

20-Year Outlook Examines Policy Impacts on Future Resource Needs

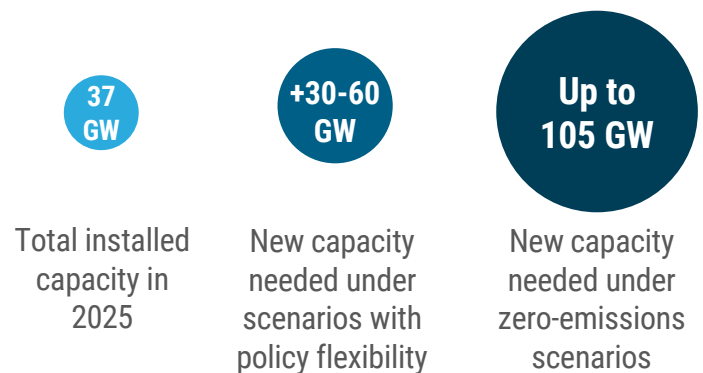
NYISO's 2025-2044 *System & Resource Outlook* (the Outlook) uses a scenario-based planning approach to examine how New York's power system may evolve over the next 20 years.

The Outlook is intended to help policymakers, regulators, and developers understand how different policy decisions can shape New York's electric grid.

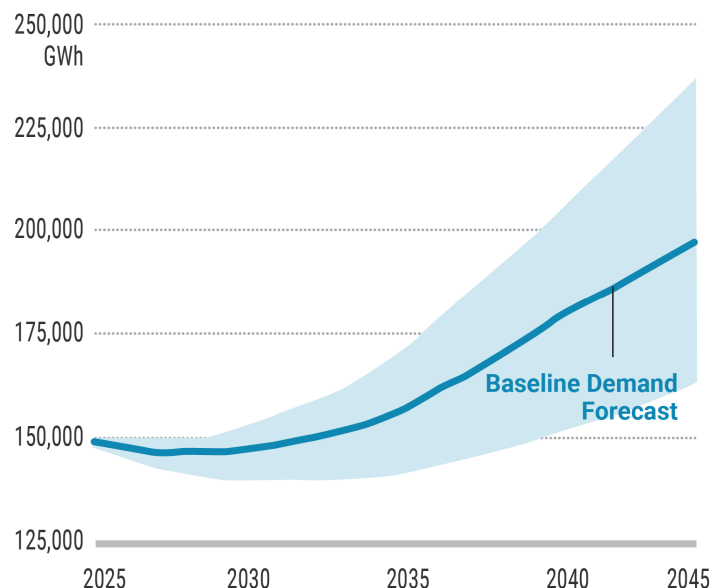
Key findings from the Outlook

- All policy-driven scenarios examined in the Outlook require 2-3X additional generation capacity with a different resource mix than exists today.
- No dispatchable emissions-free technology is available at commercial scale to replace the energy and flexibility that fossil fuel generators provide – making the goal of a zero-emissions grid by 2040 unachievable. The continued, limited operation of fossil fuel resources can provide reliability benefits with lower capital investments.
- Electricity demand is expected to increase over the next two decades, driven by electrification policies and the emergence of new large loads. Together, these trends not only increase total electricity needs but also reshape when and where demand occurs on the system.
- Public policy design directly impacts the scale, timing, and type of future resource development. Futures requiring a zero-emissions grid drive higher levels of installed capacity and a different mix of resources than futures that allow limited emissions from repowered and new dispatchable fossil generation.
- Transmission capability increasingly determines whether new resources can serve load. The location of generation relative to demand makes transmission a critical factor in system performance and public policy achievement.

Policy-Driven Capacity Scenarios Demonstrate the Need for More Resources



Forecasted Annual Demand for Electricity Rises Across All Scenarios



20-Year Outlook Recommendations and Opportunities

Recommendations to support reliability

Consistent with the NYISO's role in providing fact-based planning insights, these recommendations highlight considerations that influence the timing, scale, and location of resource and transmission development. Together, they emphasize actions that can minimize risks and support reliable grid operations as demand grows and the resource mix evolves.

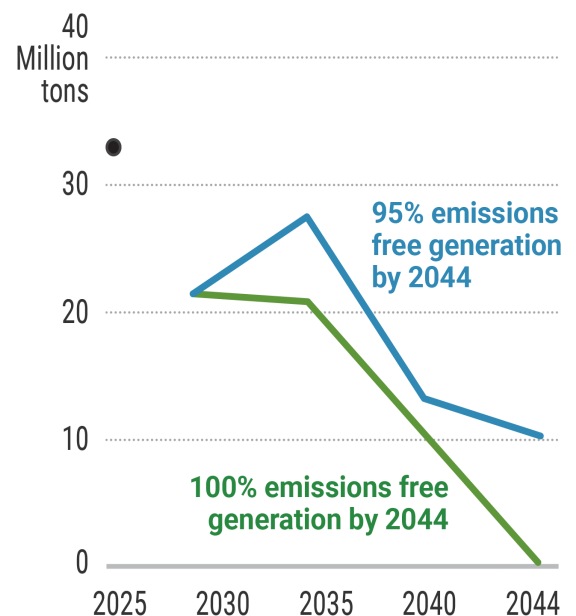
- 1. A mix of new resources, including more efficient new and repowered fossil generation, is essential.** Across all scenarios, the system requires resources that can serve demand during peak conditions and periods of low renewable output. The timely development of these resources depends on public policy, supply chain availability, siting, and permitting.
- 2. Coordinate the timing of resource additions, repowering opportunities, and retirements to reduce transition risk and avoid tightening system conditions.** As demand increases and existing generation retires, system conditions become increasingly sensitive to the pace and sequencing of new resource development.
- 3. Increase transfer capability across the Central East transmission interface.** Enhancing dynamic voltage support represents an opportunity to reduce congestion, improve energy deliverability, and better utilize existing and future generation as system conditions evolve.
- 4. Support zero-emissions generation development in Northern New York with bulk transmission upgrades** to enable energy deliverability from this region.

Reducing carbon emissions

The Outlook also evaluates CO₂ emission reductions in the electricity sector. The following chart specifically looks at the 95 x 2044 and 100 x 2044 scenarios under baseline demand.

These results are best interpreted as a planning lens on policy tradeoffs – balancing the scale of investment, pace of emissions reductions, and resource viability.

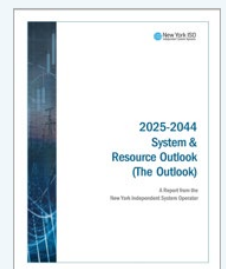
Scenario-based CO₂ Emissions



Opportunity for policy and wholesale markets to align

The magnitude of resources needed to meet demand under all scenarios examined in the Outlook is unprecedented. These scenarios demonstrate that adjusting the state's targets for renewable buildout and emissions reductions greatly influences the scale and composition of future resource development.

Alignment across market signals, investment incentives, and public policy is essential to develop new generation and transmission resources that will maintain reliability as demand grows and aging generation retires.



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