



**MINUTES OF THE
NEW YORK STATE ENERGY PLANNING BOARD MEETING
HELD ON DECEMBER 12, 2024**

Pursuant to notice dated December 2, 2024, the sixteenth meeting of the New York State Energy Planning Board (“Board”) was convened on December 12, 2024, at 2:00 p.m. at the Empire State Plaza, Meeting Room 6, Albany, New York. A copy of the meeting Notice is annexed as Exhibit A.

The following Energy Planning Board Members or their designees were present:

- Doreen Harris, President and CEO of the New York State Energy Research and Development Authority (NYSERDA) and Chair of the Board
- Richard Ball, Commissioner of the Department of Agriculture and Markets
- Didi Barrett, Assemblymember and Assembly Appointee
- Rory Christian, Chair of the Public Service Commission and Commissioner of the Department of Public Service (DPS)
- Marie Therese Dominguez, Commissioner of the Department of Transportation
- Sean Mahar, Interim Commissioner of the Department of Environmental Conservation
- Kevin Malone, designee of Dr. James McDonald, Commissioner of the Department of Health
- Vincent Ravaschiere, designee of Hope Knight, Commissioner and President & CEO of the Empire State Development Corporation
- Roberta Reardon, Commissioner of the Department of Labor
- Kisha Santiago, designee of Walter Mosley, Secretary of State
- William Suggs, Senate Appointee
- Richard Dewey, CEO of the New York Independent System Operator (NYISO) (non-voting member)

Introductory Remarks

Doreen Harris, President and CEO of NYSERDA, and Chair of the Energy Planning Board welcomed all to the meeting of the Board and noted the presence of a quorum. Chair Harris noted shifts in the energy landscape over the course of the past few months, including the change in federal administration.

Chair Harris noted a number of significant and recent milestones which occurred in the fall of 2024, including:

- The achievement of 6 gigawatts of distributed solar installed in New York State, one year ahead of the Climate Act goal,
 - the execution of 23 contracts for large scale renewable projects which will provide enough clean solar and wind energy to power more than 700,000 homes cross the State,

- launch of an IRA-funded appliance upgrade program with point-of-sale rebates to allow low- and middle-income customers to install more energy efficient appliances,
- the release of New York’s Clean Energy Industry Report, showing continued clean energy job growth in 2023,
- the publication of the Department of Public Services’ proposal to establish a zero-emission program for the electricity system statewide, and
- the NYISO’s biennial Reliability Needs Assessment.

Chair Harris also noted that NYSERDA’s draft Blueprint for Consideration of Advanced Nuclear Energy Technologies received 1,400 comments and an RFI was released to gauge market interest. She also noted that the comment deadline on the SEP draft scope was extended through December 16th and adoption of the scope would be considered at the next meeting of the board.

Consideration of Minutes of September 9, 2024 Meeting (Agenda Item No. 1)

The first item on the Agenda was to accept the minutes from the Board meeting held on September 9, 2024. Chair Harris made a motion to accept the minutes, seconded by Commissioner Christian. The board voted unanimously to adopt the minutes.

Resolution Regarding the Adoption of Changes to the Bylaws of the State Energy Planning Board (Agenda Item No. 2)

Chair Harris next called for the consideration of a resolution to adopt changes to the bylaws of the Board which would allow for videoconferencing from private locations under certain circumstances. Chair Harris noted that the bylaw changes proposed conform with Open Meetings Law requirements. A public hearing in relation to these changes was held on November 14, 2024, where no comments were received. A quorum of members will still need to gather at public locations before members can be permitted to participate from private locations due to extraordinary circumstances. Members participating under extraordinary circumstances will need to be identified and visible with video and audio to participate in the meeting. There was no discussion on the proposed amendments. Commissioner Reardon made a motion to approve the resolution, seconded by Commissioner Christian. The board approved the resolution unanimously.

Presentations on the Transition to a Zero-Emission Electric Grid

Carl Mas, NYSERDA Vice President for Policy, Analysis and Research, moderated a series of presentations on the transition to a zero-emission grid with representatives from the North American Electric Reliability Corporation (NERC), the NYISO, and DPS to discuss grid reliability and development across all levels.

The first presenter was Camilo Serna of NERC, who focused on the North American perspective and grid reliability. Serna provided background on NERC, including its inception by an act of Congress in 2005 to ensure a highly secure and reliable bulk power system for the United States and Canada.

Serna explained that based on traditional standards, reliability of the bulk power system is currently good. However, he noted that the reliability risk environment is hyper-complex, with a rapidly

changing mix of electricity generation resources, accelerating electricity demand, increases in extreme weather events, and an increasing dependence on natural gas for generation all driving changes to risk assessment. With respect to the change in generation resources, Serna explained that the retirement of fossil fuel-based electricity generators are increasing while reserve margin shortfall projections are increasing. While many solar, battery, gas generation, wind, and other projects are in the queue to interconnect, they will not all come to fruition and the intermittent nature of many of these projects create additional challenges to the electric system with regard to the consistency of their energy generation. Serna also noted that the increased use of artificial intelligence and development of data centers and cryptocurrency are increasing demand growth at a high rate even considering the overall size of the bulk power system compared to prior decades. With respect to the effects of extreme weather, generators are now dependent on variables that can be affected by conditions such as wind and drought, which need to be planned for. Further, inter-regional transmission is increasing in importance, as weather patterns are deeper, last longer and affect larger areas of the continent, which can impact ability of neighboring regions to support one another. Finally, Serna highlighted the increased reliance on natural gas, which now accounts for 40-45% of electricity generation. The natural gas system does not currently have the same approach to reliability assurances as the electric grid, which should be addressed given its increased importance to the bulk power system.

Serna emphasized the need to meet demand growth and balance load growth and electrification efforts with the realities of reliability. This can be done through the deployment of new resources to provide energy as well as essential reliability services, building of infrastructure for electric transmission and natural gas, ensuring balancing resources and sufficient fuel supply, and shifting planning from a “capacity on peak” to “energy at all times” construct.

Commissioner Christian asked for greater detail on the connection between the gas and electric systems and how to address that in New York in the near term. Serna discussed the need to work on winterization of the gas systems and the development of better communication between industries, regulatory oversight, and arrangements to allow for provision of services for reliability needs. Commissioner Christian asked if a realignment in the markets may be needed. Serna expressed hope that planning organizations will do a deeper dive to examine the needs and expand in their planning processes. Interim Commissioner Mahar asked what should be examined when considering the question of load growth. Serna indicated that the issue which needs to be considered is how that load growth manifests and by when. Consideration should be given to transmission and transfer capability across states and neighboring regions and consider retirements and risk posed by early retirements to understand what tools are available when reliability issues arise. Commissioner Ball asked about the dependence on gas and factoring renewable natural gas. Serna indicated that it is important to look at fuel availability against weather parameters to ensure access and security of natural gas during significant weather events. Mr. Suggs asked for further information regarding weatherization for natural gas assets. Serna discussed the need to develop cold-weather standards for natural gas generators to ensure the well-heads can continue to access supply during extremely low temperatures. Mr. Mas noted that the Long-Term Reliability Assessment placed New York in a “Normal Risk” category whereas other regions such as PJM, MISO and SPP are either at Elevated or High Risk. He asked what allows for certain regions to maintain strong reliability as compared to others. Serna indicated it was a combination in terms of retirements, level of demand growth, and additions that maintain balance. If there is a surge in demand, a previously normal operation region could rapidly shift and develop reliability concerns. Similarly, new weather patterns could change reliability projections.

The next presentation was from Emilie Nelson and Zach Smith of the NYISO. Emilie Nelson presented first, explaining that NYISO works to ensure power system reliability and competitive markets for New York State, with a vision of working with stakeholders to make New York's electric system the most reliable and cleanest in the nation. Their role is to maintain reliability, operate open and fair wholesale markets, plan for the future of the State's bulk power system, and provide factual information to policymakers, investors and stakeholders. Nelson emphasized that public policy is driving rapid change across the system. NYISO is working to manage both the deactivation of generators due to regulatory requirements, as well as the age of the generation fleet, which creates acute challenges. By the mid-2030s, New York is projected to become a winter peaking system, which will also add new challenges. The New York power system is heavily reliant on natural gas generation, with oil as a current backup. With respect to generating capacity (the maximum electric output a generator can produce), just under 70% of the total generating capacity of New York's generator fleet is fossil based (as of 2024). With respect to energy production (the amount of electricity a generator produces over time), 49% of electricity production in the state was zero-emissions in 2023. Nelson stated that we have a long way to go to be able to meet the mandates set in the Climate Act. One of the key factors the NYISO identified is transmission planning and construction, particularly to connect upstate generation with existing downstate demand. Nelson also discussed the changing supply mix, with the growing imbalance between generator deactivations and additions contributing to the shrinking of reliability margins; moreover, new renewable resources do not provide the same reliability services (or attributes) as existing resources. Nelson stated that the forecast is for demand to experience major growth, with a significant amount of uncertainty that will inform the reliability challenges. NYISO expects that as the shift from summer to winter peaking occurs, reliability issues will need to be managed in multiple seasons. The timing of this shift will be influenced by the adoption of electric vehicles and heat pumps, as well as the electrification of buildings. The overarching concern will be to have a system that is reliable monthly and annually.

Zach Smith then presented on NYISO's 2024 Reliability Needs Assessment (RNA), which evaluates grid reliability from 2028 to 2034 and closely evaluates risk factors that include: winter risk as a significant issue, particularly as it relates to gas generation with no firm contracts on the coldest days of the year; general demand growth for large industrial and/or energy intensive loads; and anticipated generator deactivations due to age or deficiencies. The report does identify a reliability need in New York City starting in 2033 with a 17 MW deficiency for 1 hour in that summer, increasing to 97MW for 3 hours in 2034 on a peak day. Statewide, total demand resource adequacy is healthy today, but will have a very small margin by 2034. There are a number of options to address these issues including the addition of new resources. The 2023 NYISO class year for projects contained 32 generation projects accounting for 4,400MW of capacity throughout the state, much of which is not accounted for in the RNA. Additionally, the new interconnection process is being implemented through a cluster study. That study contains over 300 projects with over 60,000MW of solar, wind, and energy storage included. These will be examined to determine which ones can be used to solve some of these reliability issues.

Emilie Nelson followed this by discussing the role of the energy capacity markets to ensure availability and cost efficiency. Energy and ancillary services markets set reliability throughout the day through schedules on a minute-by-minute basis to produce power as optimally as possible and recover from unexpected events. These markets are evolving to meet the demands of the state and prepare for increased variability. The designs of these markets recognize that managing demand is important to managing the future grid. They also are in compliance with FERC Order 2222,

addressing peak loads, balancing intermittency and dynamic reserves. With respect to the capacity market design, NYISO works to make the system both cost effective and efficient.

Assemblymember Barrett asked if there are initiatives being undertaken by other states to create resources and anticipate the risk and reliability issues that New York might examine. Nelson stated that there is a lot of good work underway in the state and called out transmission expansion as one of those examples. Nelson also noted that interconnection of new resources is an important issue where NYISO is working to reform their interconnection process as quickly as possible to bring resources online. When considering solutions presented throughout the nation, there is a need to come together and be clear eyed regarding reliability challenges and identifying solutions. Assemblymember Barrett then asked where transmission fits in terms of what the state should be advancing first. Zach Smith indicated that the NYISO, through its collaboration with other ISOs, has allowed the NYISO to continue being one of the most effective at planning and building transmission projects. The purpose of transmission is to have the most efficient grid with efficient access to both the grid and its resources. Camilo Serna added that with New York, the gas infrastructure and points of failure need to be examined to see where issues exist that may impact the electric grid. NPCC is working to analyze the state and the New England region.

Mr. Suggs asked if there are more issues with the electric distribution system or the transmission system and whether increasing the number of substations downstate would be feasible. Emilie Nelson answered that NYISO's focus is on transmission more so than on distribution. That said, outages are more often related to the distribution system, which is important to customers. She emphasized the need for reliability of both systems to serve the end user. Zach Smith added that, with respect to substations, it is essential that there is efficient access to efficient resources. This doesn't always result in more substations but may change the configuration of local grids or locations of substations to get transmission to the demand. Suggs then asked if gas heaters (deployed by a utility to regulate temperature in the gas system) may allow for the provision of natural gas without system freezes. This was agreed upon as a good mitigation measure. Camilo Serna indicated that some of the concerns are national in origin and will require coordination between both gas and electric to address the issues.

Jessica Waldorf then presented on behalf of the New York State Department of Public Service (DPS) in her role as Chief of Staff and Director of Policy Implementation. She highlighted and provided updates on a number of Public Service Commission (PSC) proceedings. The first proceeding mentioned was the Zero by 40 proceeding. This proceeding is working to explore what technologies will be necessary to achieve a zero-emissions grid that is safe and reliable. A DPS Staff proposal released November 2024 provides definitions for the "statewide electrical demand system" and "zero emissions." The next steps for this proceeding will be a PSC Order adopting definitions along with a discussion of the potential reliability gap.

Waldorf next highlighted a suite of policy focused grid planning proceedings, namely: Coordinated Grid Planning Process (CGGP), Proactive Planning for Electrification, and the Grid of the Future. CGGP is a 3-year repeating cycle involving the energy policy planning advisory council. In 2024, the PSC directed the joint utilities (JU) to propose 2-year cycles. The process will unfold in 6 stages, during which data is collected, models are developed and analyzed, solutions are developed and evaluated, a least cost assessment is completed, and a least cost plan report is generated. The Proactive Planning for Electrification proceeding was commenced in August 2024 to develop a comprehensive grid infrastructure planning framework to support electrification of transportation and

buildings. The proceeding directed utilities to design a framework for comprehensive planning as well as urgent grid needs. Finally, Grid of the Future was commenced to develop a comprehensive plan to allow for utilization of flexible resources, such as demand response and distributed resources to reach the State's clean energy goals while ensuring reliability and manageable costs. This proceeding will include flexible resources to avoid bulk infrastructure and operations costs and encourage adoption of grid responsive technologies by customers and the installation of distributed resources. The initial Grid of the Future study is expected on January 31, 2025, with the first full plan issued on February 28, 2025, and a second due on December 31, 2025. These plans will account for changing generation resources and needs while leveraging new means to increase flexibility as compared to the current system. There were no questions from the Board members.

Carl Mas then provided a brief update on the Transmission and Distribution Study that is required as part of the State Energy Plan. Mas explained that NYSERDA is working with E3 and GE Vernova to conduct this study and are advised in this by the NYISO and other entities, to review the transmission and distribution system, investments and expenditures, as well as state and federal policy initiatives in a systematic manner.

Mas then discussed the evolution of electricity markets, a topic that will be covered in the State Energy Plan as effective markets are central to a well-functioning electricity system. This evolution will include enhancing participation by flexible demand side resources to ensure incentives are adequate for participation, improving capacity market signals for resources needed to meet targets, creating potential new ancillary service products or improve current market signals for needed resources, reviewing system planning processes to see if changes are required, and pursuing opportunities for energy storage to be included as a transmission resource.

Other Business

Chair Harris asked if there was any other business. Commissioner Reardon took the opportunity to congratulate NYSERDA on the well-done Clean Energy Industry Report. Chair Harris stated that the final scope is expected to be approved in early 2025, followed by release of the draft plan later in 2025. She also reiterated that there will be public hearings and comment periods on the draft plan over the course of 2025.

There being no other business, the meeting was adjourned.



Sarah E. Simpson, Secretary to the Board
Senior Counsel, NYSERDA