

The ISO-NE's primary function is the reliable operation of the bulk electric system in New England. To that end, ISO-NE is continually planning and studying the reliability needs of the region. The ISO-NE has successfully maintained reliability in response to load growth, generator retirements, and other events potentially affecting reliable transmission service. In NEMA/Boston, the ISO-NE has driven transmission company construction of several transmission and other reliability projects to meet the zone's reliability needs following significant resource changes and load growth in the load zone during the past ten years. In response to the anticipated Salem Harbor retirement, ISO-NE has adequately planned for, and begun to construct several transmission projects that will ensure reliable service to NEMA/Boston. Due to the ISO-NE's diligence in addressing NEMA/Boston's reliability needs following the announced retirement of Salem Harbor there is no need to mandate construction of additional generation in NEMA/Boston.

Even if the Department were to believe that there is insufficient capacity in NEMA/Boston in some future period, it should not order a local distribution company to enter into a long-term, out-of-market contract with a new generator in the zone. Open, competitive and transparent electricity markets are designed to provide supply resource adequacy in the region, among other numerous benefits. While important market reforms are ongoing, the electricity markets have provided tremendous benefits to consumers through competitive outcomes and more than adequate supplies. Generator out-of-market contracts distort these competitive market price signals, expose customers to risk, and ultimately result in higher than market-based generation costs. Out-of-market contracts should be awarded only where there is an overwhelming need that cannot be met through either market-based supply, regulated transmission as a backstop to the market, or a combination of both.

The record in this proceeding clearly shows that to the extent new supply is needed in NEMA/Boston in the next ten years that need is very small and transitory, and can easily be met by existing market mechanisms. Where resource developers are willing to assume the financial risks to build any necessary additional generation, the Commonwealth's electricity consumers should not bear those risks. As evidenced in the most recent Forward Capacity Auction resource qualification process, resource developers are willing to invest in NEMA/Boston when the developer believes there is a need or opportunity.² No out-of-market contract is necessary to meet any such need. Instead, the Department should find that the ISO-NE has addressed NEMA/Boston's reliability concerns, and should allow the evolving wholesale electricity markets, including the Forward Capacity Market ("FCM"), to identify the most efficient and cost-effective capacity resources, including any additional generation, if needed at all, in NEMA/Boston.

I. The ISO-NE Has Adequately Planned for Reliable Service in NEMA/Boston for the Next Ten Years

A. The ISO-NE Ensures Reliable Service by Planning on an N-1-1 Basis

The ISO-NE plans the transmission system by subjecting New England and NEMA/Boston to rigorous analyses, modeling worst-case contingency scenarios in compliance with its obligation to ensure reliability in New England. The ISO-NE is obligated to develop transmission plans that ensure reliability in the event one or more existing resources are not available to meet reliability needs. The ISO-NE plans for the transmission system to meet reliability needs during peak load under strained system condition assumptions, including the sequential loss of two significant elements of the bulk power system such as two generators in an

² See *Intervention, Protest and Request for Waiver of Footprint Power, LLC*, Docket No. ER13-335 (November 21, 2012) ("Footprint Protest") (Footprint's protest of the ISO-NE's decision to qualify 574 MW of Footprint's planned 674 MW (winter capacity) gas-fueled generation resource to be located at the Salem Harbor site).

area, two transmission lines, transformers or other equipment, or a generator and a transmission element, *i.e.*, an N-1-1 contingency analysis. Tr. at 79. The ISO-NE further assumes that no new resources, other than those with capacity supply obligations procured through the FCM, are added to the generation total of the load zone(s) under review. Tr. at 80-1. The ISO-NE, therefore, plans for a worst-case scenario in developing the transmission system.

B. The ISO-NE Has Ensured Reliability in NEMA/Boston Through Several Large Retirements Since 2002

The ISO-NE has demonstrated its ability to effectively plan for and maintain reliable transmission service during times of generator retirements in NEMA/Boston. Since 2002, the NEMA/Boston load zone has experienced significant changes in its local resource mix. Several large plants have retired, new large generation has come into service, and active demand response and energy efficiency resources have increased. Tr. at 11-12. During that time, the ISO-NE has effectively maintained reliability in the NEMA/Boston load zone by strengthening local reliability and increasing transmission import capability where and when necessary. Since 2002, approximately 1,200 MW of large generation has retired. Tr. 15. In 2007, NSTAR completed its construction of three 345-kV cables from Stoughton to K Street and Hyde Park, increasing import capacity into NEMA/Boston by approximately the same amount, 1,200 MW. Tr. at 13. In 2009, the ISO-NE coordinated the addition of four 345-kV reactors to address high voltage during light load conditions on cables running through Boston. Id.

The ISO-NE is constantly assessing and planning for NEMA/Boston's transmission needs, updating its analyses and plans as necessary on a ten year going-forward basis. As a result of the ISO-NE's transmission planning, the NEMA/Boston load zone has enjoyed reliable service during a decade of significant resource changes.

C. The ISO-NE is Addressing the Salem Harbor Retirement in the Same Way it Successfully Maintained Reliability Following the Retirement of Several Large Generators Over the Past Decade

The pending retirement of Salem Harbor presents the ISO-NE with the same circumstances the ISO-NE has shown the ability to effectively address. Consistent with its prior practice, the ISO-NE identified local reliability concerns raised by Salem Harbor's retirement and, together with National Grid, expedited three transmission projects to avoid potential load shedding under certain peak load N-1-1 conditions ("North Shore Projects"). Tr. at 87. The North Shore Projects will ensure reliable service in the North Shore area following the retirement of Salem Harbor by allowing power to move from north to south within the NEMA/Boston area. Tr. at 55-6. One of the North Shore Projects (two parallel lines) is under construction, and the other two (three lines total) are scheduled to be in-service before Salem Harbor's June 2014 retirement date. ISO Responses at 25. In addition, the ISO-NE and the Transmission Owners have been planning the Greater Boston Transmission Project ("Greater Boston") for several years. Greater Boston is a series of projects intended to, among other objectives, increase the import capability into NEMA/Boston. Some of the Greater Boston projects are in-service, with the remainder planned to be placed in-service from 2014 through 2018. ISO Responses at 15. While the ISO-NE stated at the Technical Conference that it cannot, at this time, report definitively on the expected additional increase in import capability into NEMA/Boston due to Greater Boston, National Grid expects Greater Boston to increase import capability into NEMA/Boston by 800-1,000 MW. Exh. DPU-G-1(1).

ISO-NE has planned Greater Boston to meet NEMA/Boston's reliability and import capacity needs through at least 2022 under the assumption that Salem Harbor retires in 2014 and no additional generating or other capacity is added to NEMA/Boston through 2022. Tr. at 28,

48-9. Absent the unexpected retirement of a large generator³ in the NEMA/Boston load zone, the ISO-NE and the Transmission Owners, based on exhaustive analysis and planning, expect the Greater Boston project to timely meet NEMA/Boston's 2018 capacity needs. Tr. at 49-50. If the Greater Boston project increases import capability into NEMA/Boston by 800-1,000 MW, that increase could not only fully address anticipated load growth of a few hundred MW, but also accommodate unexpected retirement of a large generator.

D. The ISO Has Market-Based and Operational Steps it May Take To Address Short-Term Reliability Needs, If Any

The risk of a capacity deficiency, if at all, would most likely occur from 2016 through 2018 and would be relatively small. For example, the initial capacity margin for NEMA/Boston going into FCA 7 is an 18 MW surplus, *i.e.*, 18 MW more of qualified MW than needed MW. ISO-NE November 8, 2012, Technical Conference Presentation at 13. Even if the ISO-NE approves all of the 184 MW of Non-Priced Retirement Requests and no new capacity enters the market, NEMA/Boston would be short only 165 MW for FCA 7. Tr. at 68. Should FCA 7 not commit the full MWs necessary to meet the NEMA/Boston Local Sourcing Requirement ("LSR"), ISO-NE has several means by which it can address resource deficiencies. For example, the ISO-NE may procure additional local generation through a FCM Annual Reconfiguration Auction or through a gap request for proposals ("RFP"). Tr. at 68-70. The ISO-NE also may employ operational solutions to address resource adequacy needs. Tr. at 70-71. Together these measures provide the ISO-NE with the ability to meet any potential NEMA/Boston reliability needs on a short-term basis.

³ In the event a large generator in NEMA/Boston made a non-price retirement offer in the FCM, the generator could seek cost-of-service agreement approval from the FERC to recover its costs and remain in-service if the ISO-NE notified the generator that it is needed for reliability. Tr. at 59. Such a retirement would also likely correspond to a price signal in the FCM that could be met by additional new resources or expansions of existing facilities.

II. An Out-Of-Market Contract is an Extraordinary Measure Awarded Under Only Extremely Compelling Circumstances

All generation resources are best developed in response to, and in reliance on, price signals from an open, competitive marketplace. Such markets result in the lowest possible costs and best protect consumers from the construction, operational and price risks associated with these projects. Generation resources that receive a 10 to 20 year out-of-market agreement distort those competitive market price signals, cause higher than otherwise costs and expose consumers to risks. The potentially adverse market consequences of introducing a new generation resource on a out-of-market basis into NEMA/Boston argue against doing so, under even the most compelling of circumstances, which are absent here.

As discussed above, the ISO-NE has proven its ability to plan for and address all reliability concerns raised by the retirement of large generators in NEMA/Boston since 2002. ISO-NE and National Grid have already addressed the local reliability concerns prompted by the retirement of Salem Harbor, and ISO-NE, the Transmission Owners, and NEPOOL Participants are near the end of a several-year planning process to increase import capacity into NEMA/Boston by 2018, if needed. To the extent any interim need arose, the ISO-NE has several market and operational measures it can employ to meet short-term system needs. To remedy what could be a relatively short-term local resource adequacy risk, if any, with a 10-20 year out-of-market contract, when other more benign and cost-effective options are available simply does not make economic or public policy sense.

III. The Record Evidence Fails to Show That NEMA/Boston is or is Likely to be Short on Capacity for the Ten Years Considered in This Proceeding

A. FCA Results Do Not Lead to the Conclusion That Additional Generation is Needed in NEMA/Boston

The FCA 6 results show that the NEMA/Boston load zone will satisfy its resource adequacy requirements through at least the 2015-2016 Capacity Commitment Period. ISO Responses at 2. The ISO-NE will provide the Department with FCA 7 results approximately two weeks before the Department's order on the Investigation is due. Tr. at 8-9. According to ISO-NE, there is an 18 MW excess margin going into FCA 7, which represents a decrease from the 59 MW margin, measured as the total MW of rejected de-list bids, seen in FCA 6. The reduction in apparent margin between FCA 6 and FCA 7 is due to the ISO-NE's lower projected load growth in NEMA/Boston for the FCA 7 Capacity Commitment Period, *i.e.*, 2016/2017. Tr. at 18-19. If any conclusion is to be drawn at this point regarding FCA 7, it is that NEMA/Boston may be short on surplus capacity in FCA 7, though only in an amount that would be within the ISO-NE's ability to address through market, regulatory and operational measures.

B. The NEMA/Boston LSR Will Decrease Over Time as the Greater Boston Transmission Project Comes In-Service Through 2018

National Grid expects the planned Greater Boston projects to significantly increase import capacity into the NEMA/Boston load zone by 800-1,000 MW. Exh. DPU-G-1(1). It follows that by increasing import capacity into NEMA/Boston, the need for generation located within NEMA/Boston will decrease. According to ISO-NE, for each MW increase in transfer capability there is a nearly 1 MW decrease in the NEMA/Boston LSR, *i.e.*, the necessary MWs of resources located within NEMA/Boston annually. Tr. at 35-6. The LSR is based on the higher of the Transmission Security Analysis ("TSA") requirement and Local Resource Adequacy requirement, which for NEMA/Boston is the TSA for each Capacity Commitment

Period, 2014/2015 through 2021/2022. ISO Responses at 6-7. The TSA requirement is based on several factors, including N-1-1 contingency events, the 90/10 peak load, average forced-outage rates, and import capacity limits. Tr. at 53. Of those factors, an increase in import capacity is a “fairly big line item in the analysis of the TSA” and would serve to reduce the projected TSA. Tr. at 58. In addition to Greater Boston, merchant transmission project developers have proposed several direct current transmission projects into the Boston area, which the ISO-NE will take into account in its TSA analysis, potentially further reducing the NEMA/Boston LSR, once the projects receive Section I.3.9 approval. Tr. at 60-62. Any one of the merchant transmission projects may add an additional 800 to 1,000 MW of import capacity into NEMA/Boston. Tr. at 75.

As noted, National Grid expects Greater Boston to increase import capacity into NEMA/Boston by 800-1,000 MW. Assuming the low end of that range, the NEMA/Boston LSR would decrease by approximately 800 MW, causing the 2018/2019 LSR for FCA 9 to decrease to 2,601 MW. ISO Responses, p. 7, Table 2. The 2021/2022 LSR would decrease to 2,838 MW. Id. Both the 2018/2019 and 2021/2022 adjusted LSRs are much less than the 3,228 MW of NEMA/Boston resources that qualified for FCA 7, without any assumed new supply, demand resource, or energy efficiency resources entering the market during that entire period of time. These conservative estimates, therefore, suggest that Greater Boston, if needed at all, will meet NEMA/Boston’s import capacity needs, and reduce NEMA/Boston’s LSR to a level that does not require additional generation for reliability. In addition, the several merchant transmission projects in the developmental stage may further reduce the NEMA/Boston LSR. Whatever the increases in import capacity may be, the ISO-NE will update the projected LSR values as the transmission project in-service dates are finalized. Tr. at 84-5. Assuming the Greater Boston

transmission projects are expected in-service in 2018 (as is the current expectation), the ISO-NE expects to provide updated LSR values to reflect the increase in import capacity by summer 2014. Exh. DPU-G-1; Tr. at 85.

IV. The Markets Should Continue to Identify the Need for Additional Generation, If Any

The Act requires the Department to consider the “anticipated function of the capacity market in New England” in determining whether there is a need for additional generation in NEMA/Boston. Act, § 40. The Legislature’s directive is timely in two respects. First, the ISO-NE recently completed its FCA 7 qualification process, pursuant to which Footprint Power, LLC, offered 674 MW of new NEMA/Boston capacity into FCA 7 based on Footprint’s plan to construct at the Salem Harbor site. See Footprint Protest at 4-5. Footprint’s offer shows that even without an out-of-market contract, significant new resources can be offered into the capacity market. As Footprint argues in its appeal of the ISO-NE’s qualification decision, Footprint is not seeking an out-of-market contract to proceed with its new generation resource, but only for the capacity auction to be allowed to work. Specifically, Footprint stated:

Moreover, Footprint has not sought “Out of Market” treatment in FCA 7 that would permit it to bid below the auction floor price and therefore negatively affect the price. It will either clear in the market because the NEMA/Boston load zone requires new generating capacity – thus fulfilling the very purpose of the ISO-NE forward capacity market – or it will fail to clear because additional capacity will not be required in the NEMA/Boston load zone. Footprint Protest at 3.

NEPGA agrees. The FCM is designed to elicit supplier responses to price signals. If a new developer sees an opportunity to meet a need, it has a chance to compete to meet demand. If it does not clear, it is because another resource was able to provide a more cost-effective alternative to meet the capacity criteria.

The Legislature's directive is timely also in that for the first time, beginning in FCA 7, ISO-NE will model the NEMA/Boston zone as a separate zone. The ISO-NE will do so under an order from the Federal Energy Regulatory Commission, which stated that more granular modeling of zones in New England may lead to price separation in the FCA which, in turn, would attract new resources to NEMA/Boston should the zone's capacity prices signal the need for new resource investment in the zone. The ISO-NE, per the FCM rules, did not model NEMA/Boston as a separate zone for FCA 6. FCA 6, therefore, did not function in a way that would allow the FCA to send appropriate price signals to incent additional generation, if any, needed in the NEMA/Boston load zone. Tr. 41. To the extent there is a need for additional generation in NEMA/Boston, the more granular modeling of load zones beginning in FCA 7 should send price signals to resource developers to develop resources in the NEMA/Boston load zone⁴ which, for FCA 7, would equate to capacity supply obligations in 2016/2017.

V. Conclusion

The announced retirement of Salem Harbor required the ISO-NE, Transmission Owners, and NEPOOL Participants to assess the reliability impacts of the retirement on NEMA/Boston, and plan for transmission and other reliability projects to meet NEMA/Boston's needs. The ISO-NE has done so by requiring the local transmission companies to begin constructing the North Shore transmission projects to meet local reliability needs. To the extent there are residual zonal impact needs, the capacity market has been designed to, and should be allowed to attract any needed investment in NEMA/Boston. If markets fail to meet the needs, if any, the ISO-NE has planned the Greater Boston Transmission Projects, which could substantially increase transfer

⁴ Note that from 2002 – 2012, approximately 1,634 MW of new, market-based generation was voluntarily built in the NEMA/Boston area due in large part to an expectation of more accurate locational capacity market price signals.

limits and address resource need through additional imports by 2018. The record evidence fails to establish that new generation is needed in NEMA/Boston, much less new generation awarded a 10-20 year long-term out-of-market agreement. The ISO-NE, and the improving FCM, have and will ensure that NEMA/Boston maintains reliable service through 2022.

Respectfully Submitted,

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**COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC UTILITIES**

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| Investigation Into the Need if Any For |) | |
| Additional Capacity in the NEMA/Boston |) | |
| Load Zone |) | D.P.U. 12-77 |
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CERTIFICATE OF SERVICE

I certify that I have this day served the foregoing documents upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated this 27TH day of November, 2012

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