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S.4378-A / A.6251 Pollution Justice Act of 2021 Potential Impacts on Electric System Reliability

Recent events in Texas and California demonstrate the need for careful planning as the state transitions to a decarbonized electric system, dependent on intermittent resources. The NYISO's preliminary review of S.4378-A / A.6251 reveals the likelihood of significant risks to the reliable operation of the electric system, including the need for forced disconnections of retail electric customers.

Additional analysis of the bill is critical and warranted to identify all reliability risks to the electric service, which is essential for public health and safety. The NYISO will continue to examine the bill for specific system impacts.

S.4378-A / A.6251 would likely require the retirement of a significant number of power plants that are critical to support reliability under a compressed timeframe. Important work is underway to responsibly transition the electric system under the mandates of the Climate Leadership and Community Protection Act (CLCPA) of 2019. The NYISO is actively engaged in working to reach the statutory targets of the CLCPA.

The number of power plants that would be classified under the bill as a "replaceable peaker plant" is expansive as compared to a New York State Department of Environmental Conservation's (DEC) recently adopted final rule reducing the allowable level of nitrogen oxide (NOx) from peaker plants.

Like S.4378-A / A.6251, the DEC rule, adopted in 2020, imposes new, stringent requirements on peaking power plants, but creates critical exemptions for "black start" resources, which the proposed legislation does not. A "black start" resource is essential for system restoration during large scale system outages. Further, the DEC rule also provides for important compliance options that can support reliability of the system during the transition to dependence on large amounts of renewable resources. After significant input, analysis and public comment, the DEC rule responsibly speeds the state's transition of peaker plants to energy storage resources while accounting for reliability needs of the system.

As drafted, the NYISO estimates that S.4378-A / A.6251 could impact nearly 5,000 MW to as much as 10,000 MW of needed generating capacity. This equates to 12% to 21% of the current generating fleet in New York. For perspective, this reflects the amount of generating capacity

needed to supply approximately four to ten million retail customer homes. Peak electric demand was nearly 34,000 MW in 2013.

The NYISO's analysis of the impact of the bill builds on prior reliability studies and finds that removal of the existing peaker plants under the legislation's strict timeframe, would result in inadequate energy supply to reliably serve customers across New York State. In order to avoid such adverse impacts, sufficient replacement resources must be operational as early as the end of 2025. Those resources must be installed and operational in specific locations on the grid to serve customers reliably. Such resources must also be of sufficient size, and provide comparable grid services essential to satisfy reliability standards. Based on current investment levels and technological advancements, the NYISO's studies conclude that such progress will not be achievable by 2025. The NYISO is fully engaged in efforts to achieve the mandates under the CLCPA and achieve 70% renewables by 2030.

Without adequate energy supplies available to serve customers reliably during this transition, the NYISO would be forced to resort to demand reductions, including the need for rotating retail customer load shedding or rolling blackouts, as recently experienced in California and Texas. The NYISO has significant concerns that this would negatively impact the health and safety of New Yorkers and cause significant negative impacts to the state's economy.

It is also important to note that while the bill calls for replacement of these peaker plants with renewable energy systems or battery storage systems, the proposed replacement resources do not replace in kind the energy capabilities of the plants that are identified to be retired. Energy limitations of intermittent renewable generation and current battery storage technologies result in a much more limited contribution from those resources in meeting reliability of the grid. A carefully planned replacement strategy for peaking units is essential. This overall replacement strategy must also provide sufficient "on-demand" resources to deliver energy when the sun is not shining or the wind is not blowing.

Harmful air pollutants can be regulated in a manner that promotes environmental objectives and protects public health, while at the same time adequately addressing the need for reliable electricity service. As noted above, the NYISO was fully engaged in a collaborative process with the NYS DEC to inform the "Peaker Rule" regulations that became effective in early 2020. That rule carefully balances reliability of the electric system with the critical need to address pressing environmental justice issues with swift action.

About the NYISO

The NYISO is the not-for-profit corporation responsible for operating the power grid in New York, planning for the future of the power grid, providing non-discriminatory access to transmission service, and administering wholesale markets for electricity and transmission products in New York.

The NYISO manages the flow of electricity across more than 11,000 miles of high-voltage transmission lines serving New York on a minute-to-minute basis, balancing supply and demand throughout the state. NYISO operates in accordance with tariffs, accepted by the Federal Energy

Regulatory Commission (FERC), to administer open and non-discriminatory access to the electric grid, competitive markets for the sale and purchase of energy and capacity, and payments for ancillary services necessary for the reliable operation of the bulk electric grid.

The NYISO monitors the development of environmental rules and regulations impacting power generation resources in New York and provides input to federal and state policymakers on potential power system reliability implications.

Working with transmission owners, the New York State Reliability Council, the Northeast Power Coordinating Council, and the North American Electric Reliability Corporation, the NYISO adheres to the nation's strictest set of electric system reliability standards, which include 1,000 requirements designed to promote reliability for New York consumers.