

State of the Grid 2021

Presentation Talking Points

Key Messages

1. I appreciate the opportunity to speak to you all today in what is now my second annual “State of the Grid” address. Last year, we highlighted the planning studies and market enhancements that were designed to address the challenges of our grid in transition. And together we got that work done. Today, I’m focusing on the actions we must take for our markets to meet the challenges and opportunities before us.
2. Before we can do that, though, we must recognize the events that occurred in the Midwest over the last few weeks. “Reliability” and “resilience” are terms used often in our industry. When we speak of reliability and resilience, we think of what has happened in Texas and in California, and what took place in the multi-state RTOs this month. We – all of us in this meeting today – have built this system and this ISO together for the purpose of have preventing events like what has been seen in the west and Midwest from occurring here. We operate to the most stringent reliability standards in the nation, and we continuously seek to further strengthen the reliability and resilience of our system. These events make clear the job we have before us today, and the ongoing responsibility we all have, is to preserve and strengthen reliability and resilience as we work together to shape the transition to the grid of the future.
3. We know much more about that future today than we did when I spoke to you one year ago. Governor Cuomo’s 2021 State of the State address made clear the state goals will be supported by immediate action and significant investment. The governor’s remarks on clean energy focused on the need to build the renewable resources and infrastructure necessary to achieve the goals, which he indicated would be a key measure of success in 2021.
4. 2021 also brings a new federal administration that has made climate change and decarbonization the second highest federal priority behind reversing the pandemic. President Biden has taken swift action on national energy policies to aggressively address climate change. FERC will play an important role in this effort. Newly-appointed FERC Chair Richard Glick has made numerous comments in support of state

clean energy policy goals and the need to align those policies with wholesale electricity markets.

5. With the continued leadership on clean energy development in New York, and a new administration in Washington that is clearly prioritizing ways to combat climate change, there are potential new opportunities to address the tensions that have existed between federal regulation of wholesale power markets and state policy initiatives driving changes in the mix of supply serving resources adequacy needs.
6. The NYISO recognizes these challenges and is acting to address them. Tensions between federal oversight of wholesale energy markets and state energy policy objectives is not a debate between competitive or regulated approaches to meeting our energy needs of the future. It is a question of how to leverage both to meet the challenge before us. We need every tool at our disposal. We need every possible platform if we are going to truly transform the system and meet the mandates of 2030, 2035, and 2040. Energy markets are essential to meeting those objectives. But we must be open to collaborating on the innovation necessary for the market design of today to enable the grid of tomorrow.
7. Through collaboration with our stakeholders, we have taken significant steps towards putting in place the energy market enhancements necessary to address the needs of our grid in transition. With your support, we have filed proposals at FERC that are pending acceptance right now that enhance our market rules to allow for solar resources to be dispatched to serve the needs of the grid, we've proposed ancillary services shortage pricing enhancements to increase operational flexibility, and we've proposed rules for hybrid energy storage participation. With support from FERC, we will move aggressively to implement those new market rules.
8. We're currently working on more market enhancements for hybrid storage participation and DER participation. And we must prioritize the pursuit of reforms to our buyer-side mitigation rules. I am calling on the NYISO team and all of you to work together aggressively to address needed buyer-side mitigation reforms. The time to reform our mitigation rules is now. We must be open and creative to reforms that reflects the objectives of the CLCPA while preserving market signals that are essential for the investment needed to preserve reliability
9. While these challenges are daunting and require thoughtful engagement with

stakeholders, grid operators, and policymakers, this is an incredibly exciting time to be involved in shaping the future grid. We are seeing more change – and more opportunities for change – than any time since the NYISO was established.

10. For instance, transmission is being developed at a pace we couldn't have imagined just a year ago. As Governor Cuomo called for in his State of the State address, transmission investment is necessary to efficiently deliver renewable power to New York consumers. The NYISO has long highlighted the "Tale of Two Grids" that constrains the ability of clean energy resources located in northern and western New York from reaching consumer demand concentrated in southeastern New York. Three projects that were selected through our Order 1000 planning processes are now under construction. These investments will expand our ability to serve New York's energy consumers with clean energy resources.
11. What is unchanging is our commitment to reliability, to expert system planning, and to wholesale electricity markets that deliver real benefits to consumers.
12. The State policy goals must be achieved while maintaining grid reliability and market efficiency. Wholesale electricity markets in New York are an essential platform for the success of the CLCPA.
13. In support of the CLCPA objectives, we are hard at work identifying future needs of the system. The NYISO has conducted planning studies with new approaches to understand the implications of the grid in transition and climate change. These studies inform stakeholders, investors, and policymakers about the investment needs and market changes critical to the objectives of the CLCPA while at the lowest cost possible for consumers.
14. As we see a greater role for wind and solar resources, the intermittency associated with those resources presents a fundamental challenge to relying exclusively on those resources to meet electricity demand. The conditions we saw in California and Texas serve as a reminder of the importance of resource adequacy and dispatchability.
15. Our planning studies have identified deficiencies in reliable system performance, which are currently projected during the 2023 - 2030 time period.
16. These deficiencies, primarily in the New York City area, are driven by expected reductions in available generation capacity to comply with NOx emission regulations.

17. The magnitude and nature of the deficiencies are driven by our ten-year load forecast, in combination with the need for additional transmission or generation to serve the forecasted load.
18. If needed to maintain reliability, the NYISO will take steps to address these deficiencies – before they occur - by soliciting for market-based solutions, which of course will minimize costs to consumers. The deficiencies can be addressed by combinations of solutions including generation, transmission, and load reduction measures (such as energy efficiency, and demand response).
19. The current system is heavily dependent on existing fossil-fueled resources to maintain reliability. Transitioning away from our reliance on these resources will require investment in new and replacement infrastructure, and/or the emergence of a zero-carbon fuel source for thermal generating resources.
20. While we may not have full visibility into what new technologies will be available to us, we do know that the dispatchable and emissions-free resources needed to balance the system must be significant in capacity, and flexible enough to meet rapid, steep ramping needs.
21. Battery storage resources help address variability from renewable resources, but based on current technology, periods of reduced renewable generation when the sun doesn't shine or the wind isn't blowing rapidly deplete battery storage resource capabilities.
22. NYISO markets will continue to drive investment and development of innovative new technologies that will be needed to reach the objectives of the CLCPA. This is our goal and our commitment.
23. The environment in which these issues are being considered has changed dramatically and quickly in light of the onset of the Coronavirus pandemic. How the pandemic has influenced demand patterns, operational conditions, and the broader economy has implications for grid operations and markets function today, but may also influence public policy and investment decisions for the foreseeable future.
24. I am proud of the dedication and commitment the NYISO team continues to demonstrate during this crisis. We should be grateful especially for the grid operators who sequestered themselves at the NYISO control centers last spring to support grid reliability.

25. I'm also appreciative of stakeholders for your commitment to collaboration and consensus-building as we have shifted our shared governance meetings from in-person engagement to virtual meetings. Our annual meeting last summer, which for the first time was conducted virtually, was a great success, and discussions in our stakeholder meetings have not skipped a beat. We continue to get tremendous value and innovation out of our stakeholder process. I appreciate all that you are doing to continue your work to developed shared solutions to the challenges and opportunities before us.
26. Together we have made extraordinary progress over our twenty-plus year history. Our collective efforts have delivered a less costly, cleaner, more reliable bulk electric system for all New Yorkers.
27. Now, we need to do more. It will take the collective effort and will of all of us, plus additional stakeholders and our partners in the state and federal governments to make this moonshot a reality. It will be hard, it will be challenging, but it will also be a lot of fun. And if we get it right, we will set the state and the country on a path of sustainable success and economic prosperity. Thank you.