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**BEFORE THE HOUSE ENERGY & COMMERCE COMMITTEE**

**SUBCOMMITTEE ON ENERGY**

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Chairman Latta, Ranking Member Castor, Chairman Guthrie, Ranking Member Pallone, and Members of this Subcommittee, thank you for the opportunity to appear before you today.

My name is Gordon van Welie, and I am the president and chief executive officer of ISO New England.

*About ISO New England*

ISO New England is the independent, not-for-profit corporation responsible for operating a competitive wholesale electricity market across the six New England states and we plan the transmission system to ensure that it can meet the future demand for electricity in the region. Our job is to reliably plan and operate the power system to meet reliability standards set by the North American Electric Reliability Corporation (NERC) and the Northeast Power Coordinating Council (NPCC).

*Focus of this testimony*

My testimony will briefly describe New England's current energy situation and the outlook for the changing resource mix, the growth of electricity demand, and the impacts for reliability and the wholesale markets.

*Resource adequacy is a big challenge for grid operators*

Like many other parts of the country, New England's electric power system is undergoing an energy transition. Historically, power system planning has focused on having enough resources; this is referred to as "resource adequacy." However, as we transition to more weather-dependent resources, one of the

biggest challenges facing ISO New England is making sure there is sufficient *energy* in the system to meet expected electricity growth.

As we navigate this rapidly changing landscape, ISO New England remains committed to working with policymakers like yourselves, the Federal Energy Regulatory Commission (FERC), the New England states, and our stakeholders to ensure a reliable grid today and into the future.

*Important roles for ISO New England and the states in ensuring resource adequacy*

The wholesale markets administered by ISO New England are effective at pricing supply and demand conditions in both the energy and capacity markets, and this provides important signals to developers when investment is needed. However, the wholesale markets alone cannot ensure resource adequacy. The states also play key roles in achieving regional resource adequacy.

ISO New England, under the jurisdiction of the FERC, has responsibility for major aspects of designing the markets and planning the transmission system. We plan the transmission system for the long term, but our wholesale markets are essentially short-term “spot” markets. The states, in comparison, have the ability to structure longer term commitments (through various hedging strategies) to protect consumers against undue price volatility in both the energy and capacity markets, and to incent the development of sufficient resources to meet the resource adequacy standard that is priced in the capacity market. Moreover, the states have the ability to address barriers to entry for resources participating in wholesale electricity markets.

In short, the ISO and the states play a joint and complementary role in ensuring resource adequacy. Finally, it is vitally important that there is collaborative support from both federal and state regulators for New England’s chosen resource adequacy construct, i.e., the capacity market. This is fundamental to ensuring regulatory certainty for investors in the market.

### *Our changing resource mix*

Over the past 20 years, New England has seen a dramatic shift in our region's energy mix as oil and coal generators have been replaced by natural gas-fired generation. Those impacts can be seen in our energy mix today. On an annual basis, more than 50 percent of New England's electricity is generated using natural gas and only a fraction of a percent using oil and coal. This trend can flip in cold weather, however.

### *Particular challenges for New England in the winter*

During extended periods of cold weather in New England, the gas pipelines are not capable of serving the coincident peak demand for gas from heating customers and power generation. The physical constraints on the gas pipeline infrastructure drive gas prices higher, resulting in the region shifting from using pipeline gas to oil and liquified natural gas (LNG). Moreover, due to the limitations imposed by the Jones Act, the region is unable to import LNG from domestic sources and instead relies on shipments from outside the United States, which are priced at global LNG prices. These factors are significant contributors to the region's vulnerability to high natural gas prices and wholesale electricity prices in the winter.

### *Regional benefits of state incentives for energy efficiency and solar*

Incentivized by state policies, the region has also invested heavily in energy efficiency and behind-the-meter solar resources, which have effectively reduced demand for electricity from the grid operated by ISO New England. These investments, coupled with relatively little interest from large loads from data centers and other AI-driven activities, has meant New England has thus far not seen the rapid growth in consumer demand seen in other regions.

### *New England states continue to pursue a transition to non-carbon emitting resources*

The New England states are contracting for, or incentivizing, the development of large amounts of non-carbon emitting resources. Their objective is to decarbonize the power system and power the transportation and heating sectors of the economy with electricity. In particular, the states are incentivizing the development of wind and solar to reshape our region's energy mix, and batteries to store surplus wind and solar energy and help displace fossil fuels during periods when wind and solar cannot produce.

The states have centered much of these efforts around offshore wind, as it is the largest source of carbon-free energy potential in the region. New England has long been challenged by our location at the end of the energy pipeline, but the states have sought to take advantage of the vast offshore wind potential that is right at our doorstep. Offshore wind resources can be a strong and steady source of energy that is injected directly into major load centers in New England, and their production profile during the winter is helpful for offsetting the effects of the constraints on the gas pipeline system.

### *Forecast for load growth*

As I mentioned previously, state investments in energy efficiency and behind-the-meter solar have slowed demand growth in New England over the past decade. We do, however, expect this to change as policies aimed at electrifying the heating and transportation sectors take effect.

Our latest 10-year forecast projects regional electricity consumption will increase by about 17% over the next decade, driven primarily by the states' policies supporting electrification of heating systems and transportation.

### *Need for a robust transmission system*

To support the states' policy goals and address demand growth, our region will also need a robust transmission system capable of integrating renewable resources and moving the electrical energy to New England's consumers.

During my last appearance before this subcommittee in 2023, I spoke to the findings of the ISO's 2050 Transmission Study, which offered an overview of the regional transmission system investment needed into the middle of the century to ensure reliability. Since then, the ISO has been working with the New England States and our stakeholders to issue a first-of-its-kind regional solicitation under the region's new longer-term transmission planning (LTTP) process.

In December, the New England States Committee on Electricity's (NESCOE) put forth the requirements for the Request for Proposal (RFP), guided by the ISO's 2050 Transmission Study findings, which are focused on relieving future transmission bottlenecks between northern and southern New England. This month, ISO New England posted a draft of the 2025 Longer-Term Transmission Planning RFP for stakeholder comment.

This longer-term transmission planning effort is an example of the ongoing partnership between the ISO and the New England states to ensure a reliable power system for our region.

### *New resources under development*

As the market administrator, ISO New England does not plan the resource mix or contract for new resources. We do not pick or choose resources. The markets are open to all resources that can provide the services we need for a reliable system. However, states have the ability under the Federal Power Act to select specific resources and shape the overall energy mix.

As I mentioned, the New England states have identified offshore wind as a major resource that can be developed in our region and they have made major commitments to developing wind resource and the land-based infrastructure and human resources to support the offshore wind industry.

The ISO's generator interconnection queue reflects the impact that state policies are having on the future energy mix.

As of January, battery storage and wind resources make up the largest proposals in the interconnection queue (at 47% and 45% respectively). Grid-scale solar is a relatively small, but growing, component of new generation proposals (at 8%).

While the interconnection queue is an indicator of developer interest, not all projects that enter the queue are completed. Recently, project developers have announced delays to development of major wind farms off the coast of Massachusetts and Rhode Island. There are currently no other categories of resources proposed at that scale.

#### *Key projects: market reforms and new modeling tools*

As the region's power system continues to evolve, ISO New England has initiated several key projects to enhance the functions of our markets and our ability to conduct risk assessments, both of which will help to strengthen the reliability of New England's grid.

In February 2024, we announced reforms to our capacity market to transition from procuring an annual capacity product on a three-year forward basis to procuring capacity on a seasonal basis and closer to the timeframe when it will be needed. As part of these reforms, ISO New England has also initiated a resource capacity accreditation project to better reflect each resource's contribution to system reliability during stressed grid conditions. These enhancements will help ensure that resource operating characteristics and seasonal capabilities are more accurately accounted for in our markets.

ISO New England has also created a Probabilistic Energy Adequacy Tool (PEAT) to evaluate the operational impacts of extreme weather events. As I previously testified, the ISO worked with the Electric Power Research Institute (EPRI) to conduct a probabilistic energy adequacy study for New England that provides a framework to assess risks associated with extreme weather events. The study tool provides an early warning system to inform the region on the magnitude of these risks and provides a basis for developing solutions. Using this tool, we have been working with regional stakeholders to establish a Regional Energy Shortfall Threshold (REST) that determines the acceptable level of reliability risk. Once established, we can evaluate if meeting the REST requires the development of specific regional solutions, which could range from market designs to infrastructure investments to dynamic retail pricing and price responsiveness by end-use consumers.

When I testified before this subcommittee in September 2023, I shared the risk assessment that we developed for our region using PEAT. While there are some new variables, much of that analysis holds true to this day.

#### *Results of probability assessments*

The short-term risks are manageable, but there are greater risks in the longer term. The biggest long-term risk would be if the region could not maintain sufficient resource or energy adequacy to meet growing demand for electricity. These longer-term risks could be caused by the rate of electrification outpacing the addition of new resources, existing generators retiring prematurely, or the imposition of additional constraints on the operation of existing generators fueled by oil or gas.

#### *Factors that could affect reliability risks*

Significant constraints on existing resources and barriers to entry for new resources, as well as rapid acceleration in load growth (from electrification, AI, or other sources), could elevate reliability risks in

our region. While New England currently has a modest amount of surplus generation, the situation could become untenable if generators were to retire prematurely, or if electricity demand were to grow much more rapidly than the pace at which new resources come online.

New England has been counting on offshore wind as a major new source of energy and our studies have shown substantial reliability benefits of offshore wind, primarily because it delays or displaces the consumption of gas and oil so that it will be more available in the subset of high demand periods when the wind does not blow. (When a proposed resource has a signed contract or is a winner in a state-sponsored RFP, our practice is to include it in the resource base case for our studies.) The region has two offshore wind projects nearing their in-service dates. However, for a variety of reasons, additional offshore wind development in New England is facing new challenges and could potentially be delayed. If the large amount of offshore wind that has been contracted for by the states is significantly delayed or ultimately does not materialize, the region would need to assess the potential impacts and determine what other options might be needed to meet resource adequacy needs in the future.

I also mentioned how federal and state policies have historically impacted our regional energy mix.

Over the past few weeks, we have seen firsthand the impact that shifts in federal policy can have on our region. In January, the Trump Administration announced it was suspending federal offshore wind leases and permitting pending an environmental and economic review of those projects. In February, the Trump Administration announced an across-the-board 25% tariff on Canadian imports, with a lower 10% tariff for energy resources. Based on legal precedent, we do not believe the tariffs placed on Canadian imports apply to electricity, but uncertainty remains about whether that is the case.



### *Potential impact of new tariffs on imports*

New England has historically been a net importer of electricity via interconnections with neighboring power systems in New York, Quebec, and New Brunswick. Since 2020, net imports into New England have supplied between 9% and 21% of our electricity needs. A new transmission tie into New England from Quebec, known as the New England Clean Energy Connect (NECEC), is under construction and would allow the region to import an additional 1,200 MW of hydropower from Canada. While the applicability of potential new import tariffs to electricity remains unclear, we anticipate that if tariffs were implemented on Canadian electricity there would be an impact on wholesale prices. The extent of the impact would depend on several factors, including the level of imports, whether those resources are setting market prices, and the terms of any long-term contracts. If the electricity were to stop flowing from Canada, it could present reliability problems depending on the time of year, demand levels and resource mix on the New England system.

### *Conclusion*

As a region, New England has made progress in evolving the market design to align with the resources that are coming forward. We are implementing new approaches to plan the transmission system to meet the states' policy objectives. And we have new tools to help us better quantify reliability risks in a rapidly changing power system. The reliability and market outlook for the near term is generally favorable. Nevertheless, other serious challenges lie ahead.

It remains to be seen whether load growth will outpace the net effects of generator retirements and new supply coming online. This will have implications for the end of the decade.

Due to recent federal executive actions, New England is facing new uncertainty about the prospects for offshore wind, long viewed as an abundant, domestic source of energy for our region. This could have implications in both the near and long term.

The current deliberations about new tariffs on imports have the potential to affect not only the price of electricity in New England, but also the availability of power to New England from our long-standing electricity trading partners in Eastern Canada. This could have implications in both the near and long term.

As demand for electricity in New England grows, the region will need new resources to meet resource adequacy needs. It will be critical to ensure that we have a policy and regulatory framework in place that will allow for the entry of those resources.

Thank you.

## SUMMARY OF ISO-NE TESTIMONY

- The ISO projects the region will have adequate resources in the near term, but we have concerns about the end of the decade due to the uncertainty around load growth and resource retirements and the entry of new resources.
  - The region, and the ISO, are counting on the addition of large quantities of offshore wind to maintain resource and energy adequacy. If the large amount of offshore wind that has been contracted for by the states is significantly delayed or ultimately does not materialize, the region would need to assess the potential impacts and determine what other options might be needed to meet resource adequacy needs in the future.
  - Our latest 10-year forecast projects regional electricity consumption will increase by about 17% over the next decade, driven primarily by the states' policies supporting the electrification of heating systems and transportation.
- The ISO and the states have a joint and complementary role to play in achieving resource adequacy:
  - The ISO needs to design and implement effective market designs to produce efficient pricing/incentives to retain and develop resources and ensure that the transmission system is robust (including implementing interconnection queue reforms).
  - The states, in comparison, can structure longer term commitments (through various hedging strategies) to protect consumers against undue price volatility in both the energy and capacity markets, and to incent the development of sufficient resources to meet the resource adequacy standard that is priced in the capacity market. Moreover, the states can address barriers to entry for resources participating in wholesale electricity markets.
- The ISO is working on reforms to the capacity market and has implemented a sophisticated set of tools to monitor resource and energy adequacy, so that the region has forewarning of resource and energy adequacy risks as the system involves. This will serve to inform the market and the states on these risks.
- The ISO is working on a longer-term transmission planning effort with the New England states focused on relieving future transmission bottlenecks between northern and southern New England. This is an example of the ongoing partnership between the ISO and the New England states to ensure a reliable power system for our region.
- Tariffs on imports will likely raise prices (in some form) and if Canadian imports were to be completely curtailed that could create bigger concerns for reliability.