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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,* Docket IR 15-124

Dear Ms. Howland,

The New England Power Generators Association, Inc. (NEPGA) appreciates the opportunity to provide this comment letter as part of the New Hampshire Public Utilities Commission (PUC) Investigation into Potential Approaches to Mitigate Wholesale Electricity Prices. NEPGA is the trade association representing competitive electric generating companies in New England. NEPGA's member companies represent approximately 25,000 megawatts (MW) of generating capacity throughout New England, including over 2,700 MW of generation in New Hampshire, or 66 percent of the electric generating capacity in the state. NEPGA's New Hampshire companies provide power for the state from a diverse portfolio of plants, providing over $46 million annually in state and local taxes and nearly 800 well-paying and skilled jobs. NEPGA's mission is to promote sound energy policies which will further economic development, jobs and balanced environmental policy.[1]

State of Energy Markets

The electricity and fuel supply markets in New Hampshire and across New England are in transition. Several generating plants have announced retirements, new investments are being proposed, and regional development of renewable and low-carbon energy continues. Over 13,000 MW of new generation was built in the region since the opening of the competitive marketplace in the late 1990s.[2] Nearly all of this was built without

[1] The comments expressed herein represent those of NEPGA as an organization, but not necessarily those of any particular member.
[2] The New England installed capacity requirement for 2014/2015 is 33,200 MW with an all-time peak demand of 28,130 MW for New England.

consumer subsidy or contract and created an excess of generating capacity that drove price, reliability and environmental benefits for consumers. With changing economics in the marketplace, stringent environmental regulations and some aging resources, the markets have tightened with a number of facilities either having closed or announced closure. More retirements are likely in the coming years as the power generation fleet continues to evolve with older less efficient plants retiring and making the way for newer and more efficient plants to enter the market. These changes, along with with ever-increasing spending on customer bills for transmission and distribution as well as other non-bypassable charges have collectively led to rate increases for many consumers.

New England, however, is seeing the appropriate investment response to these price signals. Power generators are aggressively responding to the market by making the necessary investments to support reliability and competitive pricing for consumers all while continuing to meet or exceed state and federal environmental mandates. There are currently over 1,700 MW of new power plants that have been selected in the recent Forward Capacity Auctions (FCAs) and are expected to come online in the next several years. This looks to be just the beginning of a cycle of robust power generation development in New England.

Indeed, New England is seeing a significant wave of new potential investment in power generation facilities with over 8,500 MW of new resources having qualified to compete in the ISO New England's ninth FCA held on February 2, 2015 to secure adequate resources to meet system reliability in 2018/2019. 1,060 MW of new generation resources were selected in the auction. The window for resources to express interest in the tenth FCA commencing in early 2016 recently closed with 16,000 MW of new resources providing expressions of interest. Today, there are 78 generation projects totaling 10,462 MW currently with applications pending to connect to the New England grid. While clearly only some of these projects will be built, this amount is equal to 1/3 of the total capacity needed in the region to keep the lights on and represents a diversity of fuel sources. To put this into further perspective, this is nearly twice the 6,000 MW in the interconnection queue at this time just one year ago.[3] The Forward Capacity Market is driving investment in new infrastructure while also retaining the lowest cost existing resources to provide reliability and competitive pricing for consumers.

In addition to pending generation projects throughout the region, several natural gas pipeline projects have been proposed in New England with the potential to bring up to 2.74 billion cubic feet (Bcf) of new natural gas infrastructure into the region between 2016 and 2018. Of this proposed amount, 842,000 dekatherms (1 dekatherm equals

[3] "*Latest Forward Capacity Auction Attracts New Resources*," Restructuring Roundtable presentation, Bob Ethier of ISO New England, March 13, 2015

approximately 1,000 cubic feet of natural gas) has already been subscribed. Pending proposed pipeline projects for the region include:

- Spectra Energy's Algonquin Incremental Market gas pipeline targeted for service in November 2016 with 342,000 dekatherms per day.
- Tennessee Gas Pipeline Company/Kinder Morgan's Northeast Energy Direct proposal which combines its previously announced Northeast Expansion Project with another pipeline from the Marcellus Shale for 1.2 to 2.2 billion cubic feet targeted for service in November 2018 (500,000 dekatherms per day contracted in New England).
- Portland Natural Gas Transmission System's Continent to Coast Expansion project with an anticipated range of 300,000 dekatherms per day targeted for service in November 2016.

Liquified Natural Gas (LNG) also plays an important role in serving fuel demand in the region. Last month a major new 10-year supply agreement was announced "to provide the region with billions of cubic feet of LNG to heat homes and generate electricity at power plants."[4] The agreements will supply 6 Bcf of LNG this year and at least 3 Bcf per year from 2016-2024.[5] As was seen most notably this past winter, LNG is part of the robust infrastructure effort across New England. From December 2014 through February 2015, the region saw an injection of nearly 31 Bcf of gas from LNG imports, an amount nearly double the amount brought into New England during the previous winter.[6] The long-term nature of increased LNG supplies is also of notable interest. Currently there is 13 Bcf of new natural gas liquefaction worldwide under construction (or the final stages of development) planned to be in operation by 2018. To put this into perspective, the average daily LNG trade volume worldwide is 35 Bcf.[7] New England is certainly well poised with our existing LNG terminals to take advantage of a more robust LNG market globally.

Complementing LNG's role and efforts to build new generation plants and expand natural gas pipeline capacity into New England, owners of several existing natural gas-

[4] Boston Globe, "Distrigas Says Fuel Deals Should Prevent Future Gas Shortages" May 11, 2015 http://www.bostonglobe.com/business/2015/05/10/distrigas-inks-big-lng-deals/guafPlHwoFG4bhENhaERYK/story.html#comments

[5] Distrigas Press Release, "Distrigas to Fulfill Multiple LNG Contracts with Gas Utilities in New England; One Agreement Spans 10 Years of Supply" May 11, 2015 http://www.businesswire.com/news/home/20150511005685/en/Distrigas-Fulfill-Multiple-LNG-Contracts-Gas-Utilities#.VVEAf5NcA7o

[6] ISO-NE Newswire, April 7, 2015 "New England Power System Performed Well Through Winter 2014/2015."

[7] Stephen Kelly, VP of Trading for North America Gas and Power, Repsol Energy North America Corp., presentation at Platts Northeast Power and Gas Markets Conference, May 28, 2015 http://www.northeastgas.org/pdf/v_morrissette_2015.pdf

fired power plants in the region are pursuing efforts to retrofit their facilities to have the ability to burn both natural gas and oil. Currently there are six units in the region that intend to commission this dual-fuel capability including four units totaling 1,039 MW that did so this past winter and two for next winter with an additional 735 MW of capacity.

Finally there are four major electric transmission proposals pending in New England including the 340-mile proposed Green Line, the 187-mile proposed Northern Pass, the 230-mile proposed Northeast Energy Link and the 150-mile proposed New England Clean Power link. These lines propose to bring 1,000 to 1,200 MW of power each, with target in-service dates ranging from late 2016 to 2019.

These varied resources including generation, natural gas pipelines, LNG and electric transmission highlight the strong market response underway to meet regional energy infrastructure needs.

Pricing

For the last decade New Hampshire businesses and residential consumers have seen the costs for commodities shift over time – whether for steel, oil, copper or natural gas. Electricity is no different and has garnered much of the attention in part due to the fact that it is one of the largest cost inputs to many businesses and remains one of the most regulated commodities in the marketplace. What is remarkable is that New England's average wholesale electricity price in 2014 was actually lower than the inflation-adjusted price in 2003, when the ISO New England markets as we know them first started.[8] That is true despite the severe price volatility experienced in the winter of 2013/2014 and the roughly 1,800 MW of power plants that retired in 2014. Over those 11 years environmental emissions across the region have also plummeted with CO_2 emissions down by 18%; NO_X emissions down by 66% and SO_2 emissions down by 71%.

Understandably, much of the focus has been paid to the winter pricing situation in the New England wholesale electricity markets. The winter of 2013/2014 saw some of the most prolonged stretches of cold across the Eastern United States in history. This in turn drove volatile wholesale electricity prices in New England with total seasonal costs of $5 billion. The winter of 2014/2015 was remarkable in that not only did we experience another very cold winter – February 2015 was the coldest month since at least the 1960s and January of 2015 was colder than the previous January – but also record-breaking snowfall and intense storms throughout the region. This winter, however, was also remarkable for what didn't happen.

[8] 2014 price of $64.30/MWh versus 2003 inflation-adjusted price of $64.47/MWh ($48.59/MWh nominal) based on U.S. Bureau of Labor Statistics CPI Inflation Calculator.

Unlike the extreme pricing from last year, this winter's seasonal electricity costs were a little more than half the previous year's with the average cost of wholesale electric energy from December 2014 through February 2015 at $76.64/megawatt-hour (MWh), compared to last winter's $137.60/MWh.[9] These changes were driven by a number of factors including critical wholesale electricity market improvements, lessons-learned on fuel procurement by generators from the previous year and a different consumer demand through the season. Unquestionably though, the single largest factor was the lower fuel prices. Year-over-year natural gas prices were down 46% and oil was down 50%. Natural gas price drops were driven, in part, by LNG imports, which nearly doubled from 2013/2014.

Wholesale electricity prices will continue to be driven by the fundamentals in the marketplace and the major inputs to power generation. The market is also driving the biggest energy investment cycle in nearly 15 years in New England. As infrastructure such as the power generation and fuel infrastructure projects currently moving forward are developed, the peaks and valleys of the intense price volatility are expected to subside. Electricity, however, is an inherently volatile commodity. Sufficient revenue support will be required to ensure that the appropriate level of capacity is on the system to support reliability while the most competitive resources are performing at peak times to meet consumer demand. This is best done through the competitive market structures that exist in New England. Improvements can and should be made, but the overall structure is sound and provides the best deal for consumers over the long-term.

As new generation and fuel supply development is moving forward, a key question for the PUC to consider is what, if anything, can or should be done to mitigate consumer impacts of this transition period before new infrastructure comes on line? A big part of pricing seen by residential consumers is dependent on the structure of the standard offer service procurement.[10] New Hampshire currently purchases nearly all standard offer service products at once for a seasonal period. This has the potential to create tremendous volatility between the two seasonal periods for consumers that are not on an alternative fixed-price plan. A standard best-practice in some restructured states across the country is to have a laddered procurement either across a year or over two or three years to smooth out the volatility.

A number of states moved away from the laddered procurement structure to capture the price decreases from the shale gas revolution several years ago. Moving to purchase 100% of power needs at once certainly allows for a more direct pass through of the

[9] 2013/2014 winter costs of $5.05 billion versus 2014/2015 winter costs of $2.77 billion, a 45% decrease. Source, ISO New England Winter Review Report at NEPOOL Participants Committee, April 10, 2015.
[10] NEPGA recognizes that the PUC is engaged in a proceeding, which NEPGA is not a party to, examining default service procurements, Docket IR-14-338.

underlying costs to consumers and this increased volatility was something a number of states embraced as fuel prices were falling dramatically. With the changes in the generation fleet and the tightening of supply in the electricity market, that price volatility is now moving up as well as down. Consumers continue to have a direct view into the fundamental costs but are also now experiencing the distinct price shifts that occur in New England from the winter months to the non-winter months. A key question for the PUC is whether standard offer customers would be best served by experiencing the seasonal price shifts or embracing the laddered approach that is spread across a year or over two to three years to smooth out the price volatility impacts.

Impacts of Subsidies

As detailed throughout these comments, New England is in the midst of an energy infrastructure development boom. At the same time, proposals have emerged to subsidize particular types of infrastructure development with the most talked about coming from utility and state-subsidized provincially-owned hydropower and natural gas pipelines paid through electric utility rates. NEPGA has very serious concerns with these types of initiatives that could undermine both the billions of dollars of new infrastructure development as well as the investments that have already been made. These proposals represent the “bad old days” of guaranteed cost-recovery and profits for utilities while harming companies that have and continue to invest in New Hampshire without cost recovery or profit guarantees.

As part of this Investigation, it’s important to recognize that should New Hampshire decide to use electric utility rates to subsidize out-of-market energy infrastructure, there could be negative unintended consequences. Subsidized pipelines create increased financial challenges for non-gas power plants – primarily oil, coal and nuclear facilities which already face substantial challenges in the marketplace. These resources provide benefits as baseload and peaking resources today and subsidizing their competitors will lead to accelerated retirements with price and environmental impacts. At the local level, such uneconomic accelerated retirements would have devastating consequences from lost tax revenue, employment and contracting expenditures in host communities.

Counterintuitively, subsidizing natural gas pipelines through electric utility rates would also have a detrimental commercial impact on many natural gas power plants. Some plants that enjoy the good fortune to be connected to or in close proximity to a pipeline that may be picked as a winner by the state will have their fuel supply subsidized, other facilities that are not on such a pipeline will suffer. New Hampshire will not only be picking natural gas plants over those of other fuels, but will be picking winners and losers within the natural gas fleet. That type of public policy just doesn’t make sense.

NEPGA also remains deeply concerned about the prospect of subsidizing additional power supply options into New England. The most recent iteration has come through a utility-led initiative for a "Clean Energy RFP."[11] In this example, utilities from Connecticut, Massachusetts and Rhode Island have asked for proposals for Class I RPS resources as well as for large-scale hydropower by primarily paying for the transmission component, rather than the energy or capacity. Such an effort bypasses the clear restrictions put in place by the state legislatures on preventing onerous long-term contracts from exceeding an explicit threshold and would appear to be directed at benefiting utility-affiliated projects such as Northern Pass (Eversource), the Green Line (National Grid) and Northeast Energy Link (National Grid). As stated in NEPGA's comments submitted on the Draft RFP:

> These concerns are raised from a legal/implementation perspective[12] and also from a more fundamental policy perspective regarding the wisdom of subsidizing large-scale, provincially-owned resources that inadvertently harm more economically sound projects developed without any state subsidy. In considering last year's proposed legislation in Massachusetts – supported by both Eversource and National Grid – NEPGA commissioned an independent analysis of the cost impact of subsidizing the type of large-scale, provincially-owned hydropower contemplated in the Draft RFP. Dr. Susan Tierney of the Analysis Group found that the cost of the transmission alone would be $1 billion. Dr. Tierney stated that the procurement "is destined to have negative cost and other unintended consequences for Massachusetts consumers and the state's economy."[13]

NEPGA continues to oppose the types of subsidies contemplated in the Draft RFP and any other effort to directly pick which resources should be benefited in an open competitive marketplace. Such initiatives create a cornered market for a particular subset of projects that lead to increased costs for consumers. New Hampshire is in the midst of finally ending guaranteed ratepayer support for utility power supply sources

[11] www.cleanenergyrfp.com

[12] Questions to be addressed include what statutory provisions are the individual states relying upon as the rationale for allowing the EDCs to procure transmission projects? In the case of transmission projects being bid as part of a package bid with hydropower resources, can Massachusetts and Rhode Island EDCs even entertain these types of bids since they acknowledge they do not have the statutory authority to procure hydropower resources? What type of approvals would be necessary to move forward with a successful bid for a transmission projects including what role would FERC have in approving such projects? And how does the cost recovery work for these types of projects – how would the rate-regulated EDCs recover costs for these projects when it is not clear they have the statutory authority to solicit these projects. These are not simple questions and must be addressed before the Soliciting Parties can seek to procure transmission projects.

[13] NEPGA Comments on Clean Energy RFP Draft, March 27, 2015
https://cleanenergyrfpdotcom.files.wordpress.com/2015/03/nepga.pdf

through the proposed settlement agreement to divest the remaining rate-base generation.[14] Turning back the clock and reinserting the state in dictating market outcomes will expose ratepayers to potential new stranded costs at a time when the State is clearly moving away from embracing regulate generation investment.

In the case of transmission lines for provincially-owned hydropower and natural gas pipelines, utilities stand on both sides. Through Eversource's equity stakes in projects like Northern Pass with Hydro Quebec and Access Northeast with Spectra Energy fundamental questions are raised about the appropriate separation within a corporate structure and affiliate abuse.[15] The rampant push to have consumers underwrite these projects harkens back to the days of guaranteed cost-recovery and profits for vertically-integrated utilities. These proposals harm companies that have and continue to invest in New Hampshire and the region without cost-recovery guarantees, undermining both the billions of dollars of new infrastructure proposed as well as the tens of billions of dollars in investments already made.

New England is in an energy transition. Substantial investments are being made today to support competitively-priced power supplies, meet aggressive environmental mandates and support reliability. These investments stand to provide local construction jobs, permanent employment, substantial tax revenues and broader community investments. Intervention in the markets will have dramatic consequences on both existing and new power generation resources. New Hampshire should maintain the competitive market pressures that are bringing these investments to light while setting competitive prices for consumers. The state shouldn't create a cornered market and subsidize individual projects or technologies. Moreover, policy-makers supporting state intervention as a means to lower energy costs should be mindful of the impact on existing facilities of subsidizing an individual project or technologies, and the ripple effect on capacity costs in future wholesale capacity auctions.

Reliability is Sound

The last two winters have posed an exceptional challenge on the existing energy infrastructure in New England. As described above, the winter of 2014/2015 had some of the coldest weather and most severe storms ever seen in the region. The winter of 2013/2014 had many similar challenges. And yet, throughout both winters – not to mention the balance of the year – reliability has been maintained taking advantage of a resilient, fuel diverse power generation fleet.

[14] "2015 Term Sheet for PSNH Restructuring and Rate Stabilization," Docket No. IR 13-020, DE 11-250, DE 14-238

[15] NEPGA had requested a rulemaking proceeding at the PUC to adopt affiliate protections and appreciates the Final Rule issued in Docket DRM 14-234 to provide needed updated affiliate rules.

To try and maximize the use of the existing infrastructure, ISO New England has conducted an out-of-market Winter Reliability Program the last two years with a plan to continue to conduct them until the Pay for Performance redesign of the Forward Capacity Market is implemented beginning in 2018. NEPGA has been frustrated that ISO New England has engaged in these types of programs rather than developing a fuel-neutral market-based design, but the programs to date have clearly been successful in providing reliability assurance to the region. Programs such as the Winter Reliability Program are not meant to continue indefinitely; rather they are a transition into the Capacity Commitment Period for the recently completed FCA 9 held this February for delivery beginning June 1, 2018. Improvements have been made to the programs to make them more fuel-neutral and NEPGA continues to remain engaged in the process to push for ever-more competitive designs.

NEPGA recently commissioned an independent report to review the energy infrastructure adequacy in the region to preserve reliability from a power generation and fuel procurement standpoint.[16] The most notable conclusion from the report is that "New England is not facing a near-term energy infrastructure crisis." Instead, the region can optimize the existing infrastructure and support new market-based project developments to support reliability.

The Energyzt report highlights January 7, 2014, as a day that stands out in the challenging operating environment. On this day there was a high demand for both power and natural gas, and the Texas Eastern pipeline – a major artery into the region – had an emergency outage. At times on January 7, 2014, a number of plants were not dispatched by ISO New England and imported power was significantly lower than anticipated. Within these challenging conditions, New England had surplus electricity supplies over the amount needed for its own reliability, with the region supplying 500 MW of emergency power to the Mid-Atlantic, managed by PJM Interconnection – the largest electricity market in the world.

In fact, in the last two winters only one reliability event has occurred. That one, on December 4, 2014, was due to Hydro Quebec cutting off approximately 2,000 MW of their exports into New England in a matter of minutes. Because of the sudden curtailment of imports, New England fell into a capacity deficiency, first in 30-minute operating reserves and then in 10-minute reserves, causing real-time energy prices to spike through the recently increased reserve constraint penalty factors (the increases went into effect the day before, on December 3). In response to the reserve

[16] "Winter Reliability Analysis of New England Energy Markets," Energyzt Advisors, LLC, October 2014 http://nepga.org/wp-content/plugins/custom-post-type-attachment-pro/download.php?id=Mzg4&file=MQ==

deficiencies, ISO New England issued an Abnormal Conditions Alert and ordered on-line all available capacity resources that could start in less than two hours (*i.e.*, Operating Procedure No. 4, Action 1). At the same time, New England provided up to 450 MW of emergency energy sales to Hydro Quebec, and transmitted up to 500 MW of energy from Hydro Quebec through New Brunswick and New England and back to Hydro Quebec. Action 1 of OP4 was cancelled at 8:45 PM the same day, and the Abnormal Conditions Alert was cancelled at approximately 6:00 PM the following day. The ISO-NE has publicly noted that every New England generator called upon during this event performed to support reliability in the region.

While there have been challenges in the tightening energy markets in New England, thanks to strong operational performance by ISO New England, utilities and power generators, the lights have stayed on. Reliability continues to be met through the electricity markets with temporary programs filling in as the region transitions to longer-term market redesigns and new infrastructure comes on-line.

Conclusion

NEPGA appreciates the PUC taking a thoughtful approach to reviewing the current situation in wholesale electricity markets in New England. This Investigation presents an opportunity to learn more and understand the changing dynamics of the energy markets and important infrastructure developments. NEPGA, however, strongly urges New Hampshire to not intervene in the competitive marketplace and instead let the robust market responses underway continue to move forward.

There is no question that this is a changing and volatile pricing environment for consumers. Power generation and fuel supplies have tightened, but we’re also seeing exactly the type of response that would be hoped for – new plants are being built, new pipelines are being developed and there are creative/innovative concepts to increase energy supplies into the region, all without consumers bearing the risks associated with those investments. Undercutting such efforts, even in the most well-meaning fashion to try and lower costs for consumers, could have significant unintended consequences for the system overall and consumers.

New Hampshire is in the midst of an energy transition. Substantial investments are being made today to support competitively-priced power supplies, meet aggressive environmental mandates and ensure bulk power grid reliability for consumers. These investments stand to provide substantial benefits to not only consumers but host communities through construction jobs, permanent employment, substantial tax revenues and broader community investments. NEPGA’s members are proud to be active participants in their communities and look forward to continuing to drive solutions to meet consumer needs and economic development in New Hampshire.