New York ISO
Independent System Operator

Via Electronic Portal

January 21, 2025

Hon. Michelle L. Phillips
Secretary to the Commission
New York State Public Service Commission
Empire State Plaza
Agency Building 3
Albany, New York 12223-1350
Email: secretary@dps.ny.gov

Subject: CASE 15-E-0302 - Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard

Dear Secretary Phillips:

In response to the New York State Public Service Commission's ("Commission's") *Notice Seeking Comment* issued in the above captioned proceeding on November 20, 2024, the New York Independent System Operator, Inc. hereby submits comments for consideration.

Respectfully submitted,
/s/ James H. Sweeney
James H. Sweeney, Senior Attorney
New York Independent System Operator, Inc.
10 Krey Boulevard
Rensselaer, NY 12144
Tel: (518) 356-6000

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Rensselaer, NY this 21st day of January 2025.

/s/ Elizabeth Rilling

Elizabeth Rilling
New York Independent System Operator, Inc.
10 Krey Blvd.
Rensselaer, NY 12144
(518) 356-6177

STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

CASE 15-E-0302 - Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard

COMMENTS OF THE NEW YORK INDEPENDENT SYSTEM OPERATOR, INC. IN RESPONSE TO THE DEPARTMENT OF PUBLIC SERVICE STAFF PROPOSED DEFINITIONS OF KEY TERMS IN PSL §66-P

The New York Independent System Operator, Inc. ("NYISO") respectfully submits these comments in response to the Department of Public Service Staff ("DPS") suggested interpretations of key terms in the provisions of the Climate Leadership and Community Protection Act ("Climate Act").[1] The NYISO commends the DPS initiative to clarify and provide guidance around the terms "statewide electrical demand system" and "zero emissions" ("DPS Proposal").

The Climate Act is transforming New York's economy and driving profound changes in the electricity sector as we all work to achieve the energy and environmental mandates, including the directive that the statewide electrical demand system is zero emissions by 2040. Existing and new zero-emission technologies will be critical to support the energy needs of the statewide electrical demand system.[2] Pursuing the 2040 target will require the significant deployment of existing and novel generation technologies and their reliable integration into a changing grid. These resources must collectively provide the reliability attributes and the energy necessary to support continuous electric system operation while satisfying the goals of the Climate Act.

[1] Case 15-E-0302, *Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard*, Notice Seeking Comment, November 20, 2024.

[2] *See* 2023-2032 Comprehensive Reliability Plan ("CRP"), A Report of the New York Independent System Operator, November 28, 2023, at pp. 75-79.

Significant development of existing and emerging zero-emission electricity supply will be required.[3]

The DPS Proposal will help the Public Service Commission ("PSC"), and industry stakeholders, interpret the Climate Act goals and the criteria for generation resources to satisfy a "zero emissions" standard. This will provide more certainty to the regulated community, and, in turn, should encourage development of generation resources that meet the zero-emission requirement and support electric system reliability. The NYISO looks forward to continuing to work with DPS and the PSC on the efforts necessary to achieve the Climate Act objectives, while maintaining electric system reliability and the level of electric service that New Yorkers depend on.

The NYISO is committed to operating an electric system that provides reliable service 24 hours a day, 365 days a year, to facilitating robust wholesale electricity markets, and to planning a reliable system for the future grid.[4] Programs implemented to support the Climate Act should leverage and enhance the reliability benefits of the NYISO-administered wholesale electricity markets while minimizing consumer costs. The Climate Action Council's Final Scoping Plan accurately notes, "[w]hile transitioning away from fossil fuel use, maintaining reliable access to power, whether through centralized or distributed energy sources, is crucial for maintaining good public health in our energy-dependent society."[5] Given the timeline and scope of the Climate

[3] *See* NYISO's February 20, 2024, Comments in this proceeding (Case 15-E-0302).

[4] The New York State Reliability Council ("NYSRC") conducts an annual probabilistic assessment to determine the Installed Reserve Margin ("IRM") required to maintain a "1-day-in-10-years" ("1-in-10") loss of load expectation ("LOLE"). The NYSRC rules and Northeast Power Coordinating Council ("NPCC") criteria define resource adequacy such that at any moment in time, the probability of the unplanned disconnection of firm electric load shall not exceed one occurrence in ten years, expressed as one day in ten years, or annually as maintaining a LOLE probability of 0.1.

[5] *See* New York State Climate Action Council Scoping Plan, Full Report December 2022, at p. 105.

Act mandates, NYISO-administered competitive wholesale markets are essential to maintaining reliability, driving the necessary investment and innovation, and doing so at the least possible cost while meeting the electric needs of New Yorkers.

The NYISO offers these comments to further highlight the importance of defining key terms and promulgating implementing regulations with the provisions necessary to support reliable electric system operation.

COMMENTS

A. Drafting Implementing Regulations that Rely on Consistent and Clear Definitions is Critical to Satisfy the Zero Emissions by 2040 Standard and to Maintain Electric System Reliability

Clear definitions and implementing regulations are critical to the success of any state energy or climate policy. The time is right to set up the guideposts that will further shape the key terms within the Climate Act. Criteria that clearly describe which resources are subject to the zero-emission standard and how the zero-emission standard will be measured are critical to informing the developers and other stakeholders that need to build and operate compliant technologies. Developers, other stakeholders, Transmission Owners, and the NYISO must understand what generators and generating technologies will qualify as zero-emission to plan for and operate a reliable electric system that meets the needs of all New Yorkers.

The NYISO concurs with the Staff's belief that "the 2040 target must be interpreted and implemented without compromising resource adequacy, reliability standards, and affordability."[6] The New York power grid currently relies on a variety of generation technologies, providing numerous energy and reliability attributes, to maintain a reliable power grid. However, many of the necessary characteristics and reliability services are largely provided by fossil-based,

[6] DPS Proposal at p. 31.

emitting generation. As such, the New York generating fleet currently has sufficient operational flexibility to respond to dispatch signals, run for long periods of time, and use multiple fuel sources to support reliability.[7] To achieve the zero-emission standard, significant quantities of new resources, which satisfy the zero-emission definition, and provide the necessary energy and reliability attributes, will be required to support a reliable electric system.[8] Development, permitting, siting, and interconnection of existing and emerging zero-emission electricity supply will require significant capitalization over a relatively short period of time.[9]

Aligning market signals with policy goals is critical to maintaining electric system reliability while also achieving public policy goals at least cost. Appropriate market signals can flow from a well-designed regulatory effort in support of the Climate Act when the key terms, the compliance obligations, and the compliance timelines are clearly defined and published with sufficient lead time to enable the investment necessary for compliance. The NYISO's robust planning processes inform stakeholders about where to make investments on the grid based on where assets are expected to be most needed, while real-time operations dispatches the resources to meet load across the system based on market constructs and bid prices. In 2023, the NYISO formed a separate Grid Transition department to support this interaction between planning and

[7] The generating fleet's access to multiple fuel sources allows alternate fuels to support electric generation when a fuel source is unavailable, or a fuel type is priced out of the market.

[8] *See* 2023-2042 System & Resource Outlook ("The Outlook"), A Report of the New York Independent System Operator, July 23, 2024, at pp. 8 and 48, available at https://www.nyiso.com/documents/20142/46037414/2023-2042-System-Resource-Outlook.pdf/8fb9d37a-dfac-a1a8-8b3f-63fbf4ef6167 (The Outlook shows that 20-40 GW of dispatchable emission free resources ("DEFRs") would be required by 2040 to support the zero-emissions grid mandate).

[9] While essential to the grid of the future, such DEFR technologies are not commercially viable today at the necessary scale. Even assuming that they are commercially viable, there remains significant work in implementation and logistics that must be overcome to economically justify transitioning the dispatchable fleet to some combination of new technologies in the next 15 years. *See* The Outlook at p. 9.

operations, highlighting the system-wide reliability and economic benefits that result from planning as close to operating expectations as possible.

To maintain the reliable operation of the electric system during the grid transition as more of the energy needs of society are supplied by electricity, the NYISO strongly encourages any Climate Act implementing regulations to include mechanisms to accommodate electric system reliability issues that may arise. First and foremost, as the supply fleet transforms and demand increases through electrification, regulatory provisions must exist to allow electric generators to operate when needed for system reliability and to meet consumer demands for electricity, even if such operation could conflict with the overall compliance obligations. For example, the NYISO supports concepts like the electric system reliability provisions of the Department of Environmental Conservation's NOx emission rule[10] and some of the proposed provisions discussed in the New York Cap and Invest ("NYCI") Outline.[11] Emission reduction programs/regulations that provide electric generators the necessary timeframe to develop and implement compliance plans and the necessary operational and regulatory flexibility to maintain system reliability and meet consumer demands will serve New Yorkers in a way that achieves emission reduction goals and maintains reliability electric service. Overly restrictive compliance obligations could prevent emitting generators from operating to support system reliability or serving consumer demand and potentially force generators to retire before suitable replacement resources are available. Insufficient availability of electric generation could adversely impact public health, welfare, and safety.

[10] *See* 6 NYCRR part 227-3.6.

[11] *See* NYCI Outline available at, https://capandinvest.ny.gov/-/media/Project/CapInvest/Files/Second-Stage-of-Pre-Proposal-Outreach.pdf, and the NYISO Comments submitted to NYSERDA and the DEC.

Electric system reliability margins are already close to minimum reliability requirements in certain areas across New York and are tightening. If these margins are totally depleted, the reliability of the grid would be at an unacceptable risk and power outages could disrupt normal life or negatively impact public health, welfare, and safety.[12] The NYISO's 2024 Reliability Needs Assessment ("RNA") identifies a reliability need beginning in summer 2033 within New York City, primarily driven by a combination of forecasted increases in peak demand, limited additional supply, the assumed retirement of the NYPA small gas plants based on state legislation, and assumed unavailability of generators impacted by the DEC Peaker Rule.[13]

The NYISO's ability to operate a reliable electric system requires that the introduction of new resources be coordinated with and occur prior to the orderly retirement of any existing generators. This orderly transition from today's fleet of generation to new generation that provides both the clean energy production and operational capabilities necessary for maintaining reliability is critical. The NYISO's planning processes can analyze the transition to a zero-emission system as implementing regulations clarify the path to 2040. Planning for this transition as well as expected variables and uncertainties that arise between planning and real-time operations will become increasingly important and complex as the state moves closer to a zero-emissions electric system.

As the generation fleet transitions, demands for electricity will also drive the New York electric grid to become winter peaking in approximately ten years. Increasing electrification of the transportation and building sectors will drive winter peak demand higher and could result in a

[12] Federal and state reliability regulators expect the NYISO to comply with applicable reliability requirements to mitigate such risks to the power grid.

[13] *See* 2024 Reliability Needs Assessment ("RNA"), A Report of the New York Independent System Operator, November 19, 2024, at pp. 6-7 and 13-14, available at https://www.nyiso.com/documents/20142/2248793/2024-RNA-Report.pdf/0fe6fd1e-0f28-0332-3e80-28bea71a2344.

new set of risks to maintaining system-wide reliability than have previously been observed. These demand trends exacerbate the urgent need for new generation, with the necessary reliability attributes, and the need for new generation resources to be available before the existing generators retire or are forced out of service. The future non-emitting resource mix must include sufficient predictable, reliable, and dispatchable resources to maintain the level of service New Yorkers require as a greater share of electricity is supplied by intermittent resources and more electricity is demanded by multiple other sectors of the economy, such as building heating and transportation.

In the event existing electric generators choose to deactivate or reduce operation in response to the emission reduction regulations, or for any other reason, the NYISO must specifically plan for the deactivation or reduced operation of every such generator to maintain electric system reliability. The NYISO's reliability planning processes provide this function by evaluating the unique circumstances of each generator, identifying reliability needs, and soliciting solutions to resolve reliability gaps resulting from any resource retirement. This process maintains the reliability of the electric system that serves consumers' needs. Electric generators are required to inform the NYISO at least one year prior to deactivating to provide the time needed to study potential impacts.[14] If a reliability need arises and another timely solution is not available, the NYISO may request such generators to remain in service beyond their planned retirement date to temporarily resolve an electric system reliability need while a permanent solution is completed.[15] As New York works towards satisfying the zero emissions

[14] *See* Short-Term Reliability Process, contained in NYISO Open Access Transmission Tariff ("OATT"), Attachment FF, Sections 38.2-38.3, available here: Tariffs, FERC Filings & Orders - NYISO

[15] *See* OATT Sections 38.4 and 38.11.

by 2040 target, implementing regulations that rely on the proposed definition of zero emissions must include mechanisms to support the actions necessary to maintain electric system reliability.

B. Consistent and Transparent Treatment of Imported Energy is Critical to Maintaining Electric System Reliability

The NYISO concurs with the Staff's encouragement that the Commission treat the application of the 2040 target to electricity imports as an important indicator for planning purposes, and not as a firm limit used to restrict electricity imports in real time operations or annually. The New York electric grid is strongly interconnected with its four neighboring regions and receives many reliability, economic, and policy achievement benefits from those connections. Any potential hard restrictions imposed on the NYISO's ability to exchange energy during real-time operations through its interregional connections would reduce the benefits experienced today, and could jeopardize the reliability of the system, up to, and including load shedding or blackouts. However, evaluating consistent requirements on internal resources and imports in the system planning horizon is critical to reliability planning for the future system, informing investment decisions, and supporting operations such that the NYISO-administered wholesale markets maintain a reliable grid.

New York must treat internal generation and imports consistently and transparently to support system reliability, to maintain economic efficiency, and to address differences in energy or environmental policies among New York and neighboring states.[16] Emission rules, potentially including tracking mechanisms, should be designed such that imports of power into New York participate on equitable grounds with generators located in New York State. It is important to

[16] If the NYISO is asked to develop and administer a border adjustment mechanism, it would take time to design and implement and have to be approved by NYISO's stakeholders and accepted by the Federal Energy Regulatory Commission.

note that, subject to limited exceptions,[17] linking imported power to specific generators outside New York State is impractical and open to errors and/or double counting.

At the same time, any consideration of imported power must also address the fact that neighboring regions almost always have first rights to the generation in their region. Therefore, as electric generation surplus margins also shrink in neighboring regions, fewer and fewer imports may be available to the New York region to serve consumer demands or to support electric system reliability.[18] Imports can disappear and neighbors can request that New York export energy whenever the other area needs the energy, even when the energy was scheduled to be delivered to New York State. This issue is most likely to materialize during times of peak demand throughout the Northeast, *i.e.*, when New York needs the energy the most. Peak demand can occur during a multi-day cold snap or during a multi-day heatwave when electricity is particularly critical for New Yorker's health and safety. Neighboring regions can also curtail imports into New York when necessary to address generation shortages due to fuel availability or when intermittent generation resources are unavailable based on the weather.

When imports are reduced or disappear for any reason, internal generation will immediately be needed to fill in the gap to serve load. If internal generation resources are not

[17] The DEC and NYSERDA could consider treating imports from out-of-state renewables with New York Renewable Energy Certificate contracts different than imports supported by other generators in neighboring regions. Special considerations may be required for generating units located in New Jersey but electrically located in the New York Control Area (the area under the control of the NYISO).

[18] The NYISO has considered this uncertainty in recent studies and will continue evaluating the changing circumstances going forward. *See e.g.*, 2023-2032 Comprehensive Reliability Plan ("CRP"), A Report of the New York Independent System Operator, November 28, 2023, at pp. 68-69 ("As the energy policies in neighboring regions evolve, New York's imports and exports of energy could vary significantly due to the resulting changes in neighboring grids. New York is fortunate to have strong interconnections with neighboring regions and has enjoyed reliability and economic benefits from such connections. The availability of energy for interchange is predicted to shift fundamentally as policy achievement progresses. Balancing the need to serve demand reliably while achieving New York's emission-free target will require continuous monitoring and collaboration with our neighboring states."), and 2021-2040 System & Resource Outlook ("The Outlook"), A Report of the New York Independent System Operator, September 22, 2022, at pp. 11-13 and 56-57.

available when energy imports decrease, the system may not be able to serve load, resulting in load shedding or blackouts. As a result, the consideration of imports in the planning horizon must be consistent with the expected operation of imports in real time operation such that the NYISO and all New Yorkers can expect sufficient supply to maintain electric system reliability throughout the range of possible conditions.

A mechanism to regulate imports, while complex, is required to accurately reflect the treatment of imported power in New York's zero-emission standard annual net import evaluation. The resulting more granular treatment of emissions could provide valuable inputs to the effectiveness of energy policy administration and is useful to evaluate in planning studies through scenario analyses, but should not be imposed as a hard limit that restricts imports in operations when the electricity is needed for system reliability, *e.g.*, during extreme weather. The NYISO is available to work with DPS Staff to develop a workable approach.

CONCLUSION

The NYISO appreciates the PSC's consideration of these comments in response to the DPS Proposal and looks forward to continued work with the PSC, DPS, and NYSERDA to support the Climate Act initiatives in a way that protects electric system reliability for all New Yorkers.

Sincerely,

/s/ James H. Sweeney

James H. Sweeney
Senior Attorney
New York Independent System Operator, Inc.
10 Krey Boulevard
Rensselaer, NY 12144
Tel: (518) 356-6000
JSweeney@nyiso.com