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Before the  
U.S. House of Representatives  
Committee on Energy and Commerce  
Subcommittee on Energy

**"Keeping the Lights On: Examining the State of Regional Grid Reliability"**

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On behalf of the NYISO, I would like to thank the House Subcommittee on Energy Chairman Robert E. Latta, Vice Chairman Randy Weber, Ranking Member Kathy Castor, Subcommittee members, and staff, for your invitation to discuss the state of grid reliability and the important roles that Independent System Operators and Regional Transmission Operators play in providing reliable and cost effective electricity to consumers.

My name is Richard Dewey, President and Chief Executive Officer of the New York Independent System Operator, Inc. ("NYISO") and I am pleased to be with you today to discuss our work maintaining power system reliability and competitive electric markets for New York.

I joined the NYISO in 2000. In my previous roles within the organization, I led the System Planning, Information Technology, and Market Structures organizations. I hold a Bachelor of Science in Electrical and Computer Engineering from Clarkson University, a Master of Science in Computer Engineering from Syracuse University, and I am a graduate of Harvard Business School's General Management Program.

The NYISO is an independent, not-for-profit organization that began operation in 1999. We are regulated by the Federal Energy Regulatory Commission ("FERC") under the Federal Power Act. The NYISO is responsible for operating the bulk electricity grid in New York, administering competitive wholesale electricity markets, and conducting comprehensive long-term planning for the electric power system. The NYISO, its directors, and its employees are prohibited from taking any financial interest in its market participants or the outcomes of the energy markets it oversees. The NYISO is obligated to provide open, non-discriminatory access to the electric system. We maintain a balanced, unbiased perspective on generation, transmission and demand-side resources.

For 25 years, the NYISO has operated the New York power system to the strongest reliability standards in the nation. We operate the bulk electric system in New York under standards enforced by the North American Electric Reliability Corporation (NERC), the Northeast Power

Coordinating Council (NPCC), and the New York State Reliability Council. The grid operated by the NYISO is interconnected with systems operated by ISO-New England, PJM Interconnection, the Ontario Independent Electric System Operator, and Hydro Quebec.

At the NYISO, we are champions of the essential role the grid provides in preserving the health and safety of all New Yorkers, as well as being the backbone of our economy. Since the NYISO's inception in 1999, preserving electric system reliability has been our top priority in the face of great change, whether it be societal, policy-based, or more frequent extreme weather. As older resources retire and new resources transform the way the system responds, this commitment remains.

The power system in New York, and in many parts of the country, is experiencing an unprecedented transition. New York's public policies are increasingly prioritizing clean energy production and a rapid transition away from fossil fuels. It is imperative that during this time of rapid change we maintain adequate supply necessary to meet growing consumer demand for electricity.

Competitive electric markets continue to be the most powerful vehicle available to speed investment in the grid. During a time of rising interest rates, supply chain constraints, and economic uncertainty, competitive electric markets continue to provide superior cost efficiency and strong investment signals while shifting that investment risk away from the consumer.

As residents and businesses across New York become more dependent on electricity to power their lives and livelihoods, the expectation for reliable electricity will also continue to grow. And as the pace and scale of the state's energy transition accelerates, the collective efforts of all stakeholders must align. A careful and collaborative approach is critical.

To manage the challenges associated with the clean energy transition, we must keep a careful watch on how the electric system itself is reacting and responding to this change. The power system is experiencing a growing imbalance between the number of new generating facilities entering service and the retirement of traditional fossil-based resources that have powered the grid for the last several decades. Reliability of the system is showing strains under a mix of changing conditions and new pressures. Balancing the needs of grid reliability with the growing amount of weather-dependent generation and policy requirements for a just transition requires careful attention to system data and information.

### **The NYISO Reliability Planning Process**

The NYISO evaluates the reliability implications of changes in available supply and transmission, along with projected demand, on a regular basis, conducting a variety of studies that help determine if reliability could be at risk in the future. Our Reliability Needs Assessment (RNA) and Comprehensive Reliability Plan (CRP) and quarterly Short-Term Assessment of Reliability (STAR) analyses regularly assess the state of change on the grid and determine what new resources and transmission upgrades may be needed to maintain reliability. These reports

allow the NYISO to rapidly evaluate the state of change on the grid and identify resource capability needed to maintain reliability.

The NYISO released the 2024-2034 RNA in November 2024. The report, issued biennially, highlights growing risks to electric system reliability, including projected increases in peak demand due to electrification of the transportation and building sectors; additional generator deactivations; delayed implementation of planned infrastructure projects; and extreme weather.

The 2024-2034 RNA finds that if demand on the grid grows at a rate greater than the buildout of new generation and transmission, reliability deficiencies could arise within the RNA's ten-year planning period. It also details how the advance of new technology and economic development is compounding the complexity of maintaining reliability and the combination of near-term growth in demand from data centers, semiconductor fabrication, and new manufacturing facilities highlights the challenges for grid planning over the next several years.

The RNA also shows that the early stages of the transition of the supply mix, driven by public policies, are resulting in the retirement of fossil fuel generation faster than renewable resources are entering service. This trend has led to concerns over declining reliability margins across the state — an important element for grid reliability. Since the enactment of the state's Climate Leadership and Community Protection Act, more than twice the capacity of generation has deactivated than has been added to the system. Should this trend continue, the RNA warns that additional reliability needs may be identified, both statewide and for localities. The RNA also evaluates the potential for additional retirements of gas-fueled resources in New York City, driven by state policies, that could also result in additional reliability needs without additional resources to replace them.

The potential risks and resource needs identified in the RNA may be resolved by new capacity resources coming into service, construction of additional transmission facilities, increased energy efficiency, integration of distributed energy resources (DERs) and/or growth in demand response participation.

The RNA also emphasizes the need for additional transmission infrastructure to move renewable electricity from where we expect it will be sited to where it will be needed to serve demand. Building more generation to meet growing demand alone will be inadequate to meet the needs of a modern grid — we also need to move that electricity readily around the state as consumer demand dictates. While the RNA points out the challenge with electrifying homes, buildings, and the transportation sector, adding large, new energy-intensive load will require investments in major transmission infrastructure to keep the grid safe and reliable.

The RNA also examines challenges to grid reliability of the expected transition from a summer peaking system to a winter peaking system. The assessment finds that projected increases in demand, as discussed above, pose risks to summertime reliability in the near term, which transitions to wintertime risks in the long term. A winter peaking system introduces new

reliability concerns, particularly around fuel availability for gas-fired generators. The ability of the New York generation fleet to serve the increased winter demand will be more challenging if faced with a natural gas shortage. Based on a recent assessment of New York's fuel and energy security, the RNA states the following: "The NYISO will need to rely significantly on dual-fuel generation resources to support winter system reliability into the next decade and changes to the resource mix may complicate system operations during multi-day cold snap conditions. The frequency and severity of projected potential loss of load events grow over the modeling time horizon as the generation mix evolves and the demand for electricity increases."

Additionally, the RNA identifies that the increased frequency of extreme weather events poses risks to reliability. The report underscores that New York is not immune from such extreme weather, which could lead to greater electrical demand and more forced generator outages than previously accounted for in the NYISO's baseline forecasts. In consideration of these risk factors, the New York grid may be deficient in future years such that the transmission system could not fully serve the demand. Planning for the more extreme system conditions of heatwaves and cold snaps is currently beyond established design criteria.

### **The Critical Role of the NYISO's Wholesale Market Design Supporting Grid Reliability**

Wholesale electricity markets must serve to both attract new supply while retaining existing resources. For the past 25 years, competitive wholesale electricity markets in New York have supported the reliable, efficient operation of the grid. Furthermore, as investors look for opportunities to develop new resources to supply the grid, electricity markets ensure that the risk of those investments remain entirely on the developer an investor, rather than on ratepayers and taxpayers. An added benefit of wholesale electricity markets is that competition among resources rewards economic efficiency. Historically, this has resulted in cleaner and more efficient supply coming onto the grid and displacing older, less efficient supply.

Wholesale electricity markets use price signals to attract and retain enough supply in the most beneficial locations on the system to provide needed reliability services. Market-based price signals are transparent and stimulate necessary infrastructure investment to meet renewable and decarbonization goals, energy conservation, and demand response. Effectively designed markets incent the most beneficial reliability attributes and have effective performance characteristics to ensure consumers only pay for the services that drive reliable outcomes.

Today's grid consists largely of dispatchable resources that respond quickly to system needs. To ensure markets continue to attract the investment necessary for the grid of the future, we are taking numerous steps to evolve and enhance market designs.

For example, we are working with stakeholders to identify the emerging winter risks and determine what market changes may be needed to compensate suppliers for meeting these needs.

We also are working on market enhancements addressing dynamic reserves to balance intermittency. Operating reserves ensure sufficient supply to meet changing conditions in real-time, such as unplanned generator or transmission outages. Historically this need was solved by identifying fixed, system-wide reserve requirements. As renewable capacity grows and supply to the grid is more susceptible to changing weather conditions, establishing dynamic reserve requirements will support renewable energy integration by more accurately accounting for uncertainty and procuring this additional reserve at the lowest cost to consumers.

Finally, we are working on advanced storage modeling to coordinate the growing fleet of storage resources and improve tools for grid operators to manage capabilities so that these resources are deployed at the most effective times to meet New York's reliability needs.

### **The NYISO's Mission and Dedication**

The NYISO's nearly 650 employees share a common mission: maintain grid reliability, deliver electricity at the least cost through our wholesale markets, plan for an effective and efficient transition to a clean energy grid, and serve as an independent and authoritative source of information for policymakers, regulators, investors, stakeholders, market participants, and the public.

Every minute, every hour, every day, highly skilled grid operators support reliability and resilience. Through sophisticated modeling and expertise, NYISO grid planners support reliability and enable record levels of new transmission and supply development. The NYISO's innovative wholesale market design continues to lead the way in supporting consumer affordability by aligning reliability with cost efficiency. Balancing the transition in the mix of supply through effective planning that identifies and mitigates reliability risks, supports needed transmission investment to access supply, and more efficiently coordinates interconnection of new supply is at the forefront of the NYISO's work.

The NYISO's role as an independent, authoritative source of information is essential. As we move towards a zero-emissions grid, it is critical to understand how the growth of intermittent resources and risks stemming from extreme weather, both in the summer and winter, will impact the ability to maintain reliability of the New York electric system.

As policymakers seek widespread change in how energy is produced and consumed, the NYISO is providing critical data and information on the reliability implications of current and new policies. The NYISO will continue to actively engage with stakeholders and policymakers on the path to a reliable and lower emissions grid for New York. The NYISO's leadership in developing innovative market design enhancements demonstrates our focus on innovation. The expertise of our grid operations is unrivaled, and the importance of the skilled and authoritative system planning work done by the NYISO demonstrates the value of our independence. That success also demonstrates our ability to work across all sectors and interested parties to build consensus that supports reliability, consumer interests, public policy and new technologies that will help build the grid of the future.

Thank you for the opportunity to engage with the sub-committee today, and I look forward to further discussion and collaboration on these important issues going forward.