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STATE OF NEW HAMPSHIRE



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May 14, 2015

Debra A. Howland
Executive Director
New Hampshire Public Utilities Commission
21 S. Fruit Street, Suite 10
Concord, NH 03301

Re: Investigation into Potential Approaches to Mitigate Wholesale Electricity Prices

Dear Ms. Howland, and Interested Stakeholders:

On May 12, 2015, as specified in the Commission's Order of Notice issued on April 17, 2015, Commission Staff (Staff) met informally with interested stakeholders regarding this investigation.

Staff advised the assembled stakeholders that Staff would seek written input from interested stakeholders regarding the matters considered in this investigation, to be submitted not later than June 2, 2015. Staff's requested parameters for these submissions are presented as an attachment to this letter. Staff also advised that it would ask follow-up written questions of stakeholders that have made such timely submissions, and also potentially schedule bilateral meetings with these stakeholders, for which minutes will be prepared and disseminated. These materials will be available at the Commission's public website at:

http://www.puc.nh.gov/Electric/Investigation_into_Potential_Approaches_to_Mitigate_Wholesale_Electricity_Prices.html

and should be addressed to my attention (Alexander Speidel, Staff Attorney/Hearings Examiner).

Sincerely,

A handwritten signature in blue ink that reads "Alexander Speidel".

Alexander Speidel
Staff Attorney/Hearings Examiner

Cc: Interested Stakeholders (via E-mail)

STAFF REQUEST FOR STAKEHOLDER INPUT

Each stakeholder is invited to provide Commission Staff, no later than June 2, 2015, a written description of its preferred solution to address the high winter wholesale electricity prices that have plagued New Hampshire's and the region's electricity markets in recent winters.¹ Written comments that do not propose solutions, but for example provide information or views on the effect of high electric rates or other community concerns, are also welcome. The written description of any solution should address at a minimum the following:

1. Identification of the root cause of the high winter wholesale and/or retail electricity prices.
2. How the preferred solution results in lower wholesale and/or retail electricity prices for New Hampshire consumers. For example, if the preferred solution requires one or more New Hampshire EDCs to purchase firm pipeline capacity, explain in detail how that purchase translates into lower Load Marginal Prices (LMPs) for wholesale electricity customers and eventually lower electric energy rates for retail customers. Identify all steps in the process and specify all assumptions.
3. Whether the preferred solution is part of a regional solution to reduce wholesale electricity prices. If so, describe the regional solution and specify all approvals needed to ensure such solution moves forward.
4. For pipeline-based solutions, specify the firm pipeline capacity in Dth/day to be purchased by each EDC, the associated annual cost and the contract term, identify the pipeline project to which the estimated annual cost relates, provide the estimated benefit-cost ratio for such project and the projected reduction in wholesale and/or retail electricity prices.
5. For LNG-based solutions, describe the product/service offered, specify the quantity to be purchased by each EDC, the associated annual cost and the contract term, identify the storage facilities underlying the LNG product/service and their location(s), and provide the estimated benefit-cost ratio for such solution and the projected reduction in wholesale and/or retail electricity prices.
6. For energy efficiency-based solutions, provide the incremental winter kWh savings projection for each EDC for the ten year period beginning 2018 and the associated annual costs, identify the energy efficiency measures underlying the winter period kWh savings and related lifetime benefit-cost ratios and the projected reduction in wholesale and/or retail electricity prices.
7. Whether the preferred solution will enhance reliability of the electric power system in New Hampshire and the region. If so, explain how the preferred solution enhances reliability.
8. Provide all studies that support the claimed: (i) benefit-cost ratio(s); (ii) reduction in wholesale and/or retail electricity prices and (iii) reliability enhancement.

¹ For information on the magnitude of the winter wholesale electricity price increases, see the attached comments filed by the New Hampshire Public Utilities Commission on March 20, 2015 with the Federal Energy Regulatory Commission in Dockets Nos. AD13-7-000 and AD14-8-000.

**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

**COMMENTS OF THE
NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION**

I. INTRODUCTION

Pursuant to the November 20, 2014 Order on Technical Conferences¹ issued by the Federal Energy Regulatory Commission (“FERC” or “Commission”), and the Commission’s related February 20, 2015 Notice Allowing Public Comment in the above-captioned dockets, the New Hampshire Public Utilities Commission (“NHPUC”) hereby files these Comments, as a New Hampshire-specific companion to the comments made by the New England states collectively through the New England States Committee on Electricity, in response to the status report on fuel assurance issues filed with the Commission by ISO New England, Inc. (“ISO-NE”) on February 18, 2015 (“ISO-NE Status Report”). The November 20 Order directed RTOs/ISOs, including New England’s ISO (ISO-NE), to file reports on the status of their efforts to address fuel assurance issues, which are defined in general terms as “generator access to sufficient fuel supplies and the firmness of generator fuel arrangements.”² Fuel assurance is identified as a significant issue contributing to poor generator performance and inefficient market operations.³ Among other things, each RTO/ISO is directed to describe the fuel assurance concerns specific to its region including the strategy or strategies it has implemented or plans to

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

² November 20 Order at ¶¶ 7 and 13.

³ *Id.* at ¶¶ 5 through 8.

implement to address market and system performance issues relating to each fuel assurance concern.⁴ The NHPUC, as part of its responsibilities in monitoring and shaping the operations of New England's wholesale power markets, seeks to provide FERC with input regarding some of the shortfalls of the ISO-NE Status Report, and to suggest a way forward to foster FERC's twin goals of system reliability and just and reasonable wholesale rates.⁵

II. COMMENTS

1. The NHPUC focuses its comments on ISO-NE's failure to include in its Status Report a plan to tackle the very high prices and extreme price volatility that has plagued ISO-NE's energy markets in recent winters. ISO-NE acknowledges that this problem is caused by insufficient natural gas pipeline capacity into New England to serve the increasing demand for gas for electricity generation resulting in constraints that impact both reliability and efficiency.⁶ Given ISO-NE's responsibility for ensuring the efficient operation of the region's competitive wholesale electricity markets, the NHPUC is disappointed that the ISO-NE Status Report does not include a comprehensive plan to address the high winter electricity prices, which resulted in unprecedented increases in wholesale electricity costs in recent winters - amounting to \$4.9 billion for 2013-2014 alone compared to same period in 2011-2012.⁷ Absent a plan that definitively empowers gas generators to enter into firmer natural gas supply arrangements going forward, the NHPUC is concerned that the region's economy will be placed at a profound competitive disadvantage compared to its North American neighbors. Therefore, the NHPUC

⁴ November 20 Order at ¶ 20.

⁵ *Id.* at ¶ 8.

⁶ ISO-NE Status Report at Page 3.

⁷ See Figure 1 in the Graphical Appendix below, which compares wholesale electricity costs for three recent winters with winter costs for 2011-2012 .

advocates for a FERC-directed effort at wholesale market reform as a key step in addressing the region's gas-supply challenges.

2. The NHPUC thanks the Commission for convening the technical conferences on Capacity Markets and the Polar Vortex and for placing a sharp focus on the important issue of fuel assurance. As the Commission knows, the problem of fuel assurance has been particularly acute in New England in recent years, resulting in system reliability concerns on the coldest winter days when the region's pipeline capacity is constrained, paired with record high wholesale electricity prices over the past two winters and extreme price volatility. Indeed, the record high electricity prices caused winter wholesale power costs to increase by \$1.9 billion and \$4.9 billion in 2012-2013 and 2013- 2014 respectively compared to the same period for 2011-2012,⁸ a warmer than normal winter that resulted in minimal pipeline constraints and gas prices not significantly different from prices at trading points closer to the Marcellus shale fields.⁹ These data demonstrate that the costs paid by wholesale load in New England are now very sensitive to winter weather conditions, a fact that calls into question the justness and reasonableness of the electricity prices that result from ISO-NE's existing markets.

3. Not surprisingly, last winter's increase in wholesale electricity prices was followed this winter with retail electric energy rates for most New England consumers that are 50% higher than the same period last year, with some consumers experiencing increases as high as 85% to 100%.¹⁰ The expectation that winter wholesale electricity prices will continue at high

⁸ *Id.*

⁹ See Figure 2 in the Graphical Appendix below, which shows the number of days the M3 to Algonquin basis differential fell within specified price ranges during the 2011-2012 winter period.

¹⁰ See James Daly, Vice President, Energy Supply, Northeast Utilities, Restructuring Roundtable Presentation: New England Electric Rates and Market Drivers, Nov. 21, 2014, at Slide 4, available at www.raabassociates.org/main/roundtable.asp?sel=131

and volatile levels until new natural gas pipeline infrastructure is built is a troubling prospect for the New England states.¹¹

4. ISO-NE acknowledges that the record high electricity prices of the past two winters were the result of pipeline constraints driven by insufficient investment in gas infrastructure to supply the increased demand for gas for electricity generation. An ISO-NE commissioned study puts the winter infrastructure deficit at 0.8 to 1.4 Bcf/day by 2019-2020 depending on gas demand estimates, equivalent to 3,500 to 6,000 MW of unserved gas generation.¹² Despite this acknowledgment, the ISO-NE Status Report offers no insights into the root cause of the investment shortfall – a lack of incentives in the competitive wholesale electric markets for generators to support long-term firm infrastructure development – and contains no assessment of the solution options included in the November 20 Order, which “range from those focused on providing incentives to encourage greater fuel assurance to approaches that are more administrative in nature.”¹³

5. Instead of offering an informed perspective on alternative solutions to this difficult problem, ISO-NE is content to point to efforts by the New England states to solve the problem with their state-sponsored initiative, claiming that such an initiative may be the most direct route to a timely solution.¹⁴ Although the NHPUC has been and continues to be a staunch supporter of the state-sponsored initiative, we firmly believe that it is incumbent on ISO-NE as the entity responsible for ensuring the efficient operation of the region’s wholesale electricity

¹¹ In addition, capacity market costs are projected to rise to about \$4 billion a year in 2018-2019 from their 2013-2014 level of around \$1.1 billion.

¹² Assessment of New England’s Natural Gas Pipeline Capacity to Satisfy Short and Near-Term Electric Generation Needs: Phase II, November 20, 2014, prepared by ICF International for ISO-NE.

¹³ November 20 Order at ¶ 14.

¹⁴ ISO-NE Status Report at Page 4.

markets to also propose necessary amendments to its market rules to facilitate a solution to this issue. The state-sponsored initiative, without the concurrent introduction of market reform, is more likely to be a temporary solution potentially requiring subsequent state efforts as the demand for gas grows to outpace previously added new pipeline capacity. Therefore, to make the state-sponsored initiative a true success, ISO-NE must begin the process of modifying its market rules to accommodate firm fuel procurement by generators.

6. The ISO-NE Status Report provides considerable discussion of the forthcoming changes in its Pay for Performance capacity market redesign to improve generator performance during times of system emergencies.¹⁵ While Pay for Performance is expected to positively influence generator performance and responsiveness, and hence system reliability, it is not expected to eliminate or significantly reduce the constraints on New England's natural gas pipelines. The reliability-focused capacity market reforms are instead likely to result in greater use of fuel oil and/or Liquefied Natural Gas ("LNG") as back-up fuel sources when the reforms are implemented a few years from now (*i.e.*, 2018). Even with the recent decline in crude oil prices, fuel oil and LNG prices are expected to remain considerably higher than the price of pipeline natural gas enjoyed by consumers outside of New England. As a result, the cost of generating electricity with back-up fuels is expected to be significantly higher than the cost of generation based on Marcellus-area natural gas prices.

7. Without market reforms that encourage the use of firm natural gas supplies by generators, as natural gas prices spike in the winter months, fuel oil and LNG will increasingly become the fuels of choice for electricity production and wholesale and retail electricity prices will remain at elevated levels. In addition, because fuel oil has a significantly dirtier emissions

¹⁵ Pay for Performance was designed to address New England's growing dependence on natural gas and attendant vulnerability to interruptions in gas supply.

profile than natural gas, its increased use risks reversing progress on reducing power plant emissions in New England, an outcome that may make the permitting of back-up fuel oil facilities difficult if not impossible. For these reasons, the NHPUC expects that Pay for Performance has limitations that will prevent ISO-NE from fully meeting the FERC's twin goals of system reliability at just and reasonable wholesale rates.

8. Although this winter's weather through the end of February has been moderately colder than last winter for the same time period, wholesale electricity prices in New England have been substantially lower. Last winter, daily average real-time electricity prices through March 1, 2014 exceeded \$200/MWh nineteen times. During the same period this winter, daily average real-time prices never exceeded \$187/MWh. In addition, price volatility this winter has been substantially lower than last.¹⁶ The reduction in electricity prices compared to last winter has been attributed in large part to a surge in gas sendout from the region's LNG import terminals, including previously idled offshore terminals, which resulted in lower natural gas prices. The surge in LNG supplies was made possible by a reduction in world LNG prices¹⁷ that enabled terminal operators to successfully compete with fuel oil and pipeline natural gas to supply gas generators.

9. The increase in LNG sendout and the associated drop in gas and electricity prices this winter are welcome developments; however, the price of gas delivered to New England city gates continues to exceed by large margins the price of gas prevailing across the Hudson River.¹⁸ The result is that wholesale electricity prices for this winter are not substantially different from

¹⁶ See Figure 3 in the Graphical Appendix below.

¹⁷ Driven by the drop in crude oil prices.

¹⁸ See Figure 4 in the Graphical Appendix below.

the record prices of winter 2012-2013,¹⁹ suggesting that next winter's retail electricity prices will continue to exceed those paid by consumers outside of New England. These observations indicate New England continues to have a high winter electricity price problem that can be addressed economically only through the addition of new pipeline capacity. Finally on this issue, the NHPUC cautions that the recent positive developments discussed here could be reversed in short order if the price of crude oil and therefore LNG increases.²⁰

10. ISO-NE's 2014 Regional System Plan analyzed the potential future retirement of 8,300 MW of coal- and oil-fired generating units. The results showed these retirements would cause resource shortages that would require over 6,000 MW of resources to be retained, repowered, or replaced to meet the region's Installed Capacity Requirement. Gas and renewable generation resources (mostly gas) totaling 6,915 MW currently in the generator interconnection queue will likely satisfy the required new resources. If so, New England's reliance on natural gas to meet its electricity needs will increase further, potentially resulting in even higher wholesale electricity prices and costs. In the NHPUC's opinion, the possibility of such an outcome effectively demands the development of a comprehensive plan to mitigate those additional fuel assurance risks in a timely manner.

11. The NHPUC's favored long-term remedy for addressing New England's pipeline capacity woes is for the FERC to require ISO-NE to develop, with stakeholder input through the normal processes, proposals for new market-based reforms designed to drive firmer, economic gas supply outcomes. These proposals would be filed with the Commission by ISO-NE, and selected for implementation by FERC order. In the meantime, New Hampshire officials will

¹⁹ As shown in Figure 1 in the Graphical Appendix below, wholesale electricity costs for this winter are also not substantially different from winter 2012-2013 costs.

²⁰ LNG prices are indexed to crude oil.

continue to work with our partners in other New England states to move the state-sponsored initiative forward. Even if the success of the states' initiative is assumed, it is critical that ISO-NE, FERC, and stakeholders develop complementary market reforms that provide for recovery of the costs of economic firm fuel arrangements for gas generators that will (1) eliminate or lessen the need for future state interventions, and (2) give gas generators the necessary financial incentive to take on the capacity offered through the state-sponsored initiative.

III. CONCLUSION

The NHPUC appreciates the opportunity to provide its perspective on fuel assurance issues and respectfully requests that the FERC consider these comments in the above-captioned dockets, and act to require ISO-NE to begin a market-reform stakeholder process.

Respectfully submitted,

**New Hampshire Public Utilities
Commission:**

/s/ Alexander F. Speidel

Alexander F. Speidel
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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 Secretary in these proceedings.

Dated at Concord, New Hampshire this 20th day of March, 2015.

By:

/s/ Alexander F. Speidel

Alexander F. Speidel

Staff Attorney

N.H. Public Utilities Commission

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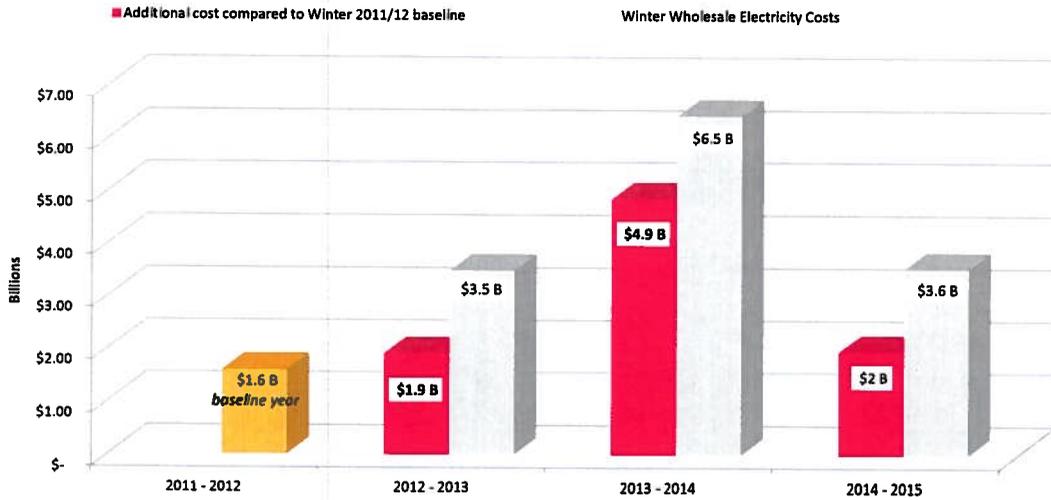
Email: alexander.speidel@puc.nh.gov

GRAPHICAL APPENDIX

(Figures 1 through 4)

Figure 1.

**New England Winter Wholesale Electricity Costs compared to baseline*
December through March**



Cost data sourced from ISO-NE's Wholesale Load Cost Reports.

Wholesale costs for 2014/2015 include estimate for March 2015.

*Winter 2011/12 was warmer than normal and natural gas-fired generators had relatively ready access to pipeline capacity without producing significant constraints.

Figure 2.

**Basis Differential (Algonquin - M3)
(frequency of occurrences for December 2011 through March 2012)**

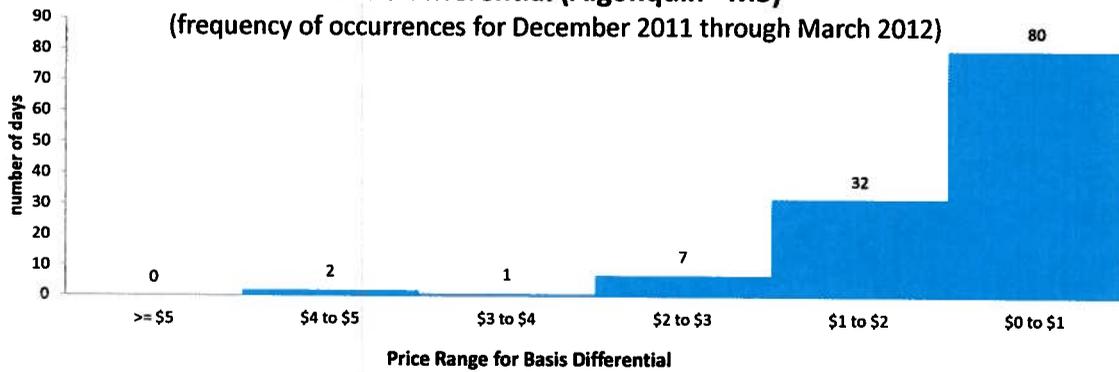


Figure 3.

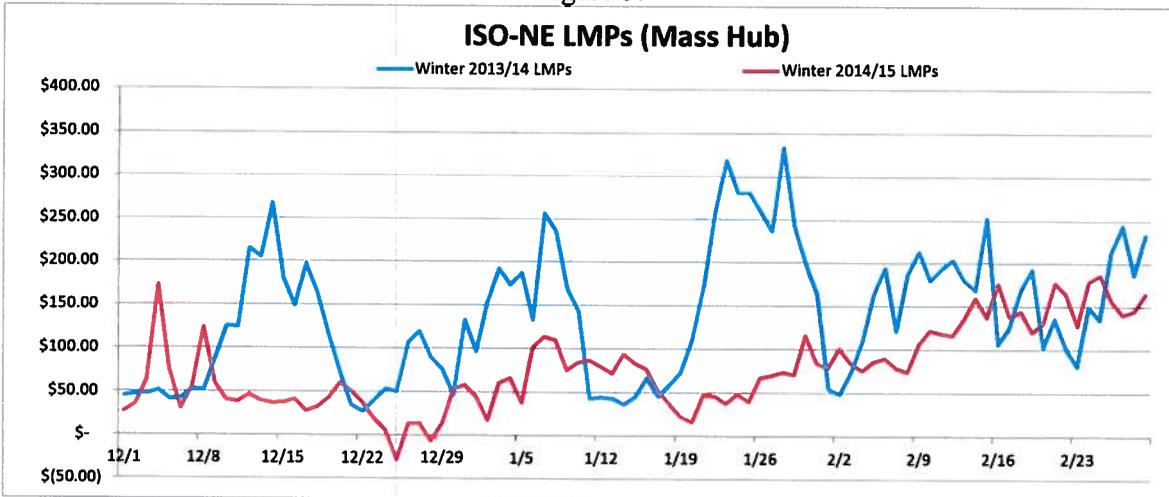


Figure 4.

