

NYISO's Comprehensive Reliability Plan (CRP)

Study Findings: Power Grid Reliability Risks

⇒ **The NYISO is responsible for planning the power system to prepare for future reliability risks.**

As we move to a zero-emissions grid, it's critical we understand how the growth of intermittent resources and extreme weather could impact the ability to maintain reliability of the New York bulk electric system.

Reliability Risk Factors: Key Takeaways

Our CRP evaluates the reliability of NY's grid through 2030 and concludes that while the state's bulk electric system is expected to meet reliability requirements, risks to reliability and resilience remain. **Key risk factors include:**

- 1** Resource adequacy margins are tightening across the New York grid through time, from Buffalo to Long Island. New York would experience even smaller margins if additional power plants become unavailable or if demand is greater than forecasted. **If the margins are totally depleted, the reliability of the grid would be at risk.**
- 2** While transmission security within New York City is maintained through the ten-year period in accordance with current design criteria, **the margin would be very tight starting in 2025 and would be deficient beginning in 2028 if forced outages are experienced at the historical rate.**
- 3** The reliability plan is heavily reliant on the timely completion of planned transmission projects. **If the planned projects were delayed for any reason, the grid's ability to reliably serve customer demand would be jeopardized.**
- 4** **Extreme events such as heatwaves or storms could result in deficiencies to serve demand statewide, especially in New York City considering the plans included in the CRP.** This outlook could improve as more resources and transmission are added to New York City.



The latest study demonstrates that our reliability margins are thinning to concerning levels beginning in 2023. We have to move carefully with the grid in transition in order to maintain reliability and avoid the kind of problems we've seen in other parts of the U.S.

— Zach G. Smith
NYISO VP of System
& Resource Planning

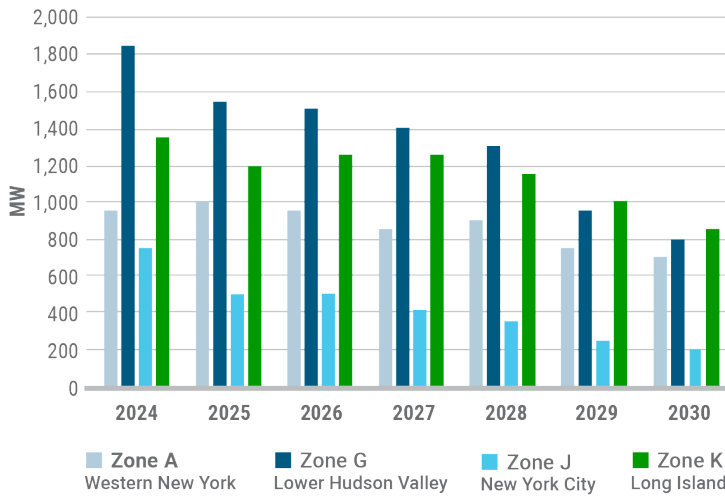


Extreme weather strains on NY's grid:

- Extreme weather driven by climate change is impacting the grid around the country. The grid in NY must be resilient to the risk of climate change.
- The system may cross a reliability "tipping point" in future years such that the transmission system could not fully serve the demand.
- Careful planning and investment is needed to maximize the clean-energy benefits of solar and both onshore and offshore wind generation.

CRP FINDINGS: Power Grid Reliability Risks & Actions NYISO is Taking

Zonal Resource Adequacy Margins



Reliability margins will shrink in upcoming years due primarily to the planned unavailability of simple cycle combustion turbines that are impacted by the DEC's Peaker Rule.

« **This figure** shows the tightening of zonal resource adequacy margins for western New York (Zone A), lower Hudson Valley (Zone G), New York City (Zone J), and Long Island (Zone K). New York may experience even smaller resource adequacy margins if additional power plants become unavailable or if demand is greater than forecasted.

Actions NYISO is taking to maintain bulk power system reliability:

✓ Monitor Risk Factors

Reliability margins will shrink in upcoming years. Regulatory changes, like the DEC's Peaker Rule, will impact resource availability. New York may experience even smaller margins if additional power plants are unavailable or if system conditions are more severe than currently planned for. The dangers of severe weather impacting the grid have been demonstrated around the country in the past year. Through our reliability planning processes, we will continue to identify and address risks to reliability and resilience.

✓ Monitor & Track Local Transmission Owner Investment Plans

Local transmission owner plans need to complete the projects identified in their Local Transmission Owner Plans (LTPs), on schedule and as planned.

✓ Monitor & Track Potential New Developments of the Grid in Transition

The energy industry is in transition. Economic conditions, governmental programs and environmental regulations are changing quickly. The NYISO will monitor and track these developments and consider their potential impacts in future system reliability planning studies.

✓ Consider Enhancements to Reliability and Resilience Rules & Procedures

Reliability rules require that New York maintain enough supply capacity to meet forecasted peak demand levels. The CRP demonstrates that system margins are expected to narrow. Revisions to current reliability rules, procedures, and practices may be necessary as the impacts of climate change, along with changes to economic conditions and public policies, place new demands on the grid.

✓ Continue Coordination with the New York State Public Service Commission

The NYISO will continue to coordinate its system planning activities with the New York Public Service Commission (PSC). Transmission needs declared by the PSC to support the CLCPA are leading to the largest investment in decades. If the PSC determines that there is an additional public policy need for new transmission, the NYISO will solicit projects from developers to fulfill that need. In addition, new clean energy programs are being designed to increase deployment of energy efficiency, renewable generation and DERs.

➔ **Download the 2021-2030 CRP Report** at www.nyiso.com/2040grid

2021CRP-11_19_21 V1

Follow us



www.nyiso.com/blog

