

# Summary of June 2024 Annual Board / MC Discussions:

**Topic 1 – Reliability through Markets During a Grid in Transition**

**Topic 2 – Planning to Meet the Needs of the Grid of the Future**

## Summary of Main Points / Emilie Nelson - NYISO

### Summary of Board/Senior Management Takeaways from Stakeholder Discussions

- Four overarching themes came across from the table discussions.
  1. The Capacity Market may need to be re-examined to meet the needs of grid of the future. The general consensus from stakeholders was that a broad overhaul of the capacity markets is not necessary.
  2. Energy and ancillary services markets will need to be examined to ensure that markets reward the attributes needed to support reliability.
  3. The Planning Process should consider additional scenarios and consider what actions may be necessary in response to scenario findings.
  4. There was broad support for the importance of ongoing collaboration and coordination among the NYISO and its stakeholders.

### Capacity Market

- Widespread recognition that the capacity market will need to be examined to ensure it continues to perform its key functions – attracting new resources and retaining existing resources needed for reliability. Some stakeholders suggest that it’s time to present a vision for the future of the capacity market.
  - Comments generally supported the mission of markets to minimize costs. Stakeholder comments generally support market-based approaches over cost-of-service compensation methods.
  - The general consensus is that public policies are changing the needs of the grid and that, while the capacity market is not fundamentally broken, there is general agreement that it may need to be revised to ensure it continues to support reliability.
  - While there were no consensus revisions proposed, a number of stakeholders suggest the capacity market may need to be revised to offer separate products for attracting new resources and for retaining existing resources. This view stems in part from the current role state solicitations and contracts play in attracting new resources.
  - Further consideration of the role of Capacity Accreditation Factors (CAFs) in incentivizing resource entry and their interaction with the Demand Curve Reset process was raised as an area worthy of focus.
  - Additionally, some expressed a need for further review of capacity market criteria such as the application of transmission security metrics and reconsidering the Loss of Load

Expectation (LOLE) of .1 as the objective function, as compared to alternate metrics such as unserved energy.

- But there was also general agreement that any efforts to substantially revamp or revise the capacity market should immediately follow the ongoing demand curve reset process.

### Energy and Ancillary Services

- While there was agreement to start examining how the Capacity Market can meet the needs of the future, there was also some agreement that we need to examine energy and ancillary services markets to address more immediate considerations.
  - Some noted that the reliability challenges we're facing are not solely the domain of the capacity market. The combination of capacity, energy and ancillary services markets are required to incentivize the reliability attributes needed. Stakeholders suggested that the growth of renewable resources will create a greater potential for energy shortages if renewable production wanes and there are not sufficient dispatchable resources available to make up for energy production shortfalls.
  - The NYISO and stakeholders should broadly consider what new or revised Ancillary Service products may be necessary for reliability with a supply mix made up of larger volumes of intermittent resources.

### Planning

- One of the challenges to achieving the milestones for the grid of the future is the high level of uncertainty over many factors that lie outside of the NYISO's control.
  - Large load interconnections are driving increased demand that we have not seen in NY for some time. A complicating factor is uncertainty around the timing and scale of the anticipated large load projects. Also, recognition that not all large loads act in the same manner.
  - NY electrification policies will roughly double winter demand, but the exact rate of load growth will hinge on how quickly air source heat pumps and electric vehicles are adopted.
  - The future resource mix has been made increasingly uncertain in recent months as large-scale generation projects have been tabled, at least temporarily, and ongoing supply chain constraints create more investment uncertainty.
- Stakeholders want to see more scenarios in the NYISO's planning processes and some suggest making these scenarios actionable. Stakeholders said that planning the system should go beyond the single view of the future that the base case results present.
  - The interaction and coordination of local planning through the Coordinated Grid Planning Process and bulk system planning is important and stakeholders would like more information on this process.
  - Interregional planning, cost allocation, and projects that provide multiple value streams are topics that should be further explored.
  - The proposed enhancements to the planning processes would need to balance available staffing resources and timing requirements.
  - Many of these concepts are currently part of our comprehensive planning process. The opportunity to address this feedback can further be explored as part of the FERC Order No. 1920 effort.

- Some stakeholders suggest that planning studies more directly communicate study findings to inform the evolving NYISO market design.
- Some participants expressed increased concern regarding the ability of the grid to provide the reliability and resilience necessary to support the health and safety of New Yorkers. Whereas other stakeholders cautioned against stacking conservative planning assumptions, which could lead to unnecessary and costly overbuild.
- There was broad support for the process undertaken by the NYISO and stakeholders in developing the NYISO's compliance filing to FERC Order No. 2023. There may be additional improvements down the line, but largely the focus should be on the transition cluster at this juncture.

### Communication and Coordination

- Communication and coordination are a common theme of discussion just about every year. Stakeholders generally support NYISO communications, find them valuable and encourage the NYISO to do more.
  - The NYISO's reports were noted to be highly useful and our communications efforts around them welcome.
- Stakeholders continue to support the NYISO's role as an independent, authoritative source of information.
- Meetings such as this are a tremendous opportunity to keep frank and open dialogue happening within the NYISO's stakeholder community.

## Summary of Main Points / Dana Lazarus – MC Chair

### Summary for Topic 1 – Reliability through Markets During a Grid in Transition

- Topic #1 asked stakeholders to weigh in on the question of whether the NYISO's Capacity Markets (as well as the broader markets) need to evolve given the changes we are experiencing in the New York energy landscape.
- In discussing this topic, there was general recognition that the energy landscape has changed fundamentally since the energy markets were first established, over two decades ago. Our discussions highlighted a number of factors that are changing how we view the capacity markets. Specifically:
  - While the current market construct was designed in an energy landscape that saw wholly market driven new entry, that is not what we are seeing today.
  - Rather, in today's energy landscape, we are seeing new supply entry primarily from state-supported resources. These resources – renewables and storage – have very different attributes than the traditional generation on which the demand curve has historically been based.
  - However, with respect to traditional generation resources, it is uncertain whether a new gas turbine would be able to be permitted in New York state.

- In the place of such resources, we must eventually define and incentivize “DEFRRs” – dispatchable emissions free resources. Today, it is not clear what future technologies will eventually fill that role.
  - This means that an interim challenge is retaining the existing dispatchable resources we have today until this new supply materializes, to support grid reliability.
  - Putting all of this into focus is the load growth we are seeing, resulting both from electrification of transportation and heating, as well as large load additions (e.g., data centers). Customers will rely on electricity in the future even more than they do today, putting reliability at the forefront.
  - And while we are experiencing these challenges, so are our neighbors, further complicating the reliability equation.
  - Finally, recognize that in addition to supply prices, state clean energy programs and energy infrastructure also requires investment, and all of this will ultimately land on the customer bill.
- So, given all this, is the capacity market, as currently designed, still the right construct? Stakeholders expressed a range of views:
    - On the one hand, we heard from many stakeholders a suggestion that the capacity market should be bifurcated to provide separate signals for new entry vs retainment of existing resources.
    - On the other side, stakeholders suggested that capacity should continue to be priced uniformly and the NYISO should instead focus on differentiating price signals through the energy and ancillary services markets.
- In either case, there was emphasis that prices should be sufficient to provide investors with confidence to support investment, but at the same time, tied to real outcomes to ensure they are providing value to customers and not a windfall to generators.
- So where do we start? Even though opinions may vary on the solution, there are some common questions that came through our discussions that can provide a good starting point as we go forward:
    - Start with the **fundamentals**: What is the purpose of the capacity market, and what attributes are we trying to incent?
    - Closely linked to this is **reliability** – Are our reliability metrics still appropriate, given the changes to both demand and supply? Specifically, is the 1 in 10 LOLE metric still appropriate?
    - And then, the role of **state policy**, driving changes to the resource mix. What are the attributes of the future resources we likely to see, and what are their likely revenue streams both from the markets and other sources? How will the capacity market interact with state programs in the future?
    - And finally, **timing** – how and when do we consider any changes, and do so in a way that does not undermine investor confidence in the market, especially in the near-term?

- Other, related issues to consider that came up in the discussions include:
  - Role of the recent capacity accreditation enhancements
  - Potential for identification of locational attributes
  - Addressing the divergence between LCRs and TSLs, and the probabilistic vs deterministic methodologies, respectively, that drive each
- To conclude – while stakeholder views on what the capacity market should look like in the future are varied, it is time to “take look under the hood” and explore these important questions. As stakeholders, we look forward to continued discussions with NYISO on these important issues in the future.

## Summary of Main Points / Glenn Haake – MC Vice Chair

### Summary for Topic 2 – Planning to Meet the Needs of the Grid of the Future

- Discussion of the extreme system changes that NYISO is grappling with as it seeks to maintain system reliability while accommodating the historic transition from a fossil fuel based system to one based on zero emission resources
- Paraphrase the Soprano’s master of malapropism, Carmine Lupertazi, Jr.: “NYISO is at the precipice of an enormous crossroads”
- Planning and Reliability
  - General consensus that NYISO has done a very good job on the planning function particularly through its Order 1000 implementation and its evolution of the economic planning process to the much more useful System & Resource Outlook. NYISO is largely compliant with the themes and requirements of Order 1920 and should pay particular attention to integrating the CGPP process and coordinating with state policies.
    - Stress importance of providing greater detail on CGPP project steps and timing to enable developers to plan and monitor their resource additions
    - Market Participants want greater input on CGPP scenario analysis to better understand impact of changed assumptions on transmission needs over the planning horizon.
    - Importance of ensuring competitive bulk solutions can compete with local solutions and that the CGPP and bulk planning functions are coordinated to ensure the most efficient and cost-effective set of solutions are pursued.
  - Multiple planning processes in place currently - need to streamline/overlap them to align and mitigate potential efficiency losses (PPTN, CGPP, RNA, SRO)
  - Planning function and approach must coordinate with and reflect how the operators actually commit and dispatch the system and assumptions employed in planning studies must be consistent with those used to set the IRM and to establish market rules like CAFs.
  - Skepticism about the efficiency and cost-effectiveness of interregional planning given significant differences in the sophistication and planning approach of the different ISO/RTO

planning functions. Common scenarios and approaches to planning among all ISO/RTOs will be needed for effective interregional planning.

- However, OSW transmission is an opportunity for interregional collaboration
  - Can also help support resilience (e.g., extreme weather)
  - Potential opportunity to collaborate with PJM on their State Agreement Approach
- NYISO should address scenario in which the CLCPA goals are not achieved and what steps need to be taken in advance of 2040 if it becomes apparent that the state is falling short of the 2040 goals to ensure we are able to maintain reliability and don't see a reliability problem arise due to resource retirements.
- NYISO has a very important role in maintaining its independence in the planning function and educating policy makers and politicians on the reliability needs of the system and the impact of proposed legislation.
- Grid enhancing technologies, including dynamic line rating, storage as transmission and other advanced technologies should be evaluated in designing the least cost solution to resource curtailment and transmission expansion.
- It is important to closely monitor and reflect in planning NERC, NPCC and NYSRC rule adoption and revisions
- Greater transparency and explanation of how the results of planning studies should be understood and what the take aways are for laypeople would be helpful.
- Increasing the granularity of locational reliability needs with plausible intermittent penetration levels will help define products and market design Interregional studies of common or correlated loss of resources, such as OSW, are necessary. Also consider external participation in NY load uncertainty and dynamic reserves.

- Interconnection Issues

- NYISO has done a good job of implementing order 2023, but improvement in speed and flexibility are still needed.
  - Importance of expanding NYISO approach to BESS modeling to sub 100kV interconnections.
  - Allowing de minimis changes within the process is necessary to address minor technical changes
  - Recognize need to accommodate evolution of IBR facilities in the interconnection process, where final models are not available at the time of Interconnection Request
- Establish rules for the coordination of co-located load and generation to avoid assignment of system upgrades that would not be required but for these interconnections being evaluated separately instead of together.
- NYSERDA solicitations should be tailored to reflect timing and requirements of the new NYISO interconnection process and the ORES process
- NYISO should consider whether planning for bulk and local upgrades can more efficiently assign costs for upgrades needed to address resource curtailment than the current system which assigns such costs to individual projects within the interconnection process.