New York ISO

Electricity Markets Essential Role in Grid Reliability

2025 MARKET DESIGN HIGHLIGHTS

Driving investment in reliability resources that respond in real time

For 25 years, market competition has rewarded economic efficiency and encouraged investment that has resulted in cleaner supply.

While state incentives attract investment in clean generation, they do not encourage generator response to changing grid conditions in real-time. NYISO-administered wholesale electricity markets produce price and procurement signals that allow suppliers to support reliability in a responsive manner—at the lowest cost.

As electricity demand rises and the volume of intermittent renewable resources grow, extreme weather patterns will create more volatility. The balancing force of markets will be essential to preserving reliability.

Industry-leading market design innovation

Our team leads the nation in delivering innovative solutions to evolve market structures. This fact sheet highlights current efforts to integrate clean energy resource participation in competitive wholesale electricity markets, support grid reliability services, and support environmental goals.

Dynamic Operating Reserves

As intermittent renewable capacity grows, dynamic reserves will address load forecasting uncertainty and reduce price volatility for consumers. Dynamic reserves will ensure sufficient supply is available in real time to address unexpected changes on the grid. This transformative approach will increase grid flexibility and reduce the price volatility associated with intermittency, extreme weather, and unplanned generator outages.

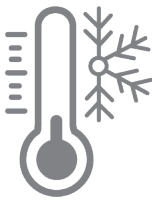
Reserve requirements will be recalculated based on dynamically changing "worst-case" scenarios to continuously align available reserves to real-time needs on the grid. **This will ensure sufficient supply in changing conditions without over procuring and compensate resources appropriately for their reliability contributions.**

STATUS: Modeling of the Dynamic Reserves design under severe conditions produced economic efficiency and reliability benefits. The design will be submitted to FERC for review in 2025 and implementation is targeted in 2027.

Winter Reliability Capacity Enhancements

More than half of NY's generating capacity relies on fossil fuel. The prospect of a winter-peaking system introduces new reliability challenges driven by the inability of generators to secure fuel on the coldest days. With winter demand expected to grow, the capacity market must address winter risks and provide incentives for generators to secure firm fuel arrangements.

STATUS: The NYISO is working with stakeholders to identify the emerging winter risks and reliability rules to determine what market changes are needed.



Technology and market design innovations to improve grid resilience

Competitive markets produce real-time price and procurement signals that allow power suppliers to respond instantly to the grid's changing needs. The power of markets to balance grid resources will continue to be vital in ensuring that a greener grid is a reliable grid.

Expanding Demand Response & DER Participation

NYISO has a history of first-in-the-nation market design innovations that enable and expand the use of demand-side resources to support reliability.

In April 2024, FERC approved NYISO rules allowing aggregations of smaller DER resources such as renewables and storage to participate in competitive markets to supply the grid directly or reduce demand in response to system needs.

Our recently developed DER market rules further expand participation across NYISO-administered energy, capacity, and ancillary service markets.

STATUS: Additional software design specifications are in development and targeted for deployment in 2026.

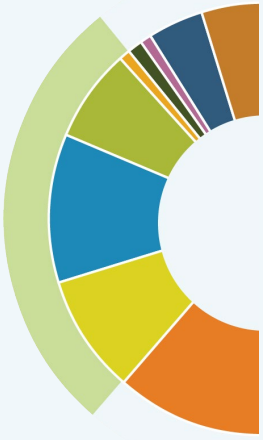
> "To date, the NYISO has been at the forefront of developing a participation model for DERs and seeking to implement that model expeditiously."
>
> - FERC Order comments from Chairman Willie Phillips & former Commissioner Allison Clements

Advanced Storage Modeling

Coordinating the growing fleet of storage resources requires advanced modeling in energy markets. This will improve tools to optimize the ability of storage to meet reliability needs.

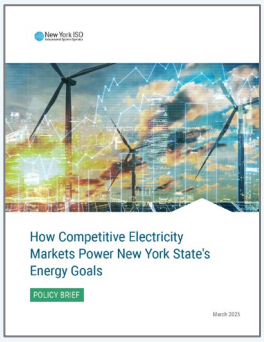
STATUS: We are working with stakeholders to develop capabilities for potential deployment in 2027.

2025 Market Initiatives V2 04.03.25



Ensuring that a greener grid is a reliable grid

The transition to more weather-dependent resources will also require flexibility among supply and demand technologies to replace the reliability characteristics of retiring fossil fuel generators. Also, as policies seek to promote electrification and phase out fossil fuel generation, new winter reliability challenges will arise. Signaling investment and innovation needs in NYISO-administered electricity markets will be critical to ensure that a greener grid of the future is also a reliable one.



Learn More

Blog: How Markets support a least-cost approach to grid reliability

Maintaining a reliable energy system requires that enough power generating capacity is installed system-wide to meet projected electricity demand and reliability requirements.

Read more

Video: People Who Power New York: From Engineering to Market Design: My Powerful Purpose

Manish Sainani says that while growing up in Mumbai, India, he was always inclined toward engineering and had an interest in renewable energy.

Listen now