winter season, our region is experiencing serious implications from "high and volatile global energy prices" reflecting the dynamics of the conflict between Russian and Ukraine, constrained supply chains, and strong international demand.[3] New England's current reliance on global natural gas markets to operate the electric power system is not sustainable—as a matter of consumer price volatility, reliability, and overall public policy. As long as the reliability of the regional electric grid requires natural gas, uncertainty around fuel supply arrangements presents an unacceptable risk to the flow of electricity that our residents and businesses rely on for health, safety, economic security, and the daily activities that enrich our lives.

While New England has been "building an energy strategy to reduce reliance on imported fuels," our region must accelerate that work.[4] State procurements for clean energy, as discussed below, have included electric system reliability as a key factor in weighing the costs and benefits of a project. As we transition to this future grid, we must continue to act to give consumers reliable electric service in the most cost-effective way. The consequences of inaction are too great to allow the *status quo* to define our collective response to a long-standing regional problem.

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[3] Letter from N.E. Governors to U.S. DOE Secretary Granholm, July 27, 2022 ("Governors' Letter to U.S. DOE"), at 1, at https://www.iso-ne.com/static-assets/documents/2022/08/npc-20220804-composite4c.pdf (the letter is available on PDF p. 59); FERC Staff Report to the Commission, Winter Energy Market and Reliability Assessment 2022-2023, Oct. 20, 2022 ("2022-2023 Winter Reliability Report"), at 6, at https://ferc.gov/media/report-2022-2023-winter-assessment.

[4] Governors' Letter to U.S. DOE at 2.

The reliable operation of New England's regional electric system during the winter months has been a persistent concern for two decades.[5] New England utilizes natural gas-fired generation to meet approximately half of its electricity needs.[6] Yet, the ability of natural gas supply to reach the region is constrained both by limited infrastructure and geography. New England sits at the end of the interstate gas pipeline system.[7] Our region's ability to source liquefied natural gas ("LNG") is tied to global commodity prices, with high LNG prices challenging New England's ability to access additional supply during high demand periods.[8]

This dynamic exposes the region to unique reliability risks relative to other regions during periods of cold weather when gas supply is used to meet heating demand, limiting natural gas availability for electric generators without firm supply and transportation. New England's

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[5] *See, e.g.*, ISO New England Inc., Market Monitoring Unit, *Final Report on Electricity Supply Conditions in New England During the January 14 - 16, 2004 "Cold Snap,"* Oct. 12, 2004, at 11 (referencing 2001 and 2002 studies that ISO-NE commissioned showing thousands of MW at-risk during the winter months due to gas unavailability), at https://www.iso-ne.com/static-assets/documents/2017/09/iso-ne_final_report_jan2004_cold_snap.pdf.

[6] ISO-NE, Resource Mix, at https://www.iso-ne.com/about/key-stats/resource-mix/; 2022-2023 Winter Reliability Report at 37 ("Forecasts indicate natural gas will account for approximately 49% of the region's electric generation energy output this winter[.]") (citation omitted).

There have also been "many instances where close to 70% of [New England] demand is served by natural gas fired generation." Joint Comments of the North American Electric Reliability Corp. [("NERC")] and the Northeast Power Coordinating Council [("NPCC")], Docket No. AD22-9-000 (filed Sept. 1, 2022) ("NERC/NPCC Comments"), at 5.

As ISO-NE explains, NERC is a non-profit organization that FERC has selected to be the nation's "Electric Reliability Organization," charged with "establishing and enforcing reliability standards for the US power system." ISO-NE, Reliability Standards: Development and Compliance, at https://www.iso-ne.com/about/what-we-do/in-depth/reliability-standards-development-and-compliance.

NPCC, also a non-profit organization, is one of eight regional entities to which NERC delegated its "authority to monitor and enforce compliance with reliability standards," covering New England, New York, and parts of Canada. *Id.*

[7] ISO-NE, Natural Gas Infrastructure Constraints ("NG Constraints Primer"), at https://www.iso-ne.com/about/what-we-do/in-depth/natural-gas-infrastructure-constraints.

[8] *See* 2022-2023 Winter Reliability Report at 6-7 ("In past winters with lower global LNG prices and demand, LNG imports into New England provided additional supply during times of higher demand.") (citation omitted).

gas pipeline constraints, coupled with our region's current reliance on globally-sourced LNG supplies and fuel oil inventories, led NERC and NPCC to warn the Commission of New England's "increased risk during periods of extended cold weather when the system is stretched beyond normal extremes."[9] As part of its participation in the New England Forum, ISO-NE also summarized a series of "close calls" for system reliability correlating with fuel supply challenges.[10] In its recent report to the Commission, FERC Staff concluded its assessment of winter readiness in New England with a clear statement of caution for our region: "While fuel oil inventories are being filled without additional incentives and new programs have been put in place that promote reliability, New England nonetheless faces a risk that sustained cold weather could interrupt electric supply in the region."[11]

In addition to reliability risks, our region's reliance on natural gas for electricity system operations has led to substantial price volatility. An extended cold period during the winter of 2017-2018 caused prices to skyrocket over a roughly two-week period. According to ISO-NE, New England's "wholesale energy market was valued at $992 million for the two-week period from December 26 to January 8, compared with $243 million during the same time the prior year."[12]

In a July 2022 letter to U.S. DOE, New England's Governors explained that "[t]he Russian invasion of Ukraine has exacerbated the pricing of nearly all energy commodities which

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9 NERC/NPCC Comments at 3.

10 ISO New England, New England Winter Gas-Electric Forum, Sept. 8, 2022 ("ISO-NE Forum Presentation"), Panel 1, Slides 16-21, at https://www.iso-ne.com/static-assets/documents/2022/09/ne_gas_electric_forum_presentations.pdf.

11 2022-2023 Winter Reliability Report at 40.

12 NG Constraints Primer.

is directly impacting energy consumers in our respective states."[13] The letter stated that "[t]he increase in global [LNG] pricing has been particularly acute - while global petroleum prices increased by 50 percent over the last year, global LNG prices have increased by almost 300 percent."[14] According to a recent FERC Staff report, global LNG prices reached record high levels this past summer due to massive purchases of the commodity in the European markets.[15] This has a direct and material effect on New England prices. Algonquin Citygates prices saw "the largest expected year-over-year futures price increase" for the second consecutive year.[16] Natural gas futures prices in New England, which traded above $40/MMBtu at Algonquin Citygates as of the New England Forum,[17] "have risen alongside European LNG prices" for the upcoming winter.[18] For point of reference, last winter, average natural gas prices in New England were $14.41/MMBtu and they peaked at $29.42/MMBtu.[19]

A few weeks after the New England Forum, a letter from a group of load serving entities ("LSEs") to ISO-NE described how surging global LNG prices driven by Russia's invasion and resulting market instability implicates the risks it prices into contracts to serve consumers.[20] This

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13 Governors' Letter to U.S. DOE at 1.

14 *Id.*

15 2022-2023 Winter Reliability Report at 6.

16 *Id.*

17 ISO-NE Forum Presentation, Panel 2, at Slide 7.

18 2022-2023 Winter Reliability Report at 7. In a recent update, ISO-NE noted that "European prices for January delivery were" approximately $60/MMBtu but have since "trended down." ISO-NE, New England Winter Outlook 2022/2023, ISO New England Board Meeting Open Session, Nov. 1, 2022 ("ISO-NE November Update"), at Slide 7, available at https://www.iso-ne.com/static-assets/documents/2022/11/combined_master_slide_deck_nov_1_bod_open_meeting.pdf.

19 ISO-NE Internal Market Monitor, Winter 2022 Quarterly Markets Report, May 4, 2022, at 3 and 6, at https://www.iso-ne.com/static-assets/documents/2022/05/2022-winter-quarterly-markets-report.pdf.

20 *See* NEPOOL Participants Committee Meeting, Oct. 6, 2022, Composite Materials, Agenda Item #3, at PDF pp. 26-28, at https://nepool.com/wp-content/uploads/2022/09/NPC_20221006_Composite3.pdf.

gas commodity price volatility, whether caused by cold weather and pipeline constraints or geopolitical events, exposes retail consumers to high electricity prices coupled with potentially significant risk premiums that LSEs may charge to mitigate their losses.[21]

ISO-NE has identified a continuing need for dispatchable resources while executing the clean energy transition, with natural gas-fired generation expected to be the primary dispatchable resource in the near-term.[22] NERC and NPCC have underscored this point. While noting the benefits and promise of demand reduction and clean energy to help "offset the area's dependence on natural gas for electric reliability," NERC and NPCC describe how natural gas and resources like hydroelectricity will continue to be needed to fill the reliability gap during New England's clean energy transformation.[23] NERC and NPCC also state that "[e]nergy efficiency and demand response are important resources that help balance variable generation, however these resources

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[21] Some electric customers face substantial bill increases of over 60% this winter. *Electric Bills Could Increase 64% this Winter in Massachusetts, National Grid Warns*, Sept. 21, 2022, at https://www.wcvb.com/article/electric-bills-could-increase-64-percent-this-winter-in-massachusetts-2022-2033/41312993#.

See New England Winter Gas-Electric Forum, Docket No. AD22-9-000, Technical Conference Transcript, Sept. 8, 2022 ("Transcript"), at 131 (Comments of James Daly, Eversource) ("[P]rices this winter are going up 60 to 100 percent over what they were last winter, so we have a very serious situation on our hands that warrants action. And fuel is the problem.").

[22] ISO-NE, Future Grid Reliability Summary Study, at 1 ("The resulting growth in demand for electricity will drive natural gas-fired resource use and continue the grid's reliance on gas during peak winter periods in ways that will exceed current supply and pipeline capabilities."), at https://www.iso-ne.com/static-assets/documents/2022/09/future_grid_reliability_study_summary_03.pdf; ISO New England Inc., 2021 Economic Study: Future Grid Reliability Study Phase 1, July 29, 2022 ("Future Grid Study"), at 43 ("It was generally expected that as the quantity of renewable resources in these Scenarios increased, the region's reliance on fossil fuel resources would decrease. Though emissions, LMPs, and utilization of fossil fuel resources did decrease, this decrease did not result in a commensurate reduction in the need for dispatchable resources dependent upon stored fuel."), at https://www.iso-ne.com/static-assets/documents/2022/07/2021_economic_study_future_grid_reliability_study_phase_1_report.pdf; ISO-NE Forum Presentation, Panel 1, at Slide 25.

NESCOE emphasizes, as ISO-NE did at a recent public forum it hosted on the Future Grid Study, that the need for "dispatchable" resources focuses on operating characteristics—the ability for ISO-NE to dispatch units up and down to balance the system—and is not limited to carbon emitting resources.

[23] NERC/NPCC Comments at 4, 6.

are less effective during certain New England winter weather extremes, particularly events of prolonged duration."[24] No facts were presented at the New England Forum that disputed their assessment.

The path to a solution must begin where the New England Forum ended: fostering continued collaboration among the Commission, New England states, ISO-NE, and stakeholders representing broad and diverse interests. The pursuit of solutions does not fit neatly within federal, state, or local statutory and regulatory structures. It extends beyond the electric power sector and spans different industries. It implicates international partnerships. The New England Forum should serve as a catalyzing moment to develop collaborative and lasting solutions.

Our shared work requires renewed efforts to achieve a common understanding of the magnitude of the problem and the time frames involved. This analysis is foundational to developing targeted and cost-effective approaches. The comments below seek to provide a framework for the information, data, and clarity in communications that is needed to inform solution pathways.

In addition, there are near-term actions that the Commission and our region can pursue. These actions, discussed below, seek to build on the momentum of the New England Forum to explore a range of potential options to address winter reliability risks, including long-term and durable solutions.

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[24] *Id.* at 7.

III. BACKGROUND

A. New England States Have Supported Regional Efforts to Address Winter Reliability Challenges

Collaboration has been a hallmark of New England's approach to addressing energy adequacy concerns.[25] The states have long recognized the need to work together, across industries and jurisdictions, on these issues. For example, a decade ago, the states co-led the New England Gas-Electric Focus Group, which provided a "forum through which the natural gas industry, electric industry, consumers and the New England states explored in detail the region's gas-electric challenges and the potential solutions."[26] Around the same time, the New England Governors announced work, through NESCOE, to advance an energy infrastructure initiative.[27] As part of that initiative, the states explored the development of new clean resources and associated electric transmission together with incremental natural gas pipeline infrastructure. For a variety of reasons, the states ultimately elected not to pursue the infrastructure initiative through the ISO-NE process or a filing with the Commission and some states individually pursued actions to accelerate clean energy integration and support natural gas infrastructure.

NESCOE has worked closely with ISO-NE and the New England Power Pool ("NEPOOL") in connection with a series of temporary winter reliability programs beginning in 2013. The Commission approved three such programs, with the last program covering the

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[25] See Section IV.A.2 below regarding the need for clear metrics by which to measure energy adequacy.

[26] New England Gas-Electric Focus Group Final Report, at 2, at nescoe.com/focusgroup2014.

[27] New England Governors' Commitment to Regional Cooperation on Energy Infrastructure Issues, Dec. 5, 2013, at https://nescoe.com/resource-center/govs-stmt-infra-dec2013/.

periods 2015/2016, 2016/2017, and 2017/2018.[28] NESCOE appreciates the Commission's close focus on New England winter challenges over many years.

ISO-NE has also undertaken important market design work and pursued other tools to help mitigate the winter energy adequacy challenges facing the region. These include market reforms that improve price formation and allow offer flexibility as well as operational improvements to increase ISO-NE's situational awareness during the winter months, such as the 21-Day Energy Assessment Forecast.[29]

ISO-NE has not identified the need for a winter reliability program since the winter of 2017/2018. ISO-NE's Pay-for-Performance program went into effect the following year,[30] with the Commission also approving that same year a cost-of-service agreement between ISO-NE and the owners of Mystic Units 8 and 9 for the periods 2022/2023 and 2023/2024.[31] Even with these actions, ISO-NE has continued to identify energy adequacy issues justifying the need for further intervention.[32]

In recent months, NESCOE initiated discussions with ISO-NE and others in the region to understand more fully the reliability risks for this coming winter and any actions that ISO-NE

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[28] *ISO New England Inc. and New England Power Pool Participants Committee*, 152 FERC ¶ 61,190 at P 47 (2015), *order on reh'g*, 154 FERC ¶ 61,133 (2016).

[29] *See* ISO-NE Forum Presentation, Panel 2, at Slides 11-17.

[30] *ISO New England Inc. and New England Power Pool Participants Committee*, 147 FERC ¶ 61,172 (2014).

[31] *ISO New England Inc.*, 165 FERC ¶ 61,202 (2018), *order on reh'g*, 173 FERC ¶ 61,204 (2020), *aff'd in part, rev'd in part, Constellation Mystic Power, LLC v. FERC*, 2022 U.S. App. LEXIS 23485 (D.C. Cir. Aug. 23, 2022).

[32] *See, e.g., ISO New England Inc.*, 171 FERC ¶ 61,235 at P 117 (2020) (approving ISO-NE's Inventoried Energy Program ("IEP") despite existence of Mystic agreement and Pay-for-Performance program), *reh'd denied*, Notice of Denial of Rehearing, *ISO New England Inc.*, 172 FERC ¶ 62,095 (2020), *aff'd in part and vacated in part, Belmont Mun. Light Dept. v. FERC*, 38 F.4th 173 (D.C. Cir. 2022), order directing compliance filing, *ISO New England Inc.*, 180 FERC ¶ 61,181 (2022).

may pursue to address those risks.[33] These discussions culminated, at the states' request, in ISO-NE performing an assessment of regional energy adequacy for the 2022/2023 winter period.[34] In July 2022, ISO-NE presented that analysis to states and stakeholders, along with its recommendation not to propose a winter reliability program for the upcoming winter season.[35]

B. States Continue to Pursue Policies that Diversify Our Region's Energy Mix, Reduce Price Volatility, and Mitigate Reliability Risks

In addition to regional efforts, the New England states have pursued actions within their own authorities that help to address energy adequacy on multiple fronts. New England's Governors recently underscored to U.S. DOE Secretary Granholm how state actions are helping to mitigate the reliability challenges created by depending too heavily on natural gas, expressing that "[t]he region has invested in energy efficiency and pursued a variety of clean energy projects such as offshore wind and hydroelectricity that will reduce the region's reliance on LNG imported into New England."[36]

Reliability has remained squarely in focus as the states have procured resources to meet their clean energy laws and mandates. Reliability and fuel diversity benefits were key factors for Connecticut state officials to weigh in considering bids for "zero-carbon generation facilities,"

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[33] *See* Memorandum from NESCOE to ISO-NE, Winter 2022/23 Analysis and Recommendation, Aug. 3, 2022, at nescoe.com/memo_winter_reliability_Aug_2022.

[34] ISO-NE, Winter 2022/23 Analysis: Assessment and Recommendations, July 14, 2022, at https://www.isone.com/static-assets/documents/2022/07/a09_mc_2022_07_12-14_winter_2022_2023_presentation.pptx.

[35] *Id.* at Slide 5. Last week, ISO-NE provided an update to states, stakeholders, and the public that included expected winter conditions and fuel supply dynamics. *See generally* ISO-NE November Update.

[36] Governors' Letter to U.S. DOE at 1.

which led to power purchase agreements with the Millstone nuclear power station.[37] Recent state procurements for offshore wind also weighed the reliability benefits of the contracted projects, including contributions to reliability during winter peak demands and reductions in winter energy price spikes.[38]

In approving long-term power contracts associated with the New England Clean Energy Connect ("NECEC Project"), Massachusetts regulators found, consistent with statutory requirements, that among other things the NECEC Project provided (i) enhanced in-state reliability, (ii) reduced winter energy price spikes, and (iii) a guaranteed delivery of energy in the winter months.[39] However, the long and litigious road that has impeded the NECEC Project—including millions of dollars that incumbent electric power generators have reportedly spent to oppose the project[40]—illustrates that state actions to invest in resources that can contribute to system reliability do not always pave a clear, predictable, and uninterrupted path to operation.[41]

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[37] State of Connecticut, Office of Legislative Research, Millstone Power Procurement, Sept. 1, 2020, at https://www.cga.ct.gov/2020/rpt/pdf/2020-R-0203.pdf.

See Transcript at 211-212 (Comments of Katie Dykes, Commissioner of the Connecticut Department of Energy and Environmental Protection) ("We . . . signed a contract with the Millstone nuclear facility, motivated in large part because of concerns about imminent winter reliability challenges that the entire region will face.").

[38] Massachusetts Dept. of Energy Resources, Fitchburg Gas & Elec. Co. d/b/a Unitil et al., Request for Proposals for Long-Term Contracts for Offshore Wind Energy Projects, June 29, 2017, at 26-27, at https://macleanenergy.files.wordpress.com/2017/02/section-83c-request-for-proposals-for-long-term-contracts-for-offshore-wind-energy-projects-june-29-2017.pdf; Connecticut Department of Energy & Environmental Protection, Notice of Request for Proposals for Offshore Wind Facilities, Aug. 16, 2019, at https://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/ccf12ec6cdf19ca7852584580072434d/$FILE/2019.08.16_Final.OSW.RFP.pdf.

[39] Massachusetts D.P.U. 18-64, 18-65, and 18-66, Order (June 25, 2019), at 75-93; *see* Section 83D of An Act Relative to Green Communities, St. 2008, c. 169 and 220 CMR 24.00, *et seq.*

[40] *See* Scott Thistle, *Energy companies keep pouring millions into battle over power line corridor*, Portland Press Herald, Oct. 5, 2021 (updated Oct. 6, 2022), at https://www.pressherald.com/2021/10/05/energy-companies-spend-millions-more-in-battle-over-powerline-corridor/.

[41] In addition to NECEC Project delays, offshore wind projects have been delayed for various reasons including the federal permitting process and supply chain issues. *See* Jon Chesto, *Supply chain issues slow development of*

Several New England states are also investing in programs to support the deployment of battery storage.[42] As a dispatchable resource, battery storage has the potential to displace future demand for natural gas as the primary dispatchable resource.[43] Storage provides operational benefits, such as firming intermittent resources, particularly solar, as well as price benefits for consumers by reducing peak prices. Nonetheless, NESCOE recognizes the limits to current battery storage technology for winter reliability. For example, ISO-NE's recently completed Phase 1 Future Grid Study shows that battery storage alone is unlikely to meet the region's need for dispatchable resources, particularly during long duration weather events in the winter.[44]

NESCOE emphasizes that supply side solutions are not the only solution to energy adequacy challenges in our region. Using less power can and must play a prominent role in shoring up system reliability. The New England states have long been leaders in energy efficiency and demand response programs.[45] They were instrumental in ensuring the region's wholesale electricity markets account for energy efficiency investments, advocating for ISO-NE

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major Mass. offshore wind farm, Boston Globe, Sept. 22, 2022, at https://www.bostonglobe.com/2022/09/22/business/supply-chain-issues-slow-development-major-mass-offshore-wind-farm/; UtilityDive, *Vineyard Wind faces unexpected permitting delays, pushing 2022 start date for 800 MW offshore project*, Feb. 12, 2020, at https://www.utilitydive.com/news/vineyard-wind-faces-unexpected-permitting-delays-pushing-2022-start-date-f/572127/.

42 Massachusetts Session Laws, An Act to Advance Clean Energy, Chapter 227 of the Acts of 2018, Section 20 (establishing a 1,000 MWh energy storage target to be achieved by December 31, 2025); An Act Concerning Energy Storage, Connecticut Public Act 21-53 (setting energy storage deployment goal of 1,000 MW by 2030); An Act To Advance Energy Storage in Maine, L.D. 528 (setting energy storage targets of 300 MW by 2025 and 400 MW by 2030).

43 *Cf.* NERC/NPCC Comments at 4 ("[B]attery storage is currently a promising technology to offset the intermittency and variability of renewable resources such as solar and wind.").

44 The Future Grid Study discusses how two alternative scenarios relied on large penetrations of battery storage, "but the storage in these fleets were depleted during the winter season" because they "could not store enough energy to meet demand between recharge periods." Future Grid Study at 47.

45 *See, e.g.*, ACEEE, The 2020 State Energy Efficiency Scorecard (ranking four of the six New England states in the top ten nationally as leaders in energy efficiency programs), at https://www.aceee.org/research-report/u2011.

to adopt the first ever energy efficiency forecast in the nation.[46] Some New England state programs also focus explicitly on demand reduction during the peak winter period.[47] Energy efficiency and demand response programs will continue to play an important role throughout the clean energy transition, particularly as electric vehicle and heat pump adoption increase electric power system demand. States and ISO-NE must continue to prioritize investments in energy efficiency and demand response as part of our region's response to energy adequacy risks. However, even with New England's long-standing leadership in demand-side related policies and programs, winter challenges remain.[48]

More recently, the states have begun to assess, and have sought federal support for, the "development of a new or modernized strategic energy reserve to protect against low probability weather events to ensure energy system reliability."[49] NESCOE appreciates ISO-NE's willingness to allocate resources to this work,[50] and the states look forward to collaborating with ISO-NE, U.S. DOE, FERC, and others on this issue.

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[46] *See* ISO-NE, Energy Efficiency Forecast, at https://www.iso-ne.com/system-planning/system-forecasting/energy-efficiency-forecast/.

[47] *See, e.g.*, Massachusetts D.P.U. 18-110 through 18-119, Order (Jan. 29, 2019).

[48] NESCOE recognizes that entities responsible for the reliability of New England's electric grid have cautioned that, like with current battery storage technology, there are limits to the ability of energy efficiency and demand response to fully solve our region's energy adequacy challenges. *See, e.g.*, NERC/NPCC Comments at 7 ("Energy efficiency and demand response are important resources that help balance variable generation, however these resources are less effective during certain New England winter weather extremes, particularly events of prolonged duration.").

[49] Governors' Letter to U.S. DOE at 1-2.

[50] ISO New England's 2023 Annual Work Plan ("2023 Work Plan"), Slide 9, at https://www.iso-ne.com/static-assets/documents/2022/10/2023_awp_final_10_12_22.pdf.

IV. COMMENTS

NESCOE stands ready to continue working together with the Commission, ISO-NE, and regional partners to address New England's winter reliability risks. This includes actively engaging with ISO-NE and stakeholders to shape markets that fulfill their function of ensuring resource adequacy. NESCOE's comments are centered in two areas: (i) a threshold need for clarity and focused regional discussion, and (ii) next steps for collaborative work across a range of possible approaches to winter challenges in New England.

A. Need for Clarity and Focused Regional Discussion

Conversation at the New England Forum underscored the breadth and complexity of the issues. Clarity and precision in communication is critical to bring focus to discussions and next steps.

1. Timeframe

NESCOE has urged timeframe clarity and consistency in energy adequacy communications. As we have observed in regional discussions on winter reliability challenges, when timeframes are conflated or not uniformly understood, it impedes the discussion of solutions that may vary depending on the time horizon involved. Consistent reference to relevant timeframes will help states, the Commission, stakeholders, and the public better understand ISO-NE's communications, and each other, on winter reliability challenges. Moreover, while perhaps already commonly understood, we should agree that low-probability, high impact events are not just limited to extreme weather. Indeed, that phrase should not be used interchangeably with energy adequacy more broadly.

NESCOE has offered possible timeframe delineations, which ISO-NE recently adopted in its 2023 Work Plan in materially the following form:[51]

- **Immediate-term:** Winter 2022/2023.
- **Short-term:** Winters of 2023/2024 and 2024/2025. (NESCOE notes that this term corresponds with the final year of the Mystic cost-of-service contract (ending in May 2024) and implementation of IEP (winters 2023/2024 and 2024/2025))
- **Medium-term:** The subsequent seven winters: 2025/2026 through 2032/2033. (NESCOE understands this term to be characterized by the clean energy transition, as the grid of the future becomes prominent with a substantial shift in the generation fleet)
- **Longer-term:** Beyond 2033.

NESCOE hopes all stakeholders will adopt these timeframes. The commitment of ISO-NE and others to message future work and activities using these timeframes is important to facilitate a shared understanding of current and emerging regional risks and potentially available solutions that may be influenced by the time horizons involved.

2. Defining and Measuring Energy Adequacy

ISO-NE used the term "energy adequacy" various times in its submissions and presentations in this docket, but NESCOE is not aware that "energy adequacy" has, to date, been defined in any filing in this proceeding. However, in a recent filing with the Commission in another proceeding, ISO-NE defines energy adequacy as "a dependable energy supply chain and/or robust energy reserve to manage through extended periods of severe weather or energy

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[51] *Id.* at Slide 8. *See* NESCOE Memo to ISO-NE, Comments on ISO-NE's Draft 2023 Work Plan, Sept. 22, 2022 ("NESCOE Work Plan Memo"), at https://nescoe.wpenginepowered.com/wp-content/uploads/2022/09/2023_Draft_Workplan_Comments_9-22-22.pdf.

supply constraints."[52] Moving forward, and consistent with the discussion below on the need for continued analysis and reporting of winter reliability risks, ISO-NE should propose metrics by which to quantify "energy adequacy."[53] As a comparative example, in the case of resource adequacy, the common metric historically has, of course, been loss of load expectation of one day every ten years.[54]

3. Gas-Electric Relationship

Clarity is similarly important when discussing the interdependence of the gas and electric systems. In New England, the two are inextricably linked. The conversation at the New England Forum recounted that relationship, particularly when participants discussed the Everett Marine Terminal and its perceived value both to electric and gas system reliability. Understanding and clearly indicating what areas of concern relate specifically to each system is important as there are likely different paths available to addressing risks based on their distinct regulatory structures, jurisdictional considerations, and cost recovery opportunities.

For example, local gas distribution companies ("LDCs") have obligations to serve their customers and to engage in regular, formal communication channels with state regulators about meeting those obligations. The New England Forum included reference to a possible state jurisdictional path for the LDCs to follow should they have concerns about their gas system

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[52] Initial Comments of ISO New England Inc., Docket No. RM21-17-000 (filed Aug. 17, 2022), at 9.

[53] Maine Public Utilities Chairman Phil Bartlett echoed this point at the New England Forum. Transcript at 203-204 (Comments of Phil Bartlett, Chair of the Maine Public Utilities Commission) (". . . we haven't carefully defined, and come up with a way to measure what we mean when we talk about energy security, or energy adequacy. So you know we know what resource adequacy is, we know how to measure it. There's a real, sort of methodology that's been developed around it. But when it comes to energy adequacy we haven't done that.").

[54] *See, e.g.*, E. Ibanez and M. Milligan, *Comparing Resource Adequacy Metrics*, National Renewable Energy Laboratory, Nov., 2014, at 1, at https://www.nrel.gov/docs/fy14osti/62847.pdf.

reliability.[55] The draft problem statement that ISO-NE submitted in this proceeding, joined by LDCs and electric distribution companies ("EDCs"), described how an analogous state jurisdictional pathway in Massachusetts for EDCs to address electric reliability issues through contracting for gas supplies has been foreclosed by law.[56]

As we work together to consider winter reliability risks and possible solutions, it is critical for ISO-NE to clarify what is a gas system need and what is an electric system need. Moreover, when ISO-NE moves to power system need assessment and solutions, the focus should be on the electric system. As one example, when referencing a 50 Bcf need and 20 Bcf gap,[57] ISO-NE should be clear and consistent regarding how that gap translates to the electric system and whether it is a gap in MW or MWh.[58]

New England must ensure that it is holistically considering all possible electric system solutions to winter reliability challenges. Storage technologies are rapidly evolving, offshore wind turbines continue to increase in size and efficiency, and various New England states continue to express interest in unlocking more hydroelectric generation. As discussed above, energy efficiency and active demand response also play a critical role. By focusing only on Bcf

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[55] Transcript at 218 (Comments of Matt Nelson, Chair of the Massachusetts Department of Public Utilities ("DPU")) ("[A]s the Chair of the Massachusetts DPU we are in charge of the integrated resource planning for the LDCs in Massachusetts, which take and use from Mystic. They are welcome to bring a contract to the Mass DPU at any time. And just to clear up the record, there's no category about index price or whatever the case may be. They come up with terms that show benefits to consumers, they can bring that to us.").

[56] ISO New England Inc., Draft Problem Statement and Call to Action on LNG and Energy Adequacy, Docket No. AD22-9-000 (filed Sept. 2, 2022), at 2-3 (describing how the "Massachusetts Supreme Judicial Court ruled that the Massachusetts Department of Public Utilities did not have the authority to approve" an EDC procurement of "regional gas supplies for gas generators").

[57] Transcript at 255 (Comments of Gordon van Welie, ISO-NE CEO) ("They tell me assuming that we run the oil units with 100 million gallons of oil in storage, we're going to need 50Bcf on top of that. Right? And we're expecting about 31 Bcf is what we said. So that says the gap today is roughly 20.").

[58] NESCOE is not aware of any analysis that ISO-NE has provided to support its assertions regarding a Bcf "gap." The comments below discuss the need for strong analytical support for identified gaps or system needs.

needs and gaps, NESCOE is concerned that our region will unnecessarily limit potential solutions to a subset of available resources (e.g., fossil fuel-fired generation). Translating Bcf needs or gaps into MW and MWh broadens the set of solutions to be considered. Even if some solutions may not alone be sufficient or viable over the immediate- to short-term—perhaps due to cost or technological maturity—all options should be explored across the range of time horizons reflecting different system conditions and challenges.

4. Resource Adequacy Responsibility

The New England Forum included a brief discussion regarding whether responsibility for resource adequacy in New England lies with the states or ISO-NE. Under New England's current structure, ISO-NE has primary responsibility for ensuring resource adequacy across the region. *Conn. Dep't of Pub. Util. Control v. FERC*, 569 F.3d 477, 479 (D.C. Cir 2009) (recounting history of LSEs procuring capacity and how that "role has since shifted" to ISO-NE).

Despite ISO-NE's clear obligation to provide regional resource adequacy, states may direct the procurement of resources outside the ISO-NE markets. Some of these actions were discussed above in the context of clean energy contracts that also seek to promote system reliability, including during peak winter periods.

Moreover, the current responsibility that states—through their utilities—have delegated to ISO-NE is not absolute. The Federal Power Act ("FPA") grants states jurisdiction "over facilities used for the generation of electric energy," among other things. 16 U.S.C. § 824(b). The New England states could elect to pursue a different model for achieving resource adequacy than the current structure that assigns responsibility to ISO-NE. There would be a number of complex legal, operational, and cost issues to consider as part of any such decision-making

process.[59] However, absent adoption of an alternative arrangement—which the New England states are not currently pursuing—ISO-NE has responsibility for resource adequacy for the New England region.

B. Next Steps

At the New England Forum, Commissioners expressed a sharp focus on what actions FERC could take to help address our region's winter reliability challenges. NESCOE welcomes the Commission's focus on winter reliability and encourages the Commission's continued involvement in helping the region identify a long-term solution, while cautioning against directing solutions as discussed below. A durable solution will take continued collaboration across sectors and jurisdictions. There are several next steps that our region and the Commission should pursue to address New England's persistent energy adequacy challenges.

1. The Commission Should Direct Regular ISO-NE Winter Analysis and Reporting but Should Not Institute a Section 206 Proceeding at this Time

NESCOE echoes ISO-NE's request at the New England Forum that the Commission not take prescriptive action at this time, such as issuing an FPA section 206 order. Due to *ex parte* restrictions that would take effect in connection with a section 206 order, that action would impede critical communications between the Commission and ISO-NE, the states, and stakeholders.[60] Those restrictions could be lengthy, preventing timely conversations with the

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[59] For example, in the case of a geographically small state like Rhode Island that has been inextricably linked and dependent upon out-of-state generation resources throughout the regional system for many decades—even pre-dating industry restructuring—the magnitude of an undertaking to pursue a different model for assuring resource adequacy in Rhode Island would present a daunting challenge.

[60] *See* Transcript at 237 (Comments of Gordon van Welie) (". . . if you issue a 206, you're going to shut down communications between the parties that have to resolve the problem, and we've walked that road before, it was not helpful.").

Commission and Commission staff as potential solutions emerge. A section 206 proceeding relating to energy adequacy in New England is not conducive to an expeditious end. If a simple market or operational fix were possible, FERC and the region would have pursued that approach long ago. Achieving a lasting outcome will require a cooperative process with FERC's active participation.

Going forward, discussions around solutions should be grounded in facts and analysis that describe and quantify to the greatest extent possible the specific energy adequacy risks facing the region. The states have strongly advocated for such an approach,[61] and NESCOE is encouraged by several Commissioners' calls for timely analysis at FERC's September 22, 2022 open meeting.

ISO-NE's ongoing Operational Impacts of Extreme Weather Events analysis it is conducting in conjunction with the Electric Power Research Institute ("EPRI") should help to provide important information to support the region's comprehensive assessment of energy adequacy risks.[62] ISO-NE has set a schedule to work with states and stakeholders through the end of this year and into 2023 on the EPRI study.[63] Following that work, NESCOE understands that ISO-NE will develop an energy adequacy "problem statement."[64] ISO-NE has also set aside

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61 *See, e.g.*, Memo from NESCOE to ISO-NE, Winter 2022/23 Analysis and Recommendation, Aug. 3, 2022, at https://nescoe.wpenginepowered.com/wp-content/uploads/2022/08/8-3-22_Winter_2022-2023.pdf; Letter from NESCOE to ISO-NE, Jan. 18, 2022, at 2 ("Without timely ISO-NE analysis about the current risks, no one can make a reasoned judgment about whether a winter reliability program, a market mechanism, or some type of state action is necessary or would be effective to fill any reliability gap."), at https://nescoe.wpenginepowered.com/wp-content/uploads/2022/01/Letter_ISO-NE_Cold_Weather_1-18-22.pdf.

62 *See* 2023 Work Plan at Slides 7-9.

63 *Id.* at Slide 9.

64 *Id.*

resources in 2023 to "[d]iscuss scope and viability of energy adequacy solutions and define the list of options to pursue, which could include" a modernized strategic energy reserve as well as market design enhancements and infrastructure options such as transmission.[65] The Commission should encourage an expeditious completion of this process.

NESCOE suggests below a procedural approach to facilitate a free flow of information between our region and the Commission. In contrast, a section 206 order would limit this information exchange and place many in our region in a litigation posture. Moreover, such a directive could disrupt our region's 2023 timeline for work on energy adequacy-oriented projects by forcing ISO-NE and others to reallocate resources to respond to litigation.

While the Commission should not pursue a section 206 proceeding at this time, it can build on the New England Forum's open platform for information sharing and transparency by requiring timely annual reporting on winter reliability in New England until there is a long-term solution.[66] With completion of the EPRI study, ISO-NE should finally have a foundation in place to assess the energy adequacy gap in advance of each winter. ISO-NE should provide that information to the Commission on a timeframe that allows for solution implementation as needed, and share any confidential data the analysis rests on, as it has this year.[67]

Specifically, NESCOE respectfully requests that the Commission exercise its authority under section 304 of the FPA, 16 U.S.C. § 825c, to direct that ISO-NE file annual reports on

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65 *Id.*

66 The Commission could also consider whether similar annual informational filings from gas pipelines may be warranted.

67 Memo from ISO-NE to NESCOE, Request Regarding ISO New England's on [*sic*] Winter 2022/23 Analysis and Recommendation, Aug. 19, 2022, at https://www.iso-ne.com/static-assets/documents/2022/08/iso_response_to_nescoe_aug_3_letter_on_winter_2022_2023_w_nescoe_original.pdf.

winter reliability until a long-term solution is in place. By requiring this report, the Commission can help to shape and further facilitate the discussion of solution sets to our region's long-standing fuel security issues.

NESCOE respectfully suggests below a minimum list of reporting information. Beginning in 2023, the annual reports should be filed no later than the spring to provide opportunity for engagement of the Commission, states, and stakeholders about any measures that should be pursued prior to the winter months. In the spirit of continued collaboration, NESCOE welcomes any opportunity to consult with the Commission and Commission staff, ISO-NE, and others on these reporting requirements and the proposed filing timeline prior to any Commission order directing such annual reports.

The reports should contain, at minimum, the following:

i. How ISO-NE has defined and measured energy adequacy.
ii. Analysis of any quantified reliability gap that exists for the coming winter that includes a measure of this gap in MW and MWh to ensure the broadest possible set of solutions are considered.
iii. Whether and how that reliability gap has changed from prior years.
iv. If a reliability gap is identified, the range of solutions that ISO-NE explored, including its assessment of both demand and supply side solutions.
v. Whether ISO-NE is pursuing one or more proposed solutions. If ISO-NE is proposing a solution, an explanation of how that solution addresses the identified gap and whether program costs would be commensurate with the expected benefit. ISO-NE should also explain how the solution fits into the timeframe delineations discussed above (immediate-, short-, medium, long-term). If ISO-NE is not proposing a solution, an explanation for why not.

vi. The status of longer-term solutions.

Following each annual report, the Commission should convene a forum, virtual or otherwise, modeled on the New England Forum, to provide the opportunity to exchange ideas, enhance public understanding of the challenges, and discuss plans for the upcoming winter and progress toward a longer-term solution.[68]

2. Other Near-Term Actions

NESCOE appreciates ISO-NE adding energy adequacy as an "anchor project" in its 2023 Work Plan.[69] NESCOE joined NEPOOL in calling on ISO-NE to prioritize this work.[70] ISO-NE has provided an action-oriented timeline for energy adequacy work through the end of this year and into 2023. ISO-NE has listed a series of efforts aimed across the energy adequacy time horizon, from the immediate-term through the medium/longer-term years.

NESCOE looks forward to working with ISO-NE and regional stakeholders on this project, and we are pleased that ISO-NE will commence energy adequacy work while the EPRI study process is ongoing. Some reforms, particularly targeted market design changes, may be best suited for consideration after the EPRI analysis is concluded. However, given pressing winter reliability challenges, it is critical that work on solutions proceed in parallel with the analysis.

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[68] Given cross-jurisdictional issues and in the spirit of continued collaboration, the Commission could consider hosting a future technical conference jointly with the New England states. *See, e.g., Joint Technical Conference on New York Markets & Infrastructure*, Docket No. AD14-18-000 (2014).

[69] 2023 Work Plan at Slides 8-9.

[70] NESCOE Work Plan Memo at 1.

For example, as reflected in the 2023 Work Plan, our region can take concrete action now to help mitigate immediate-term reliability risks and lay the foundation to address challenges over a medium- and longer-term horizon through the following efforts:

- **Development of a Modernized Strategic Energy Reserve**: The New England Governors recently sought U.S. DOE support to modernize the strategic fuel reserve it has managed since 2002.[71] NESCOE appreciates ISO-NE's willingness to allocate resources over the next year to help explore the development of a modernized strategic energy reserve to protect electric system reliability in the event of low probability, high impact weather events. The Commission's engagement in and support for this initiative is important to inform the technical, policy, and legal considerations that will guide this work.

- **Jones Act Exemption**: In their letter to U.S. DOE, the New England Governors also expressed the need "to explore the conditions under which it might be appropriate to suspend the Jones Act for the delivery of LNG for a portion or all of the winter of 2022-2023."[72] Secretary Granholm responded that U.S. DOE is a "consulting agency for Jones Act waiver requests related to energy" and the Department of Homeland Security ("DHS") reviews Jones Act waivers.[73] Further, DHS "has a process in place to expeditiously review any requests for waivers" on a case-by-case basis.[74] Dedicating resources to early collaboration on possible targeted requests for Jones Act exemptions may allow New England to access domestic LNG by tanker in emergency conditions. ISO-NE has included "maintain lines of communication for Jones Act waivers" in its 2023 Work Plan.[75] To the extent New England states ultimately request a Jones Act waiver to address acute system conditions this winter, any advance work or technical assistance that the Commission, ISO-NE, NERC, and NPCC can provide to support that request on a timely basis would best position our region for expeditious DHS action.

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71 Governors' Letter to U.S. DOE at 1-2.

72 *Id.* at 1.

73 *See* Letter from U.S. DOE Secretary Granholm to Massachusetts Governor Charles D. Baker, Aug. 18, 2022, at 2, at https://www.energy.gov/sites/default/files/2022-09/EXEC-2022-005143%20-%20S1%20Letter%20to%20Gov.%20Baker.pdf.

74 *Id.*

75 2023 Work Plan at Slide 9.

- **ISO-NE Programs and Market Development**: The year ahead must be defined by aggressive pursuit of a long-term, durable solution to energy adequacy risks in New England. Both Chair Glick and Commissioner Clements expressed interest in the concept of a seasonal capacity market at FERC's September 2022 open meeting.[76] ISO-NE has included consideration of a seasonal capacity product in its 2023 Work Plan, but discussions with stakeholders are not targeted until 2024. A seasonal market could work in complement with other contemplated market rule changes, such as capacity accreditation. NESCOE respectfully asks ISO-NE to explore how it can move its evaluation of a seasonal market forward on a faster-track given the value of considering potential market enhancements to support energy adequacy as a holistic package of reforms.

In addition to the actions discussed above, NESCOE generally supports the Commission's consideration of actions within its authority to improve the safety and reliability of the interstate gas pipelines.[77]

Finally, in hosting an open forum to discuss winter reliability and energy adequacy, the Commission signaled its recognition of the significant implications these issues have for the public.[78] As a follow-on to these efforts, the Commission could consider working through its Office of Public Participation to promote a greater public understanding of, and engagement on,

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[76] *See* Michael Brooks, *FERC Seeking Solutions for New England Winter Reliability*, RTO Insider, Sept. 22, 2022; Commissioner Clements' Statement on Next Steps After the New England Winter Gas-Electric Forum, Sept. 22, 2022, at https://www.ferc.gov/news-events/news/commissioner-clements-statement-next-steps-after-new-england-winter-gas-electric.

[77] In comments filed in advance of the New England Forum, National Grid proposed a new policy framework for the Commission to "exert more robust and pro-active regulatory oversight of interstate natural gas pipeline service reliability." Pre-Forum Comments of National Grid USA, Docket No. AD21-9-000 (filed Sept. 2, 2022), at 2. NESCOE's comments should not be construed as endorsing any such framework. However, NESCOE generally supports the Commission's assessment of how it might leverage existing statutory authority over interstate natural gas pipelines to enhance system reliability and specifically energy adequacy for New England's electric grid.

[78] *See* 2022-2023 Winter Reliability Report at 40 ("The Commission recognizes the risks to reliability and markets in New England and hosted the above-noted New England Winter Gas-Electric Forum to engage with the region about the challenges it faces in upcoming winters.").

winter reliability challenges as we collectively work to analyze the magnitude of the risk and explore a range of potential solutions.

V. CONCLUSION

NESCOE thanks the Commission for convening the New England Forum and for its continued close engagement on winter reliability in New England. NESCOE respectfully requests that the Commission consider its comments in this proceeding.

Respectfully Submitted,

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