

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

ISO New England Inc.

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**Docket Nos. AD13-7-000
AD14-8-000**

FUEL ASSURANCE STATUS REPORT OF ISO NEW ENGLAND INC.

Pursuant to the November 20, 2014, Order on Technical Conferences¹ issued by the Federal Energy Regulatory Commission (“Commission”) in the above-captioned dockets, ISO New England Inc. (“ISO-NE”) hereby submits this status report on ISO-NE’s efforts to address fuel assurance issues.

I. INTRODUCTION

In the November 20 Order, the Commission observed that concerns about fuel assurance – a term describing a broad set of issues related to “generator access to sufficient fuel supplies and the firmness of generator fuel arrangements”² – had been raised in recent technical conferences related to centralized capacity markets and winter 2013-2014 operations and market performance.³ The Commission stated that “generator performance and efficient market operations are among the most pressing concerns to the Commission,”⁴ and that fuel assurance “has been identified as a significant issue contributing to poor generator performance and

¹ *Order on Technical Conferences*, 149 FERC ¶ 61,145 (2014) (“November 20 Order”).

² *Id.* at P 7.

³ *See id.* at PP 1, 3-4.

⁴ *Id.* at P 5.

inefficient market operations.”⁵ As a result of these concerns, the Commission initiated a review of how each ISO and RTO is addressing fuel assurance,⁶ and directed each ISO and RTO:

to file a report on the status of its efforts to address market and system performance associated with fuel assurance issues within 90 days of the date of this order. The RTO/ISO report should describe the nature of fuel assurance concerns specific to its regions. The report should also describe the comprehensive strategy or strategies the RTO/ISO has implemented or plans to implement to address market and system performance in light of each of its fuel assurance concerns. Finally, the report should detail the specific programs and mechanisms that the RTO/ISO will use to carry out its strategies.⁷

ISO-NE has been very proactive in undertaking projects aimed at improving reliability through better generator performance, with an emphasis on fuel assurance. In late 2010, ISO-NE launched a Strategic Planning Initiative to identify, analyze, and address threats to the reliable supply of electricity.⁸ One of the most pressing challenges identified was the region’s increased reliance on natural-gas-fired capacity. In the intervening years, ISO-NE has worked diligently to address the problem. Indeed, most of the examples of appropriate actions cited by the Commission in the November 20 Order are from New England. The most significant of these projects – the two-settlement, “Pay For Performance” capacity market design (which is ISO-NE’s long-term approach for sending appropriate price signals for fuel assurance and for placing all the risks of performance where they belong – on resource owners) and the winter reliability programs (which will likely be needed until Pay For Performance becomes fully effective in 2018) – are directly related to fuel assurance. Importantly, however, sufficient fuel supplies and firm fuel arrangements are not end goals in and of themselves. Rather, as the Commission

⁵ *Id.*

⁶ *See id.* at P 1.

⁷ *Id.* at P 20.

⁸ Information on the Strategic Planning Initiative is available at <http://www.iso-ne.com/committees/key-projects/strategic-planning-initiative>.

recognizes, “[f]uel assurance is a key to ensuring generator performance, which directly contributes to the overall reliability of the grid.”⁹ ISO-NE has also undertaken numerous other projects designed to improve generator performance and thereby improve system reliability and market efficiency. These efforts are described in Part II below.

In New England, the percentage of electricity generated from natural gas has grown from 15% in 2000 to 46% in 2013.¹⁰ During that time, coal- and oil-fired units transitioned from producing 40% of New England’s electricity to less than 7%.¹¹ In regions that have an abundance of natural gas pipeline infrastructure, additional demand for natural gas for power generation may not be a concern. In New England, however, increasing pressure on an already-constrained natural gas infrastructure is one of the region’s most urgent challenges.

The capacity of pipelines bringing natural gas to New England has not kept pace with the region’s increasing reliance on natural gas for electricity generation. This results in bottlenecks that impact both reliability and efficiency. During winter cold snaps, for example, natural gas pipelines are severely constrained, limiting gas generation to minimal levels and presenting serious risks to reliability during dangerous weather conditions. And due to the natural gas transportation constraints, what gas is available can be extremely expensive, raising electricity prices. Indeed, high natural gas prices drove wholesale electricity prices to record levels in the past two winters (2012-2013 and 2013-2014).¹²

⁹ November 20 Order at P 8.

¹⁰ *Ensuring Grid Reliability and Resiliency in New England* at 3, speaker materials of Peter Brandien, ISO-NE Vice President of System Operations, Docket No. AD14-9-000, Reliability Technical Conference (June 10, 2014).

¹¹ *Id.*

¹² *Id.* at 6.

In addition, in recent years, aging oil-fired generators that were seldom dispatched have sometimes not had stored fuel sufficient for extended operation when needed. In the winter of 2012-2013, for example, oil-fired generators ran out of fuel.¹³

While the numerous efforts described below go a long way to providing incentives for generators to ensure that they have access to all available fuel, these efforts may not be sufficient to drive investment in new pipeline. There are some fundamental differences between the power and pipeline industries – in the electric industry, transmission line upgrades are designed to meet peak demand ten years in the future; the pipeline industry only builds new or expanded pipeline if customers have signed up in advance for contracts to pay over the long term – 15 years on average.¹⁴ The New England states, recognizing the reliability risks and economic consequences associated with insufficient pipeline capacity, have worked diligently in an effort to facilitate the necessary investment in additional pipeline capacity. This path is not without difficulty, but may be the most direct route to a timely solution to this serious problem.

The lack of sufficient pipeline capacity also raises a related challenge – the need for dual-fuel capacity in the region. If a gas-fired resource has not obtained gas in advance, it may not be able to operate at the times of most critical reliability need. To help alleviate this problem, the Pay For Performance design will provide strong incentives for the installation and operation of oil-firing capability – if a dual-fuel generator cannot get gas (or if the price of gas is higher than

¹³ See, e.g., *Winter Operations Summary: January – February 2013* at 9 (February 27, 2013) (available at http://www.iso-ne.com/static-assets/documents/committees/comm_wkgrps/strategic_planning_discussion/materials/winter_operations_summary_2013_feb_27_draft_for_discussion.pdf).

¹⁴ See, e.g., *Addressing Gas Dependence* at 6 (ISO-NE white paper published July 2012) (available at http://www.iso-ne.com/static-assets/documents/committees/comm_wkgrps/strategic_planning_discussion/materials/natural_gas_white_paper_draft_july_2012.pdf).

oil), it can instead use oil stored in a tank on site. State and federal environmental restrictions and goals, however, may make permitting and operating such oil-firing capability difficult; such difficulties could prove a significant obstacle to fuel assurance.

II. INITIATIVES TO IMPROVE GENERATOR PERFORMANCE THROUGH FUEL ASSURANCES

A. ISO New England’s Long-Term, Market-Based Solution: The Pay For Performance Capacity Market Design

The centerpiece of ISO-NE’s efforts to address fuel assurance concerns and improve generator performance is the recently implemented Pay For Performance capacity market design.¹⁵ Pay For Performance is intended to closely link capacity payments to resource performance. Under Pay For Performance, resources that provide more than their share of the system’s requirements during times of system stress will be paid by those that provide less.¹⁶

Pay For Performance was designed to address New England’s growing dependence on natural gas and attendant vulnerability to interruptions in gas supply.¹⁷ It was also designed to address the significant portion of New England’s oil and coal units that cannot provide reliable backup when gas problems arise due to increased outage rates and other operational difficulties, and to address poor performance across the fleet generally.¹⁸ Many of these problems will be resolved when suppliers undertake additional operational-related investments, including in short-notice or non-interruptible gas supply arrangements and dual-fuel capability.¹⁹

¹⁵ See *ISO New England Inc. and New England Power Pool, Filings of Market Rule Changes to Implement Pay For Performance in the Forward Capacity Market*, Docket No. ER14-1050 (filed January 17, 2014) (“Pay For Performance Filing”).

¹⁶ See, e.g., *id.* at 5.

¹⁷ See, e.g., *id.* at 3, 10-11.

¹⁸ *Id.* at 3.

¹⁹ *Id.*

The Pay For Performance capacity market design strongly incentivizes just such investment. Strong performance incentives will provide suppliers with the economic motivation, and the financial capability, for fuel procurement strategies and operational-related investments that ensure resources are available when needed to maintain reliability, including acquiring more reliable fuel supply arrangements and dual-fuel capability. Under Pay For Performance, a resource's capacity payments depend to a great extent on its performance in the energy and reserve markets during scarcity events; therefore, while Pay For Performance is a capacity market design change, it will affect resource behavior during periods of system scarcity when energy and reserves are critical.

The first Forward Capacity Auction using the Pay For Performance incentives was the ninth, which was held earlier this month. As the design intended, the auction attracted significant amounts of new dual-fuel generation: the two largest new generators to obtain Capacity Supply Obligations are planned as dual-fuel – a 725 MW unit to be located in Connecticut and a 190 MW dual-fuel peaking unit to be located in Massachusetts. Due to the three-year forward nature of the capacity market, the new design will not affect capacity market payments until June 2018. Because of this, Pay For Performance will not directly affect behavior in the energy and ancillary services markets until 2018. As discussed in the following section, this lag necessitates an interim solution.

The Commission, in the November 20 Order, cites the Pay For Performance design as an example of how an RTO might reform its centralized capacity market to provide greater price incentives for capacity resources to be available, which in turn would encourage capacity resources to enter into firmer fuel arrangements.²⁰

²⁰ November 20 Order at P 15.

B. ISO New England’s Interim Solution: The Winter Reliability Programs

As the Commission observed in the November 20 Order, it has accepted two Winter Reliability Programs filed by ISO-NE and the New England Power Pool (“NEPOOL”) Participants Committee.²¹ Of all the efforts described in this document, the two winter programs constitute ISO-NE’s most direct actions to address fuel assurance. The central component of the winter programs is the provision of direct financial incentives to generators to maintain on-site oil inventories. By ensuring that oil- and dual-fuel-fired generators do not run out of oil, the winter programs directly address concerns about generator reliance on pipeline deliveries of fuel during periods of high natural gas demand and stress on the pipeline system.²²

The 2013-2014 Winter Reliability Program created incentives for the region’s oil-fired generators to procure adequate levels of inventory and dual-fuel capability, created a winter demand response program, and included market monitoring changes to provide greater offer flexibility to dual-fuel generators.²³ The resources and inventory procured through the 2013-2014 Winter Reliability Program were vital to grid operation during stretches of extremely cold weather.²⁴ The region relied heavily on oil-fired generators that winter, burning through 1.6 million of the 1.9 million megawatt-hours of oil procured through the program.²⁵

²¹ *Id.* at P 12. The 2013-2014 Winter Reliability Program was accepted in *Order Conditionally Accepting Tariff Revisions*, 144 FERC ¶ 61,204 (2013). The 2014-2015 Winter Reliability Program was accepted in *Order Accepting Tariff Revisions*, 148 FERC ¶ 61,179 (2014).

²² See November 20 Order at P 12.

²³ See *ISO New England Inc. and New England Power Pool, Winter 2013-2014 Reliability Program* at 1-2, Docket No. ER13-1851 (filed June 28, 2013).

²⁴ *Comments on the US Department of Energy’s Quadrennial Energy Review* at 3 (letter dated October 10, 2014).

²⁵ *Id.*

ISO-NE and NEPOOL submitted, and the Commission approved, a second Winter Reliability Program for the current winter, winter 2014-2015. This program builds off the prior winter program, again providing incentives for generators to procure oil inventory going into the winter, for demand response participation, and for the development of dual-fuel capability.²⁶ The 2014-2015 Winter Reliability Program also provides incentives for resources to enter into contracts for liquefied natural gas and includes additional market monitoring changes designed to provide dual-fuel resources greater flexibility.²⁷

The results of the 2014-2015 Winter Reliability Program have thus far been positive. The program has drawn robust participation from oil-fired and dual-fuel generators that stocked oil and contracted for liquefied natural gas and has attracted new demand response resources.²⁸ During February's extremely cold weather, oil resources have had sufficient fuel to maintain reliability. Most significantly for long term fuel security, six units representing over 1,700 megawatts have decided to take advantage of new incentives for generators to add dual-fuel capability.²⁹

What these two winter programs have demonstrated is that targeted solutions to incent generators to have oil in storage for potentially colder than average winters or periods of extreme cold weather are an extremely effectual and cost effective means of protecting reliability. Given the objective of fuel adequacy, these programs have fully achieved their goals. Likewise, directly

²⁶ See *ISO New England Inc. and New England Power Pool, Winter 2014-2015 Reliability Program (Part 1 of 2)* at 2, Docket No. ER14-2407 (filed July 11, 2014) ("Winter 2014-2015 Filing").

²⁷ *Id.*

²⁸ *February 2015 NEPOOL Participants Committee Report* at 9, Vamsi Chadalavada, Executive Vice President and Chief Operating Officer (February 6, 2015) (available at <http://www.iso-ne.com/static-assets/documents/2015/02/february-2015-coo-report.pdf>).

²⁹ *Id.* at 10.

incenting dual-fuel capability until Pay For Performance is fully effective has begun moving the region to additional protection against gas shortages through oil backup. Likewise, providing incentives for liquefied natural gas has provided additional incentives for further fuel security until Pay For Performance is fully effective.

ISO-NE has stated that it anticipates the need for some form of winter reliability program for the three remaining winters prior to the June 2018 full implementation of Pay For Performance.³⁰ In an order issued last month, the Commission clarified that any interim winter program, if deemed necessary, must be “an appropriate market-based solution.”³¹ On February 19, ISO-NE will be filing for rehearing of that order, urging the Commission to permit an expansion of the existing winter program; alternatively, ISO-NE will propose additional increases to the Reserve Constraint Penalty Factors³² to provide market-based incentives for fuel assurance. A fully designed auction mechanism cannot be implemented on a timely basis and would be far more complicated, controversial, and potentially less effective than the narrowly targeted structure of the current program. Unlike Pay For Performance, any winter solution will be a short-term, stop-gap measure and therefore will not drive long-term investment; its design should be driven accordingly.

C. Other Initiatives

1. Increased Reserve Constraint Penalty Factors

In 2012, ISO-NE and NEPOOL filed, and the Commission accepted, a change to the Tariff to increase the Reserve Constraint Penalty Factors for thirty-minute operating reserves

³⁰ See, e.g., Winter 2014-2015 Filing at 5 and the attached Testimony of Christopher Parent at 5-6.

³¹ *Order on Clarification*, 150 FERC ¶ 61,029 at P 10 (January 20, 2015).

³² See footnote 33 below for a description of Reserve Constraint Penalty Factors.

from \$100/MWh to \$500/MWh.³³ By making the provision of reserves more lucrative than it had been, this change provided incrementally better incentives to generators to procure fuel and maintain the flexibility to perform in the reserve market.

As the Commission noted in its November 20 Order, when it ruled on the Pay For Performance design, it also required ISO-NE to increase Reserve Constraint Penalty Factors for thirty-minute operating reserves and ten-minute non-spinning reserves to provide better price signals in the energy and ancillary services markets during reserve shortage events.³⁴ Specifically, the Commission directed that ISO-NE increase the Reserve Constraint Penalty Factor for thirty-minute operating reserves to \$1,000/MWh (from \$500/MWh) and for ten-minute non-spinning reserves to \$1,500/MWh (from \$850/MWh).³⁵ As the Commission observed in the November 20 Order, “[t]he potential additional market revenues to generators available in real-time shortage conditions, and the potential for significant penalties when not available, are intended to spur investments in fuel assurance, dual-fuel capability, improved maintenance and staffing, and other enhancements to improve resource performance.”³⁶

³³ *ISO New England and New England Power Pool Participants Committee*, Docket No. ER12-1314-000 (unpublished letter order dated May 21, 2012).

National and regional reliability standards require that ISO-NE grid operators maintain “operating reserves” (capacity on stand-by, above the amount needed to serve load in real time) that can cover 100 percent of the first contingency within ten minutes and additional reserves that can cover fifty percent of the second contingency within thirty minutes. The ten-minute reserve requirement is met by both spinning (on-line) and non-spinning (off-line) reserves.

Reserve Constraint Penalty Factors are rates, in \$/MWh, that are used within the real-time dispatch and pricing algorithm to reflect the value of reserve shortages. The Reserve Constraint Penalty Factor acts as a cap on the price that ISO-NE may pay to procure additional reserves. Reaching this price cap signals that the system is in a reserve deficiency.

³⁴ November 20 Order at P 10 citing *ISO New England Inc.*, 147 FERC ¶ 61,172 at P 107 (2014) (the “Pay For Performance Order”).

³⁵ Pay For Performance Order at P 107.

³⁶ November 20 Order at P 10.

2. Energy Market Offer Flexibility

Another important initiative that helps provide generators with greater certainty that they will be able to recover their fuel costs, also cited by the Commission in the November 20 Order, is ISO-NE's energy market offer flexibility enhancements.³⁷ The offer flexibility changes, implemented in December 2014, allow participants to modify their offers on an hourly basis within the operating day.³⁸ The intent is to improve resources' ability to reflect fuel costs and opportunity costs in offers, especially during periods of high fuel price volatility. Because generators will be more likely to procure high-priced fuel if they can recover the costs, these changes will cause resources to better leverage their existing infrastructure and fuel supply arrangements to procure available gas.

3. Generator Fuel Procurement Obligations

On November 5, 2012, in response to ongoing performance deterioration and stakeholder inquiries regarding generator obligations respecting fuel procurement, ISO-NE issued a memorandum outlining its interpretation of the Tariff.³⁹ In short, ISO-NE asserted that the Tariff obligates resources to have sufficient fuel to meet their Capacity Supply Obligations at all times, and that a refusal to operate based on a failure to make fuel arrangements (as opposed to a physical problem with a pipeline) constitutes a violation of the ISO-NE Tariff. This

³⁷ *Id.* at P 12, citing *Order Accepting Tariff Revisions*, 147 FERC ¶ 61,073 (2014).

³⁸ 147 FERC ¶ 61,073 at P 3.

³⁹ *Market Participant Performance Obligations*, ISO-NE memorandum to the NEPOOL Markets Committee from Peter Brandien, ISO-NE Vice President of System Operations; David LaPlante, ISO-NE Vice President of Market Monitoring; and Raymond Hepper, ISO-NE Vice President and General Counsel (dated November 5, 2012) (available at http://www.iso-ne.com/committees/comm_wkgrps/mrkt_comm/mrkt/mtrls/2012/nov782012/a09a_iso_memo_11_05_12.pdf).

memorandum formed the basis of a complaint filed by the New England Power Generators Association alleging that ISO-NE had improperly interpreted its Tariff.

As noted in the November 20 Order, the Commission confirmed that the Tariff imposes a strict performance obligation on capacity resources, an obligation that a resource can avoid only if it is physically impossible to procure fuel.⁴⁰ If those Tariff provisions were not previously understood by generators, then the possibility of Commission enforcement action should provide an incentive for generators to modify their fuel procurement in real-time and make every effort to secure fuel if it is available.

4. Day-Ahead Energy Market Timing Changes

In the November 20 Order, the Commission noted that properly valuing fuel assurance may necessitate changes to the timing of the day-ahead market and unit commitment process.⁴¹ ISO-NE has made such changes. In May of 2013, ISO-NE implemented changes in the timing of the Day-Ahead Energy Market and Reserve Adequacy Analysis schedules that caused bidding to end earlier and ISO-NE to commit resources earlier than under the previous configuration.⁴² The intent of these changes is to give generators more time to procure natural gas by better aligning gas and electric market timelines. In an analysis of the timing changes one year after their implementation, ISO-NE wrote that the changes had “incrementally improved gas-electric coordination.”⁴³ Among other things, the report cited preliminary evidence that the number of

⁴⁰ November 20 Order at P 11 citing *New England Power Generators Association, Inc. v. ISO New England, Inc.*, 144 FERC ¶ 61,157, at P 47 (2013).

⁴¹ November 20 Order at P 17.

⁴² The Commission approved the earlier clearing of the Day-Ahead Energy market and earlier completion of the initial Reserve Adequacy Analysis in *Order on Proposed Tariff Revisions*, 143 FERC ¶ 61,065 (2013).

⁴³ *ISO-NE Informational Report on the Impact of the May 2013 Day-Ahead Energy Market and Reserve Adequacy Analysis Timing Changes* at 1, Docket No. ER13-895 (filed May 23, 2014).

units committed in the Day-Ahead Energy Market or during the Reserve Adequacy Analysis that were completely unavailable in real time due to gas procurement issues (excluding units that had had their schedules extended due to reliability or capacity issues) dropped from 12 in the winter of 2012-2013 to zero in the winter of 2013-2014.⁴⁴

5. Reserve Constraint Penalty Factor for Replacement Reserves

In August 2013, the Commission accepted changes to assign a value to replacement reserves, which had previously been unpriced.⁴⁵ These changes set this value, the Reserve Constraint Penalty Factor for replacement reserves, at \$250/MWh.⁴⁶ By assigning a value to a previously unpriced reserve constraint, these changes made providing reserves more lucrative. Because of the potential for greater revenue, these changes provided generators with better incentives to procure fuel and maintain the flexibility to perform in the reserve market.

6. Pipeline Information Sharing

In January 2013, the Commission accepted changes to the ISO New England Information Policy that allow ISO-NE to share information concerning the scheduled output of gas-fired generators with the operating personnel of the interstate natural gas pipeline companies serving New England.⁴⁷ While these changes are not expected to have an impact on generator behavior,

⁴⁴ *Id.* at 2-3.

⁴⁵ See *ISO New England Inc. and New England Power Pool Participants Committee*, Docket No. ER13-1736-000 (unpublished letter order dated August 15, 2013).

The replacement reserve requirement is an additional reserve requirement established under Part III, Section VII of ISO New England Operating Procedure No. 8, which provides that ISO-NE can maintain a quantity of additional thirty-minute operating reserves for the purpose of meeting the regional requirement to restore its ten-minute reserves within a specific timeframe.

⁴⁶ Unpublished letter order, Docket No. ER13-1736-000 (2013).

⁴⁷ Information Policy changes were accepted on an interim basis in *Order on Tariff Revisions and Request for Rehearing*, 142 FERC ¶ 61,058 (2013), and on a permanent basis in *ISO New England and New England Power Pool Participants Committee*, 146 FERC ¶ 61,159 (letter order dated March 6, 2014).

by conveying both to ISO-NE and to gas pipeline operators more accurate information about unit availability and operational capabilities, the changes allow ISO-NE to better anticipate and address potential reliability problems in the event that there is insufficient fuel for all gas-fired generators to meet their schedules.

7. Fuel Cost Recovery in Extraordinary Circumstances

As the Commission notes in the November 20 Order, it granted a request by Dominion Energy Marketing, Inc. for recovery of fuel costs incurred when Dominion generating units ran beyond their day-ahead schedules at the direction of ISO-NE and Dominion's supply offers had not been mitigated.⁴⁸ At the time, the Tariff provided for cost recovery under such circumstances only when a resource's supply offer had been mitigated or when the offer had been submitted at the energy offer cap. In granting Dominion's request, the Commission also directed ISO-NE to modify its tariff to allow resources to submit a request for cost recovery under "extraordinary circumstances."⁴⁹ In response, ISO-NE modified its Tariff to allow market participants an opportunity to request cost recovery when ISO-NE declares an "abnormal conditions alert" and also directs the market participant to either: (1) run a resource at a level that exceeds the resource's day-ahead energy market schedule; or (2) run a resource, even though the resource did not have a day-ahead energy market schedule.⁵⁰ As noted earlier, generators are more likely to procure high-priced fuel if they can recover the costs; therefore, these changes will help ensure that resources procure available gas.

⁴⁸ November 20 Order at P 12, citing *Order Granting Cost Recovery, Instituting Section 206 Proceeding, and Establishing Refund Effective Date*, 143 FERC ¶ 61,233 at PP 24-25 (2013).

⁴⁹ 143 FERC ¶ 61,233 at PP 26, 28.

⁵⁰ *See Order Accepting Compliance Filing*, 145 FERC ¶ 61,110 at P 34 (2013).

8. Forward Capacity Market Shortage Event Trigger

In November 2013, the Commission approved an expansion of what constitutes a “Shortage Event” to make it more likely that stressed system conditions would trigger a Shortage Event as defined in the ISO-NE Tariff.⁵¹ Under the prior definition, a Shortage Event was triggered when the system was deficient in ten-minute reserves; under the changes, a Shortage Event is triggered earlier, when the system is deficient in thirty-minute reserves.⁵² A capacity resource that does not meet its Capacity Supply Obligation during a Shortage Event does not receive its full capacity payment; therefore, an increased likelihood of Shortage Events provides increased incentive for resources to perform during times of system stress.

9. Fuel Surveys

In January of 2013, ISO-NE began to conduct monthly fuel surveys of resource owners – prior to that, it had conducted fuel surveys on an ad-hoc basis. These confidential surveys ask the owners of oil-fired, coal-fired, and dual-fuel units to report the amount of fuel in their inventories, their plans for replenishment, their storage capability, their dual-fuel operating characteristics, and their environmental restrictions. As dictated by system conditions and inventory levels, ISO-NE may conduct the surveys more frequently: during the January/February 2014 cold weather period, for example, it conducted surveys variously at weekly, twice weekly, and daily intervals. The information from these surveys has proved extremely valuable to ISO-NE for day-to-day system operations, for daily and weekly system planning, and for crafting fuel assurance solutions.

⁵¹ *Order on Proposed Tariff Revisions*, 145 FERC ¶ 61,095 (2013).

⁵² Because a shortage of ten-minute reserves is considered a more serious problem than a shortage of thirty-minute reserves, during an event when reserves are scarce, grid operators will utilize thirty-minute reserves in order to maintain ten-minute reserves. For that reason, a Shortage Event triggered by a deficiency in thirty-minute reserves will occur earlier than one triggered by a deficiency in ten-minute reserves.

10. Elective Transmission Upgrades

On February 13, 2015, ISO-NE and NEPOOL filed changes to improve the process for interconnecting new participant-sponsored transmission (“Elective Transmission Upgrades”) to the ISO-NE system.⁵³ Under these changes, certain Elective Transmission Upgrades that interconnect New England to another control area can “bundle” with import capacity resources to participate in the Forward Capacity Market. While the Electric Transmission Upgrades changes do not directly address fuel assurance, by encouraging new transmission, the participation of new capacity resources, and potentially, of remote renewable resources, these changes may help increase fuel diversity and competition.

Respectfully submitted,

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February 18, 2015

⁵³ *ISO New England Inc. and New England Power Pool Participants Committee, Revisions to Address the Treatment of Electric Transmission Upgrades*, Docket No. ER15-1050-000 (filed February 13, 2015).

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Commission Secretary in these proceedings.

Dated at Holyoke, Massachusetts this 18th day of February, 2015.

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