



Gordon van Welie
President and Chief Executive Officer

September 13, 2017

The Honorable Fred Upton
Chairman, Subcommittee on Energy
2125 Rayburn House Office Building
Washington, DC 20515-6115

Dear Chairman Upton:

Thank you again for the opportunity to appear before the Energy Subcommittee on July 26, and I appreciate the opportunity to respond to the questions below.

Please be in touch with any further questions or if I can provide additional information.

Sincerely,



Gordon van Welie
President and Chief Executive Officer

cc: The Honorable Bobby L. Rush, Ranking Member, Subcommittee on Energy
The Honorable Peter Welch
The Honorable Joseph Kennedy III

The Honorable Fred Upton

1. *It has been more than 7 years since FERC embarked on its efforts to promulgate new transmission planning reforms which resulted in Order No. 1000. Your RTO is designated as “Order 1000 transmission planning regions.” Now that you have had real-world experience with these reforms, do you think FERC’s efforts at reforming transmission planning and cost allocation have succeeded, failed, or landed somewhere in between?*
2. *In your testimony, you state that the “forward capacity market is achieving its objective of ensuring an adequate supply of capacity and investment in new capacity resources.” Are you concerned, however, that resources are coming to rely more and more on capacity payments as energy payments decline?*
3. *Your RTOs and ISOs play a central role in operating the wholesale electricity markets and (with the exception of ERCOT) your primary regulator is the Federal Energy Regulatory Commission. Do you believe that FERC is appropriately engaged in overseeing wholesale electricity markets?*
 - a. *Are there additional areas of regulatory oversight that requires the attention of this Subcommittee?*

Response:

As the Regional Transmission Organization, ISO New England is required to identify transmission solutions that are essential for maintaining power system reliability in New England. We accomplish this through an open stakeholder process – the end result of which is the development of long-range plans to address future system needs over the ten-year planning horizon. This planning process is governed by our Tariff and approved by our regulator (the Federal Energy Regulatory Commission (FERC)), and was modified over the last few years to come into compliance with Order 1000.

ISO New England received final approval on its Order 1000 proposal in May 2015. However, prior to that date, several major transmission studies and projects were completed. New England has made a substantial (and critical) investment in reliability-based transmission over the last 15 years. Since that time, the region has invested \$8.4 billion in transmission to improve reliability and another \$4 billion in investment has been approved and will be built in the coming years. This follows a period of very little transmission investment, which resulted in the U.S. Department of Energy (following a study directed by the *Energy Policy Act of 2005*) to identify New England as a Congestion Area of Concern. However, New England was removed from that list after further study in 2009, and at present, transmission congestion has been all but eliminated. The transmission investment has also reduced (or outright eliminated) out-of-market costs (such as Reliability Must Run Agreements or Uplift charges), improved market competition, and is helping to facilitate the transformation of New England’s energy landscape.

ISO New England launched the process for studying transmission needs driven by public policy earlier this year. During that process, the New England States (through the New England States Committee on Electricity (NESCOE)) indicated that the identified state statutes and regulations are not driving a need to build new transmission in the regional planning process.¹

In addition to the Order 1000 changes, we amended our Tariff to improve our process for Elective Transmission Upgrades (ETUs), and have a substantial number of these projects in our interconnection queue. The developers proposing ETUs are competing to meet public policy goals in state procurements.

The combination of previous and ongoing regional investment in transmission, the Order 1000 processes now in place, and the ETU's in the interconnection queue lead us to believe that the region will develop any needed transmission and, where appropriate, competition driven by Order 1000 will incent efficient transmission development.

To your second question, I am not "concerned" that capacity resources are deriving greater percentages of their revenue from the Forward Capacity Market (FCM). However, as I mentioned in my testimony, this shift does underscore the tremendous importance of ensuring proper price formation in the FCM.

As I noted in my submitted testimony, the wholesale energy market and the Forward Capacity Market work in tandem to provide the revenue requirements of resources needed for reliability. As the energy market prices fall and resources have less opportunity to recover their fixed costs, the capacity market serves as a revenue balancing mechanism. As I highlighted in my testimony, the demand for electricity is leveling off in New England (in part due to the New England states' commitments to energy efficiency and behind-the-meter solar/photovoltaic resources). The lack of growth in demand as well as lower natural gas prices (for the majority of the year) and increased supply from renewable energy (which has no fuel costs) are driving down wholesale energy prices. The purpose of the FCM as a resource adequacy mechanism is to ensure the continuation of a viable capacity fleet – especially as wholesale energy prices are lower.

We continue to work on price formation efforts in both the energy and capacity markets. In the Forward Capacity Market, we have recently tightened up expectations on performance (known as "Pay for Performance") and are currently undertaking regional stakeholder discussions (through the Integrating Markets and Public Policy (IMAPP) process) in order to integrate greater levels of state-sponsored, low-carbon resources into the capacity market without being exposed to adverse impacts on price formation.

Finally, I do believe that the Commission is appropriately engaged in overseeing wholesale electricity markets.

¹ <http://nescoe.com/resource-center/ppts-submission-may2017/>

The Honorable John Shimkus

1. *If, as we learned at the hearing, markets were structured to build only the least expensive generation, we would build nothing but natural gas plants right now.*
 - a. *Is that correct? Is that what's happening?*
 - b. *If not, how do you explain other generation sources entering the market?*

Response:

To a certain extent you are correct – the bulk of new power plants being built in New England are being powered by natural gas. However, the region has seen growth in demand resources (e.g. energy efficiency) as well as behind-the-meter solar, which is generally outside of the wholesale markets. The Forward Capacity Market is designed to reward the most efficient capacity resources, and it is achieving its objective of ensuring an adequate supply of capacity (both electric generation and demand resources). Although some of the new natural-gas fired power plants are dual-fuel capable, the region has not built (and I would not expect it to build) a new oil, coal, or nuclear power plant in many years.

However, public policy initiatives are driving an increase in non- or low-carbon energy as well. We anticipate a sizable influx of state-sponsored resources (including wind, solar, large-scale hydro, etc.) coming on our system as state procurements are finalized. Integrating these resources into the FCM while avoiding adverse impacts on price formation for other resources needed for reliability is the basis for the Integrating Markets and Public Policy initiative noted in my submitted testimony.

The Honorable Billy Long

1. *RTO development began in late 1999 with ISO development soon to follow. Both organizations help to monitor our electric power system. There are still a number of gaps in our electric system where problems could occur. What are your thoughts about the creation of another RTO that could include the states of Nevada, Arizona, Colorado, and other western states? Should it be an RTO or an ISO?*
2. *How are you planning to manage the growing surplus of generation in your respective regions?*

Response:

The decision to form an ISO/RTO is best left to the governors, utility commissioners, and elected officials within those states, as they best understand the needs and priorities of their residents.

New England's Forward Capacity Market procures a supply of capacity (both generation and demand resources) for a 12-month period three years in the future. The amount of capacity to be procured in each annual auction is guided by reliability requirements and prices. The "target" amount to procure is set prior to each auction and is a function of many variables, including the load forecast and the amount of behind-

the-meter solar projected to be installed in the region. In the most recent capacity auction held in February, 2017, the region procured sufficient resources to meet resource adequacy needs in the June 2020-May 2021 period.

However, the New England region is currently discussing the ISO's Competitive Auctions with Sponsored Policy Resources (CASPR) proposal, in part to ensure that an expected increase in state-driven renewable resources (that may have difficulty clearing the Forward Capacity Market) does not lead to an over-procurement of capacity. For more information on the CASPR proposal, I would refer you to my submitted testimony.

The Honorable Frank Pallone, Jr.

1. *Consumer advocates have identified the resource imbalance between the stakeholder members of the RTO/ISO Boards and the small consumer community as a major barrier to having meaningful representation of consumer viewpoints included in decisions about grid operation and capital project evaluation and approvals. What mechanisms, reductions in costs of stakeholder participation, or other support does your RTO/ISO provide to the small consumer community to facilitate their participation in RTO/ISO governance?*
2. *You indicated at the hearing that ISO New England had a formal structure (e.g. committee or liaison position) for obtaining input on consumer views and concerns on grid management. Please provide detail about how consumer views are incorporated into decision-making at your RTO/ISO.*
 - a. *Do consumer advocates have voting representation on the Board?*
 - b. *Do consumer advocates participate actively in the development and approval of grid planning?*
 - c. *Are there funds available to support full-time staff that serve the interests of consumer advocates? If so, what is the source of those funds?*

Response:

Stakeholders of all types in New England have multiple channels to share their viewpoints.

As I discussed with Congressman Kennedy at the July 26 hearing, the Consumer Liaison Group (CLG) is a forum for sharing information between ISO New England and those who ultimately use and pay for electricity in New England. Through this forum, the ISO develops a better understanding of consumer issues, needs, and concerns relative to the electric power system and its costs. (Similarly, consumers and their representatives gain a better understanding of regional electricity issues.) The CLG is governed by a Coordinating Committee that sets the agenda for quarterly meetings each year, and selects the topics and speakers featured at these meetings. ISO New England facilitates the meetings and communications among CLG participants.

CLG Participants generally include consumers and consumer representatives (including state consumer and ratepayer advocates), state business and industry associations, chambers of commerce, individual businesses, trade groups, nonprofit organizations, and other end-users. The CLG and the ISO have worked collaboratively to identify issues of importance to end-use consumers and have provided information at the quarterly CLG meetings that include a range of cost implications for certain regional initiatives.

While CLG meetings provide a forum to share information on regional electricity issues, they are not intended to be a substitute for end-user or consumer groups that wish to weigh in on items under discussion at the Planning Advisory Committee or the New England Power Pool (NEPOOL) committees. (A representative from the Massachusetts Attorney General's Office chairs the CLG Coordinating Committee, and joins the Connecticut Office of Consumer Counsel, the Maine Public Advocate Office, and the New Hampshire Office of Consumer Advocate as members of NEPOOL's End User sector.)

ISO New England provides information to consumer advocates through quarterly meetings and monthly memoranda posted to a dedicated portion of our website. In conjunction with the CLG Coordinating Committee, we draft an annual report of CLG activities as well as important regional information. A member of the ISO's senior management attends each CLG meeting to provide an update on regional activities and hear from stakeholders (and report back to the Board of Directors).

Regarding the Board of Directors, ISO New England strongly values its independence and believes that additional, mandatory qualification criteria for Board membership would erode the independence that is critical to the ISO's fulfillment of its mission. Furthermore, the addition of mandatory criteria could lead to similar requests (e.g., generation owners seek a slot for someone who has operated large generation plants; transmission owners may want a former transmission executive), reducing the Board to a series of dedicated seats for special interests. While the board has included former utility regulators over the years (who have brought forward cost-consciousness and perspectives of consumers), ISO New England strongly believes that a well-balanced Board with a broad range of backgrounds and expertise provides the best leadership for the ISO.

The Honorable Peter Welch

- 1. Climate change poses serious threats to public health and safety – and to our power systems. In Vermont and other parts of the Northeast, we've seen the devastation that storms like Hurricanes Irene and Sandy can cause to lives and property, while leaving millions without power. We need to address both reliability and climate change, not one or the other.*

A 2016 ISO New England economic study, conducted at the request of the region's electricity stakeholders, suggests that to meet greenhouse gas targets, New England must integrate significantly higher levels of renewable energy. In that study, only scenarios with high levels of renewables were consistent with achieving emissions targets that Vermont and other states are contemplating as part of an update to the Regional Greenhouse Gas Initiative.

- a. *Mr. van Welie, in your testimony, you discussed ISO New England's Competitive Auctions with Sponsored Policy Resources (CASPR) proposal as a way to enable states, such as Vermont, to bring in more renewable energy. My understanding, however, is that while CASPR creates the possibility for state-supported renewables to enter the capacity market, it does not guarantee that they can enter at the rates we need to reach our climate goals. In fact, as part of CASPR, ISO New England is proposing to do away with a mechanism that guarantees space for at least 200 megawatts of wind and solar projects to enter the market each year. It appears this proposal could represent a step backwards for the states because it removes certainty and makes the ability of a state-sponsored resource to clear in the capacity market dependent on the decisions of generators rather than states. Has ISO New England done any analysis that shows CASPR is consistent with meeting state renewable energy and climate goals? If so, can you share this with the Committee?*
2. *The latest installment of the Department of Energy's Quadrennial Energy Review highlighted a number of reforms needed to improve the operation of the nation's electricity system, including a number of changes needed to the Federal Power Act. Should the Committee consider changes to the Federal Power Act, are there specific reforms ISO New England believes should be made?*
 3. *Similarly, could you please name one federal policy that you think should be changed to improve grid reliability and one change to improve grid security?*
 4. *ISO-NE has always pursued a fuel-neutral approach to its wholesale markets. The markets in New England appear to be pushing toward the inclusion of more gas-fired generation, and one of the few counter-balances to that is the desire of states to increase the amount of renewables. The number of renewable resource technologies that can currently address the fuel security issue is fairly limited.*
 - a. *Given these developments, would ISO-NE consider solutions that are not fuel neutral – for example, special provision for baseload imports of Canadian hydro or increased support for battery storage technologies?*

Response:

It is important to note that the Integrating Markets and Public Policy (IMAPP) process and the ISO's Competitive Auctions with Sponsored Policy Resources (CASPR) proposal are still under discussion in New England (with hopes of sending a proposal to FERC by the end of the 2017). As such the structure and details of any final proposal are still very much in flux.

However, we believe that the substitution auction concept proposed by ISO New England as part of CASPR has several benefits for New England states focused on clearing greater levels of state-sponsored resources through the Forward Capacity Market. First, the substitution auction is technology-neutral – resources (be they renewable or demand-side) that sign long-term contracts with utilities driven by state public policy goals may be eligible to participate in the substitution auction regardless of their fuel or technology type. The substitution auction idea provides far greater flexibility than the current FCM design to clear a variety

of capacity resources favored by state policies. Second, the substitution auction does not cap the amount of new state-driven resources at an arbitrary 200 megawatts (MW) – the substitution auction could clear well beyond 200 MW in a given year under certain conditions. Finally, the substitution auction moves away from administratively-designed constructs and instead allows for greater competition and market benefits to flow to the region.

Of course we will keep your office informed as the process develops and certainly as we get closer to filing a proposal in late 2017.

ISO New England is required by our FERC-approved Tariff to administer the New England wholesale markets according to the principle of resource neutrality, accommodating participation by all technology types that can meet the specific performance requirements for each market. Accordingly, the ISO's Tariff does not explicitly identify storage, baseload or other specific technologies; instead, the Tariff organizes the rules by the relevant market or service.

As I have previously noted, the wholesale markets are designed to select the most economic resources to ensure power system reliability, without regard to fuel type. We have seen a wide range of merchant development, ranging from demand side resources to renewable resources and gas-fired generation. The ISO does not select the resource mix; rather it is an outcome of the market. That said, the New England states are actively seeking to move the resource mix towards renewable energy and we expect that these resources will gradually displace conventional generation over time. Our primary concern is to ensure that the resources that clear our markets are able to perform when needed.

In that regard, we substantially tightened performance expectations in the Forward Capacity Market several years ago (known as "Pay for Performance"). These FERC-approved changes now more closely link capacity payments received by a capacity resource (on a technology-neutral basis) with their performance (relative to their obligation) during stressed system conditions.

New England has a long history with energy storage resources due to its large pumped-storage hydropower facilities. These resources were built in the 1970s and can supply almost 2,000 MW of capacity within ten minutes. New England's market rules allow these resources to shift from energy consumption to energy production and participate across all markets and services (and we believe our market rules can accommodate new storage technologies that are being introduced into today's evolving electricity system). For more information on the ability of energy storage to participate in our markets, please refer to the paper linked to in the footnote below².

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² https://www.iso-ne.com/static-assets/documents/2016/01/final_storage_letter_cover_paper.pdf