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Before the

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Committee on Energy and Commerce

Subcommittee on Energy, Climate, and Grid Security

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My name is Richard J. Dewey. I serve as the President and Chief Executive Officer of the New York Independent System Operator, Inc. ("NYISO"). 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 earned a B.S. in Electrical and Computer Engineering from Clarkson University, a M.S. in Computer Engineering from Syracuse University, and I am a graduate of Harvard Business School's General Management Program.

On behalf of the NYISO, I would like to thank the House Subcommittee on Energy, Climate, and Grid Security Chair Jeff Duncan, Vice Chair John Curtis, and Ranking Member Diana Degette, along with Subcommittee staff, for your invitation to discuss the challenges and opportunities faced by the electric energy industry and the important roles that Independent System Operators and Regional Transmission Operators play in providing reliable and cost effective electricity to consumers.

The NYISO is an independent, not-for-profit organization that began operation in 1999. It is regulated as a public utility by the Federal Energy Regulatory Commission ("FERC") under the Federal Power Act and as an electric corporation by the New York State Public Service Commission under the New York State Public Service Law. 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 have no 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 do not advocate for or against any electric industry entity, and we maintain a balanced, unbiased perspective on generation, transmission and demand-side resources.

COMMENTS

New York's public policies are increasingly prioritizing clean energy production and a rapid transition away from fossil fuels. State policies, specifically the Climate Leadership and

Community Protection Act (CLCPA), require an emission-free electric system by 2040. It is imperative that during this time of rapid change that we maintain adequate supply necessary to meet a growing demand for electricity. As the independent grid operator in New York, our mission is to ensure a reliable electric grid and efficient wholesale markets during the transition to the new clean energy technologies that will support the economy and the health and safety of New Yorkers.

To achieve this, new clean energy supply will need to interconnect to the grid at a pace commensurate with the departure of existing supply coupled with the addition of new demand. Economic and technological uncertainties, geopolitical issues, siting and permitting uncertainties, and persistent supply chain constraints affecting the power industry on a global scale are impacting the pace of investment in New York. According to the NYISO's System and Resource Outlook report, fulfilling the objectives of the CLCPA and other state, federal and local climate policies will require an unprecedented level of investment in new supply and transmission infrastructure at a time when reliability margins are thinning. This report and New York State estimates indicate that our state will need to triple the amount of clean energy supply currently on the grid by 2040 to achieve the zero-emission electricity supply required by the CLCPA.

Just as importantly, new supply in total must provide adequate reliability services with appropriate attributes comparable to departing supply so that, in aggregate, the grid remains reliable and resilient through this transition and beyond. The NYISO evaluates the reliability implications of this transition 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 evaluate the state of change on the grid and identify resource capability needed to maintain reliability.

Of note, the NYISO's second quarter 2023 STAR report, issued in July 2023, found a deficit in transmission security reliability margins for the New York City area beginning in summer 2025. The deficit is as large as 446 MWs. Factors driving the identified reliability need include increased electrification of the transportation and building sectors, continued economic growth, and the unavailability or retirement of select generators under the New York State Department of Environmental Conservation (NYS DEC)'s "Peaker Rule." The Peaker Rule has resulted in the closure or reduced operation of approximately 950 megawatts of generation in New York City. An additional 500 megawatts of generation is scheduled to discontinue operations in 2025 in order to comply with these new emissions limitations.

The finding of a reliability need initiates a process administered by the NYISO to bring reliability margins back to acceptable operating levels. The NYISO has begun that process by working with the local utility and the marketplace to solicit solutions to the identified reliability need. The

Peaker Rule, developed in collaboration between the NYS DEC and the NYISO, includes provisions that allow generation to remain in operation for limited timeframes to address reliability needs arising from their deactivation. If responses to the NYISO's solicitation are not sufficient to addressing the need within the necessary timeframe, the NYISO may submit a letter to the NYS DEC designating which "peaker" generators may be needed to maintain reliability until solutions are in place. These important provisions serve as a model for policymakers to consider when developing new requirements impacting the retirement of existing generation and the associated reliability of the grid.

In addition to the reliability planning studies, the NYISO also works with the state and stakeholders to identify transmission expansion needs driven by public policies administered under FERC Order 1000. New York has seen the most significant investment in new transmission in decades through the NYISO's Public Policy Transmission Planning Process. While the process has been a great success, the NYISO has called for significant additional transmission investment through its Public Policy Transmission Planning Process to support the achievement of public policy requirements.

In response to the CLCPA and other public policies, the number of transmission and supplier projects seeking to interconnect to the grid in New York has more than quadrupled since 2019. The interconnection process ensures open access for new supply, transmission, and large consumers of electricity, and is an essential element in maintaining the performance and reliability of the grid. The process is coordinated by the NYISO but requires significant involvement by both the electric utilities and developers. Each party plays an important role in the success of the process. To address the increase in projects, the NYISO has been working with stakeholders for over a year to implement improvements to the efficiency of the interconnection study process while maintaining grid reliability. Further, FERC's recent Order 2023 includes important reforms to enhance the efficiency of our interconnection processes. The NYISO is currently developing compliance plans in response to the FERC order.

To inform the investment needed to achieve clean energy policy objectives while maintaining grid reliability, in 2022 the NYISO issued a System and Resource Outlook Study. A key finding of that study relates to the kinds of reliability services that will be needed as we transition to a system made up of intermittent resources like wind and solar energy. The study found that, to achieve an emission-free grid, dispatchable emission-free resources, or DEFRs, must be developed and deployed throughout New York. DEFRs that provide sustained on-demand power and system stability will be essential to meeting policy objectives while maintaining a reliable electric grid. While essential to the grid of the future, such DEFR technologies are not commercially viable today. DEFRs will require committed public and private investment in research and development efforts to identify the most efficient and cost-effective technologies with a view towards the development and eventual adoption of commercially viable resources.

The events of last December illustrate the importance of flexible and dispatchable resources to maintain reliability and resilience under extreme weather conditions. In December, 2022,

Winter Storm Elliott brought cold temperatures, strong winds and massive snowfall totals. New York was especially hard hit from December 23rd through December 27th. Thanks to accurate load forecasts and the responsible efforts of New York's generators and transmission owners, the bulk electric system performed well across New York during Winter Storm Elliott.

Considering the forecasted impacts of Winter Storm Elliott, NYISO Operations began coordinating with the New York Transmission Owners and Generation Owners to restore generation and transmission facilities from maintenance outages. The NYISO also coordinated with regulators and neighboring regions to prepare for the storm, and continued coordination efforts throughout the event. When the natural gas system became constrained due to demand tied to home and business heating, the dual-fuel capability of generators, particularly in downstate New York, became key to maintaining reliability during the storm. To meet future high demand days and extreme weather events like Winter Storm Elliott, a combination of additional transmission to expand access to a greater diversity of supply, and the development of DEFR technologies to replace the services provided by today's dual-fuel generation fleet, will be necessary.

In addition to grid operations and planning, wholesale electricity prices are a key component to supporting a clean energy transition while preserving grid reliability. Competitive wholesale electricity markets are fundamental to providing consumers reliable, lowest-cost power and an essential mechanism for achieving public policy objectives. Competitive wholesale electricity markets have successfully facilitated efficiency gains on the grid by reducing fuel consumption and lowering consumer costs. Competitive wholesale electricity markets also shift the risk and cost consequences of resource investment and operational decisions from consumers to electricity suppliers. An added benefit of wholesale markets is that competition by resources rewards economic efficiency. Historically, this has resulted in more modern supply coming onto the grid and displacing older, less efficient supply.

Properly designed competitive markets are an important element to realizing clean energy goals while minimizing costs and risks to ratepayers. To the extent that the CLCPA leads to the elimination of fossil fuel-based resources supplying the grid, markets must support investment in carbon-free resources that will offer comparable capabilities to meet electricity demand currently provided by the fossil fuel resources.

Lastly, a key component to maintaining grid reliability is the ongoing diligence to support physical and cyber security. As the systems that control and monitor the power grid become more advanced and interconnected, the scope of physical and cyber security concerns expands. Reliability standards for owners and operators of the bulk electric system include Critical Infrastructure Protection (CIP) standards. Developed by NERC and approved by FERC, these standards cover a wide range of risk areas. The NYISO implements cyber and physical security standards as part of a layered "defense in depth" posture that seeks to defend its critical infrastructure assets from incursions. The NYISO actively participates in the development of new and revised standards and remains engaged in enhancing cyber and physical security

practices to address continuously evolving risks to grid operations. We regularly collaborate with various New York State and federal government agencies, other ISOs and RTOs, and other industry entities, to maintain rigorous security protections. For example, we participate in annual desk-top Grid-Ex simulations to test our coordinated response capabilities with industry participants and state and federal officials.

CONCLUSION

As policymakers seek widespread change in how energy is produced and consumed, the NYISO is providing critical information on the reliability implications of current and new policies. The NYISO is committed to ongoing engagement with stakeholders and policymakers as we progress toward a reliable and lower emissions grid for New York. Maintaining a reliable system through this unprecedented grid transition is essential. We also know that delivering a cleaner, greener grid of the future is important for New Yorkers. Working together, we can achieve both.