New York ISO
Independent System Operator

2026 RNA Findings

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Reliability Planning

Management Committee

October 28, 2026

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Objective

- Describe the key system trends driving Reliability Needs
- Summarize Reliability Needs and scenario results
- Outline how solutions to Reliability Needs will be identified
- Seek Management Committee review and vote on the 2026 RNA

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2026 RNA Report

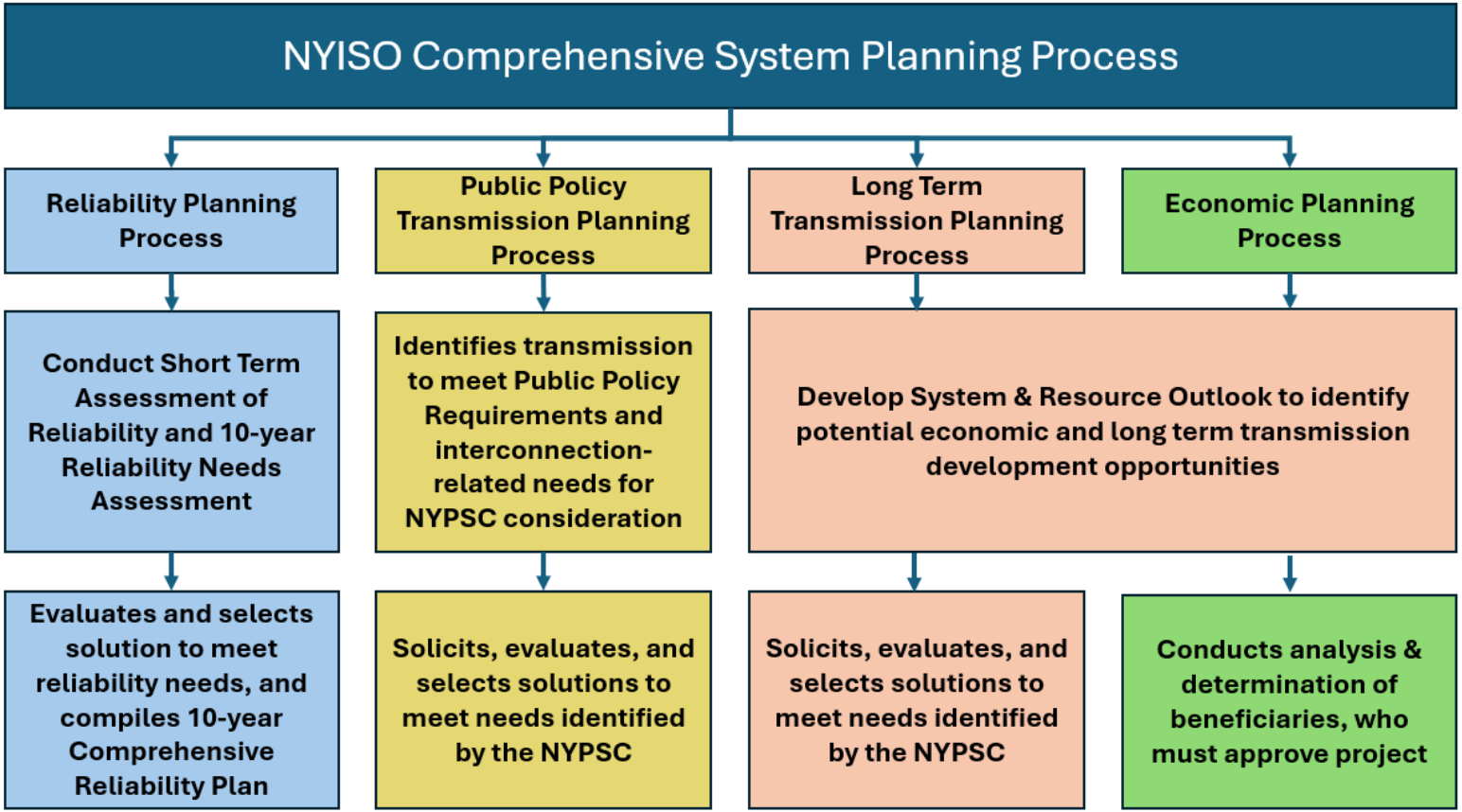
- RNA assumptions, results, and report have been reviewed and discussed at eleven TPAS/ESPWG meetings
- The RNA report and appendices contain revisions based on stakeholder discussion at the October 15, 2026, Operating Committee and are shown in a redline version included with the meeting materials

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Reliability Planning Process

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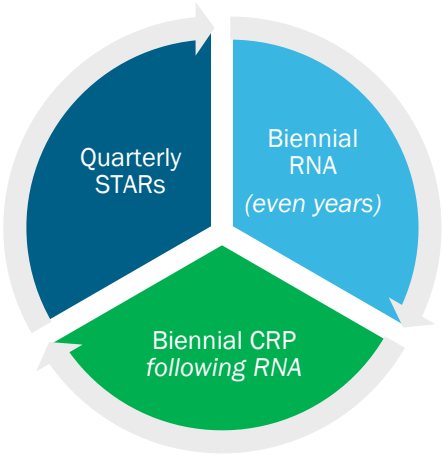


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Reliability Planning Studies

- **Short-Term Assessments of Reliability (STARs)**
  - Conducted quarterly in direct collaboration with Transmission Owners
  - Five-year study with a focus on addressing needs arising in the first three years
- **Reliability Needs Assessment (RNA)**
  - Conducted biennially to identify long-term New York State Bulk Power Transmission System (BPTF) reliability needs in years 4-10 on Base Case
  - Considers Transmission Owner LTPs, proposed generation and proposed transmission that meet inclusion rules, demand forecasts, and updates to the system
  - If Reliability Needs are identified, the NYISO issues a competitive solicitation for market-based and alternative regulated solutions, and the Responsible Transmission Owner(s) is required to propose a regulated backstop solution
- **Comprehensive Reliability Plan (CRP)**
  - Biennial report that documents the plans for a reliable grid over the 10-year planning horizon
  - If applicable, includes an assessment of viability and sufficiency and an evaluation and selection of the more efficient or cost-effective transmission solution to a Reliability Need(s) in years 4 through 10



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Key System Trends

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Key Assumptions

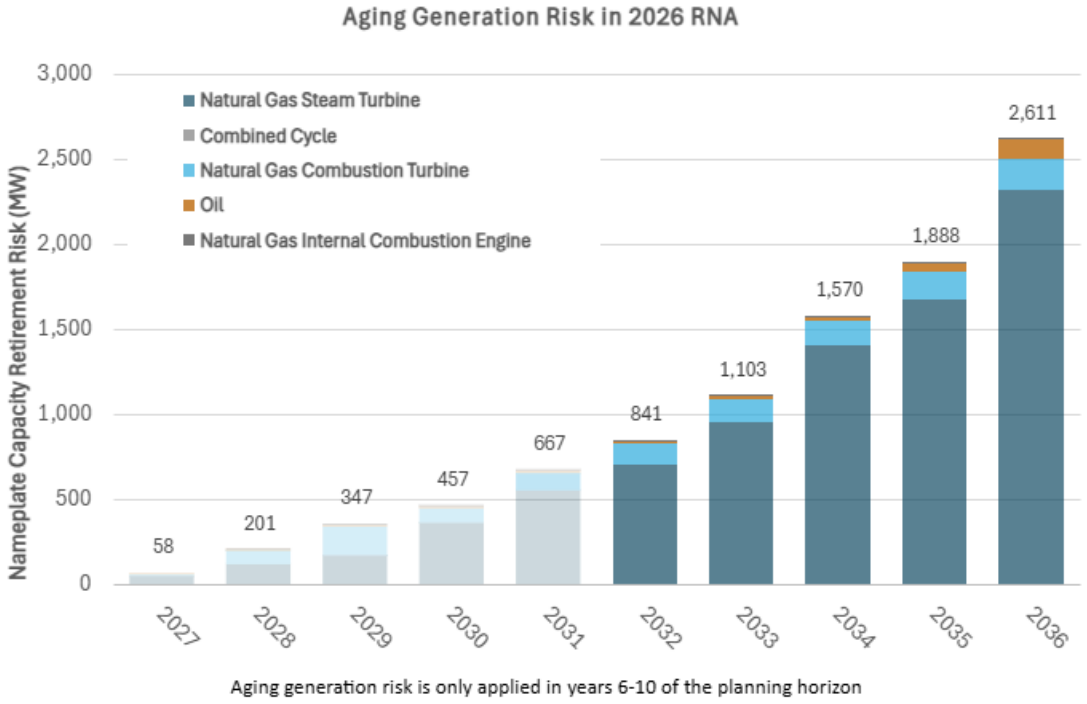
- Key assumptions were reviewed and discussed with stakeholders at the beginning of the RNA. Highlights are summarized below:
  - Generation
    - ~6,200 MW of solar, wind, and storage proposed projects
    - 517 MW of NYPA small plants assumed retired in 2031
    - ~5,400 MW of non-firm gas out of service during winter peak
  - Large Loads
    - ~2,700 MW of large load projects
  - Emergency assistance decreases from 3,500 MW to 2,500 MW by 2036 for resource adequacy assessment
    - 100 MW reduction applied annually beginning in the first study year
  - Transmission security margin incorporates NYCA 5-year zonal-average EFORd values
  - Generation aging risks considerations – details on next slide

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Aging Generation

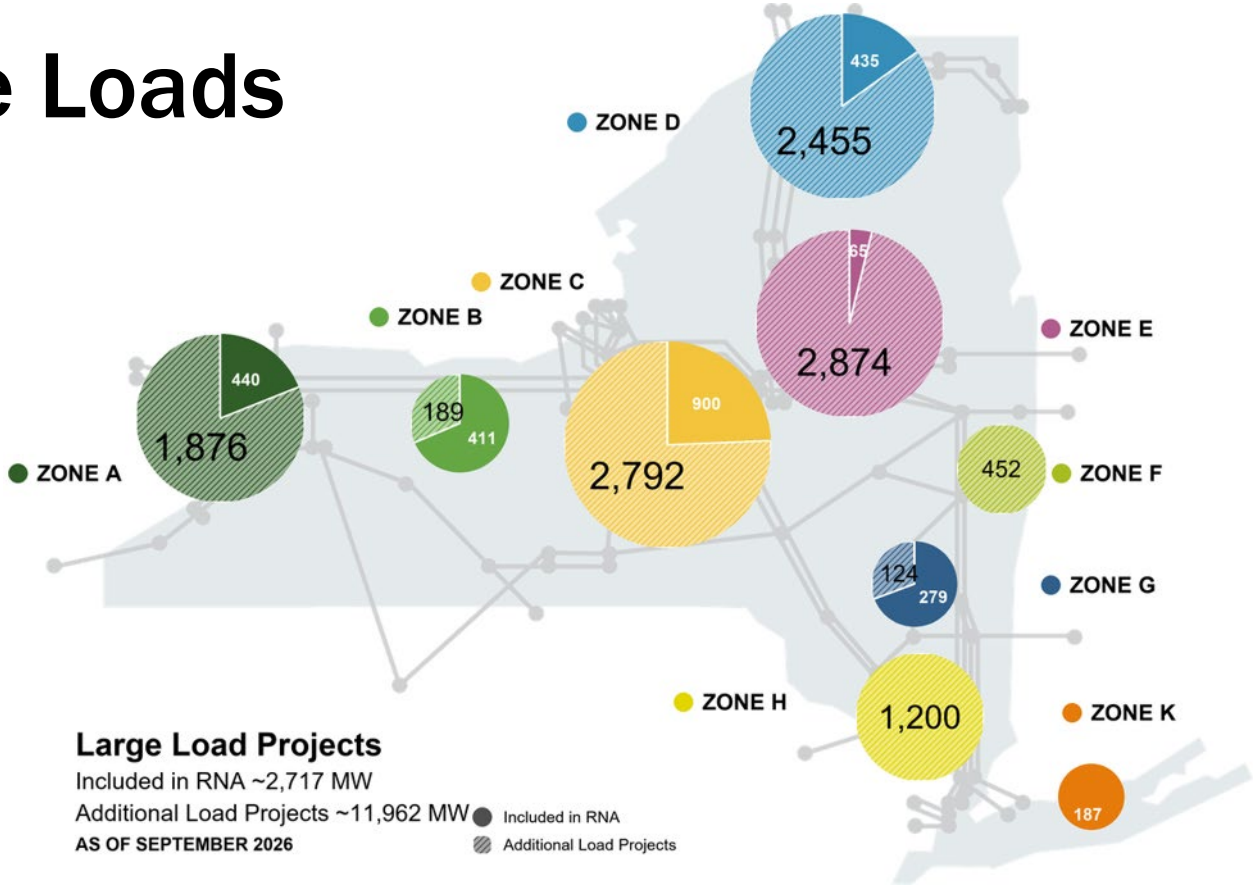
- The aging generation model applies to years 6 through 10
- Units contribute to aging generation risk after crossing a threshold age
  - For the Base Case, this is the age by which 95% of peer capacity had retired



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Large Loads



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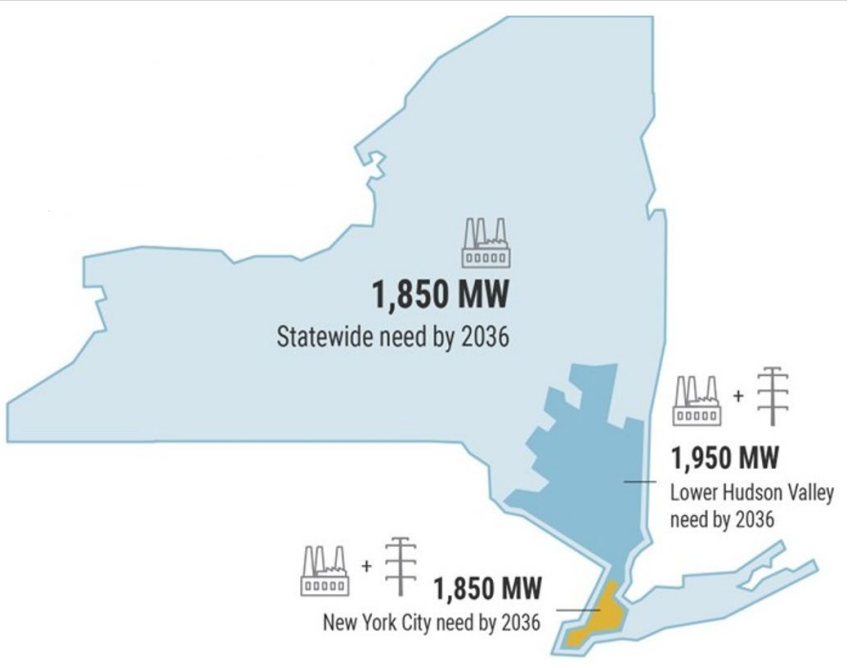
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Reliability Needs & Key Findings

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Reliability Needs Summary

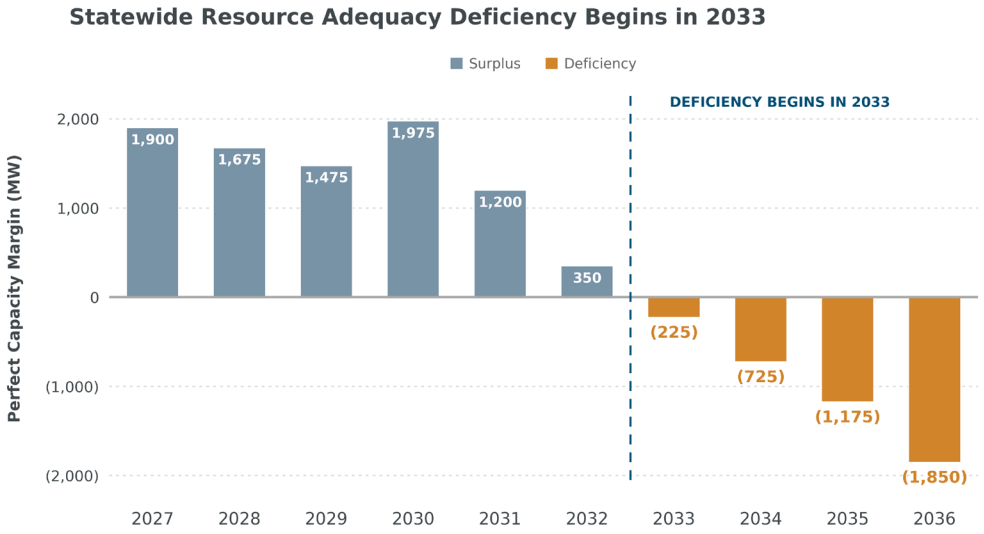
- This RNA identifies three Reliability Needs beginning in 2032:
  - A statewide resource deficiency beginning in 2033
  - A transmission-constrained deficiency in New York City beginning in 2032
  - A related transmission security need in the Lower Hudson Valley also beginning in 2032
- Taken together, the findings indicate that maintaining a reliable grid will require at least 1,850 MW of new generation resources appropriately located with the necessary operating characteristics, coupled with transmission capability necessary to deliver those resources
- In-state transmission alone will not resolve the statewide need



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Statewide Need



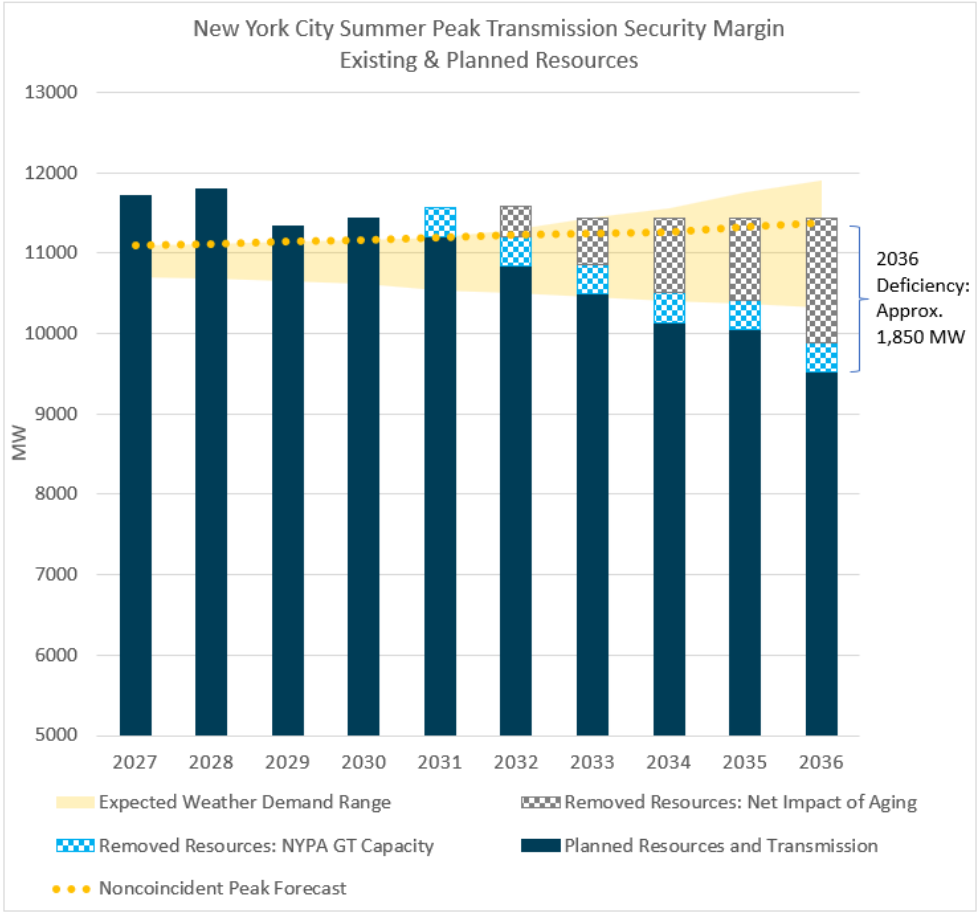
- The base case exceeds the state's resource adequacy criterion starting in 2033 with a deficiency of approximately 225 MW and gets worse through 2036 with a deficiency greater than 1,850 MW
- Unlike previously identified reliability needs, this resource deficiency is not driven by internal transmission constraints but rather is an issue of insufficient statewide supply to meet projected demand

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New York City Need

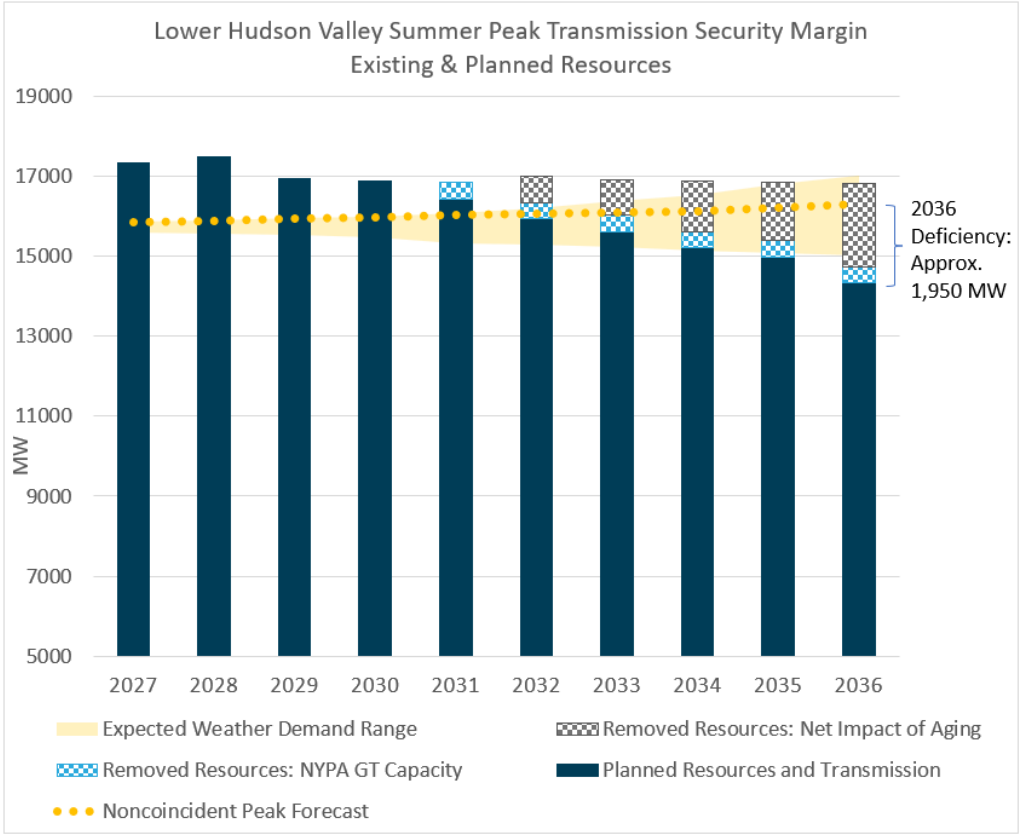
- New York City is deficient by approximately 400 MW for 7 hours in summer 2032, with the deficiency growing to approximately 1,850 MW for 15 consecutive hours during the peak demand day in summer 2036
- The deficiency also is observed in the winter with a deficiency of approximately 800 MW for 16 consecutive hours in 2036
- The identification of both summer and winter deficiencies indicates that effective solutions must provide reliable performance for a long duration across a broad range of seasonal conditions



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Lower Hudson Valley Need

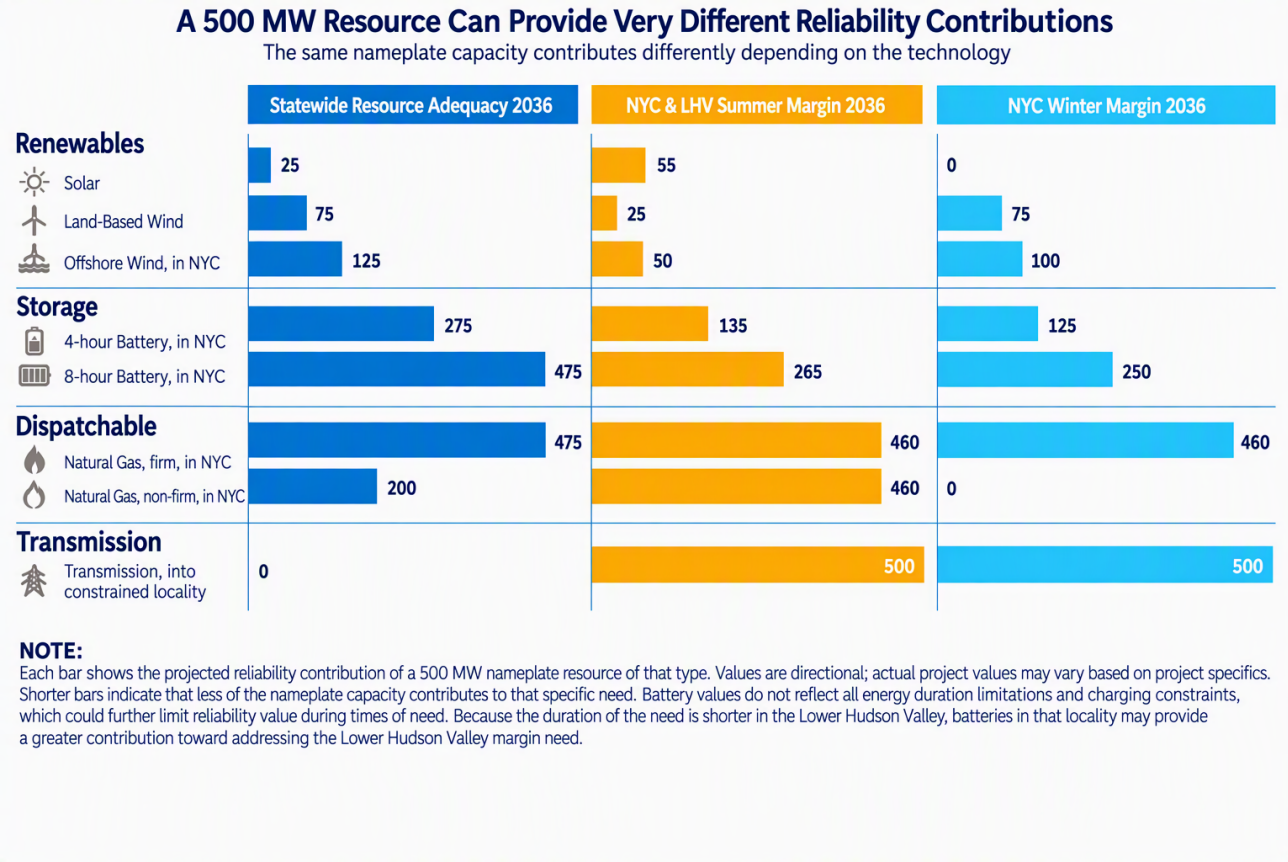
- The Lower Hudson Valley is deficient by approximately 130 MW for 2 hours in summer 2032, increasing to approximately 1,950 MW for 7 consecutive hours during the peak demand day in summer 2036
- Lower Hudson Valley transmission security Reliability Need is driven by the same principal factors as the New York City deficiency—forecast demand growth, the projected effect of aging generation, and the assumed retirement of the NYPA small gas plants



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Reliability Value of Potential Solutions

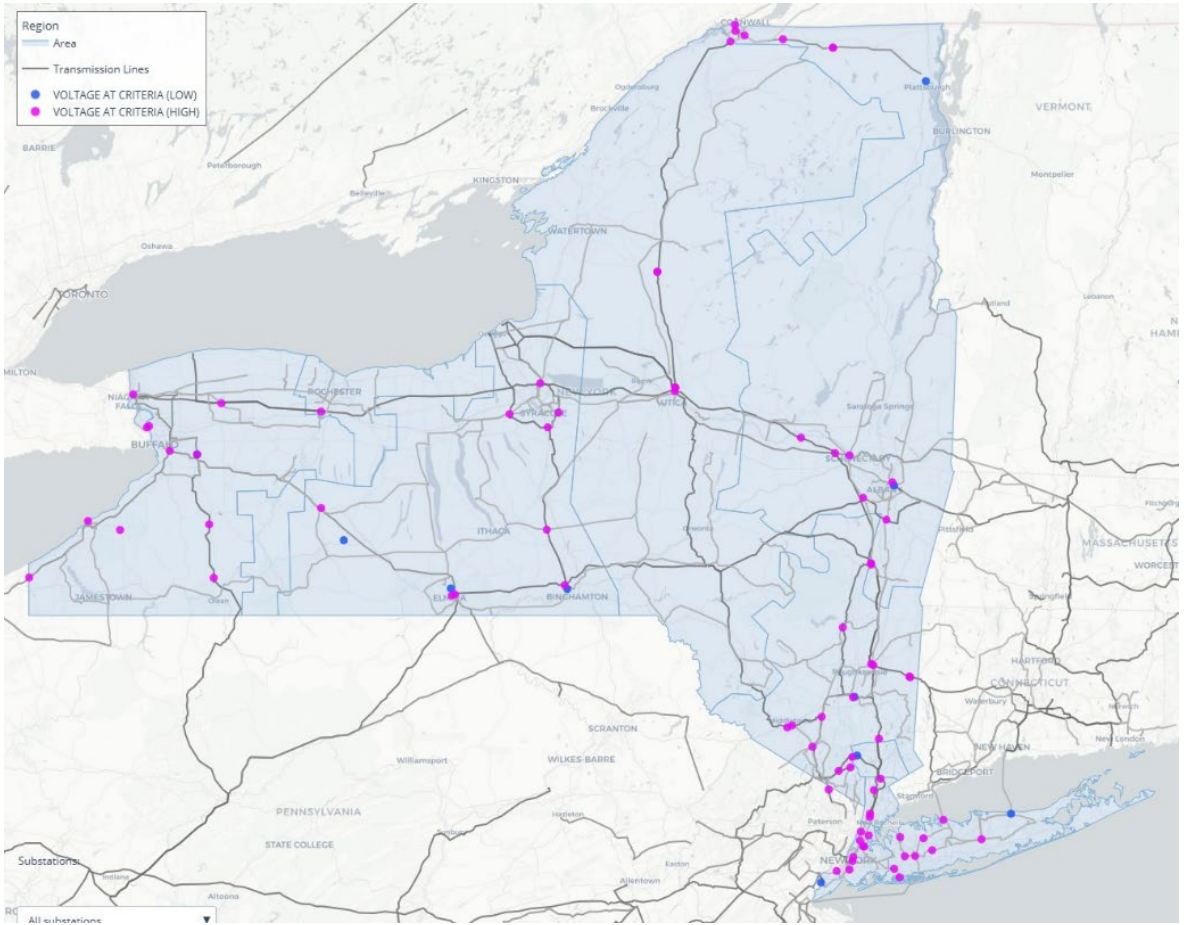


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System Voltages at Limits

- The RNA found little remaining voltage-control margin in some regions during nighttime low-demand conditions, with all or nearly all available devices needed to maintain acceptable voltages
- Locations facing both high- and low-voltage concerns should be prioritized for evaluation of dynamic reactive devices to strengthen voltage control as system conditions change



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Scenario Results

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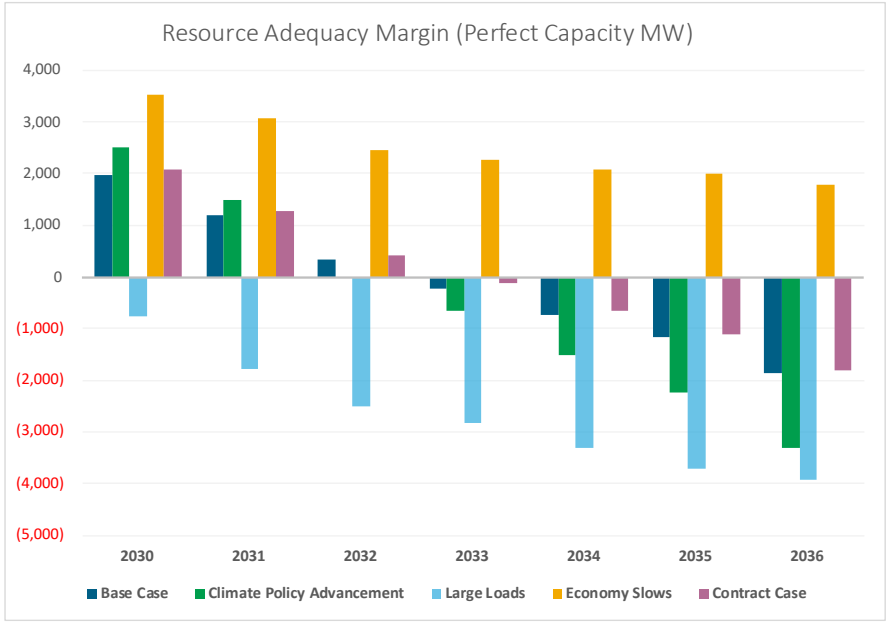
Scenarios in the 2026 RNA

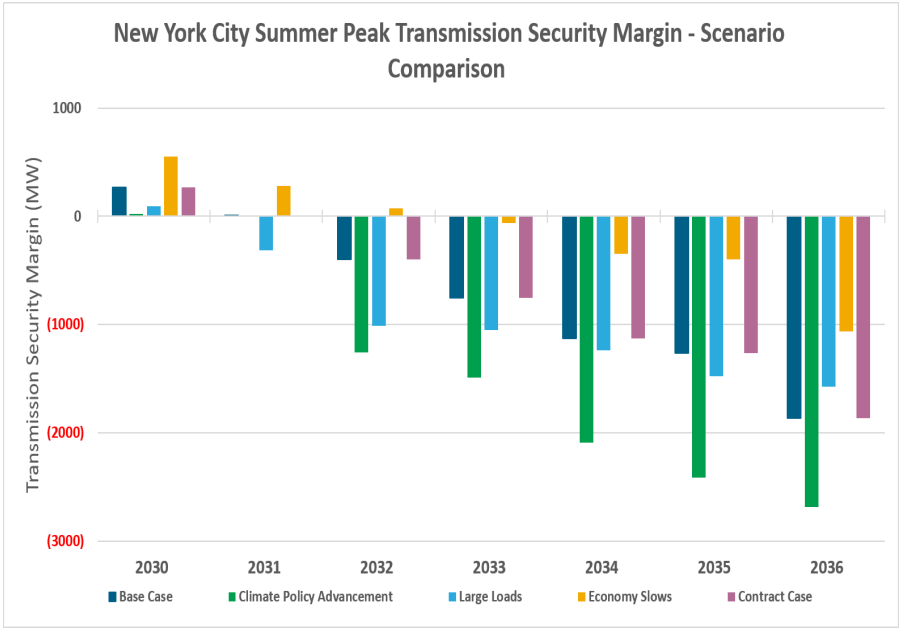
- The 2026 RNA considered two types of scenarios, both of which are informational
- Five scenarios intended to represent a diverse range of plausible system outcomes that cannot be fully captured in the RNA Base Case
  - "Climate Policy Advancement"
    - Tests reliability impacts of policy-driven resource changes towards a reduced-emissions future, including accelerated retirements, increased transportation and heating electrification, and additional clean generation.
  - "Large Loads"
    - Evaluates reliability under higher large-load growth assuming more aging generation is retained and having lower imports as neighboring systems would experience similar load growth.
  - "Economy Slows"
    - Examines a lower-growth future with reduced demand and delays to planned resource projects.
  - "Outlook Contract"
    - Evaluates the system using generation and transmission project assumptions consistent with the Outlook Contract Case, adding all generation projects with financial commitments (e.g., NYSERDA and offshore wind REC contracts) and NYPSC-approved transmission projects as of May 2026.
  - "IBR Voltage Control"
    - Assesses how inverter-based resources and changing power flow patterns affect voltage performance and reactive power needs. Only transmission security analysis was performed for this scenario.
- Other informational scenarios were analyzed to test the robustness of the analysis in this RNA, to identify risks to reliability, and to inform the nature of potential solutions.

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Scenario Results





Note: Negative margin indicates insufficient available resources to serve expected demand

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Other Informational Scenarios

- **Repowering to address aging generation risk**
  - If aging generators are modernized, repowered, or replaced such that their capability remains available to the grid, reliability outcomes improve significantly
  - The Lower Hudson Valley transmission security margin would remain sufficient throughout the study horizon and statewide resource adequacy would remain within criteria until 2036, although the New York City transmission security margin would still become deficient beginning in 2032
- **Large load impacts**
  - If the forecasted large load growth through 2036 does not materialize, there would not be statewide deficiencies
- **Propel NY reliability benefits**
  - Without the Propel NY transmission project, the Long Island margin would be deficient starting in 2030. Additionally, the statewide deficiency would occur a year sooner and would be roughly 550 MW larger.

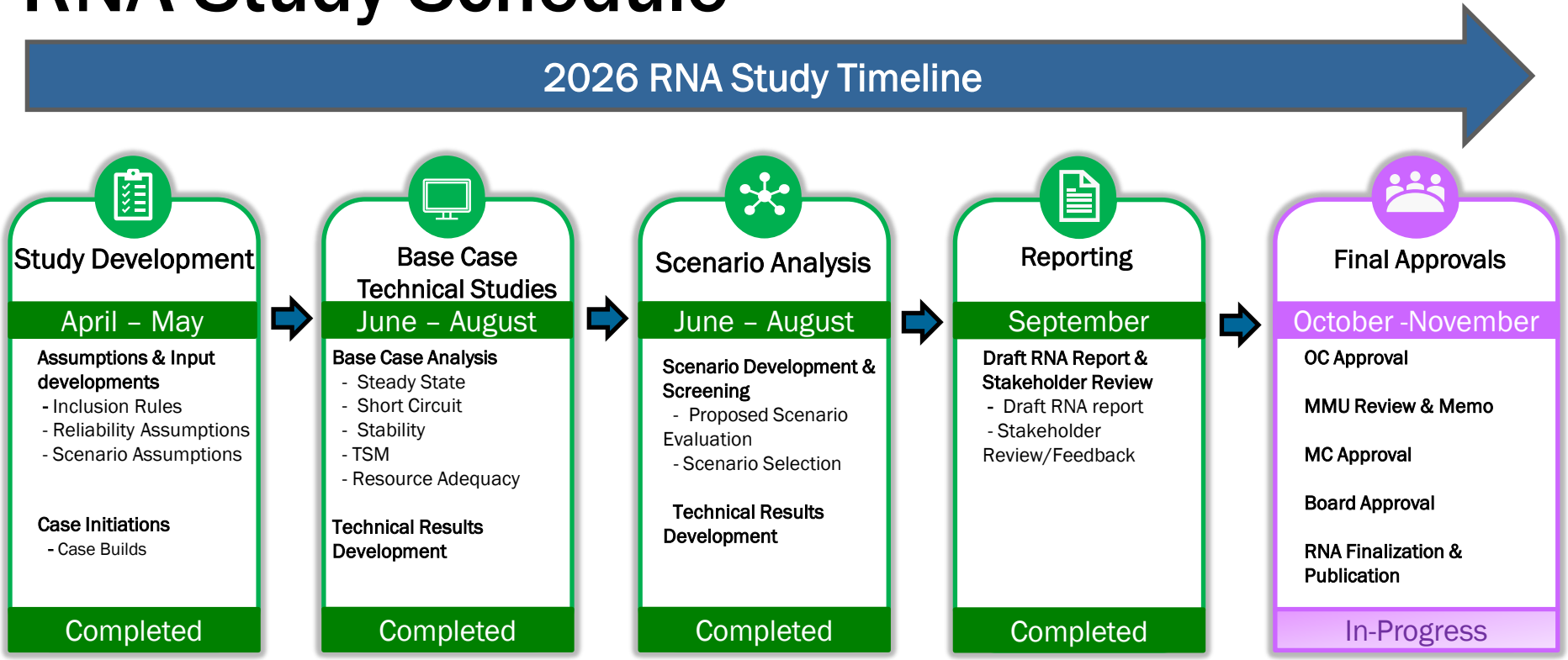
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Next Steps

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RNA Study Schedule



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Reliability Planning Process

- **Reliability Planning Process Reform**
  - Efforts are ongoing to revise the Reliability Planning Process to (a) account for a wider range of plausible outcomes via scenario planning and (b) enhance the ability of supply-side solutions to address resource shortfalls
- **RNA Base Case Update**
  - Following approval of this 2026 RNA by the Board of Directors, the NYISO will incorporate eligible system updates that meet the inclusions rules and may reduce or eliminate the Reliability Needs
- **Solution Solicitation and Initial Review**
  - If any Reliability Need remains after these Base Case updates, the NYISO will solicit market-based solutions, regulated backstop solutions, and alternative regulated solutions
- **Comprehensive Reliability Plan**
  - CRP documents the NYISO's determination of the viability and sufficiency of proposed solutions, the Trigger Dates of proposed regulated solutions, and any recommendations on the implementation of regulated solutions to maintain system reliability. Ultimately, the CRP will lay out the plan to meet the Reliability Needs identified in this RNA

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2026 RNA Data Catalog

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2026 Reliability Needs Assessment Data Catalog

Report

Report Placeholder

Study Summary

Summary Placeholder

Report Appendices

Appendix A: 2026 Reliability Needs Assessment Glossary
Appendix B: The Reliability Planning Process
Appendix C: Inclusion Rules Application
Appendix D: Resource Adequacy Models and Assessments
Appendix E: Transmission Security Assessment
Appendix F: Scenarios & Sensitivities
Appendix G: Historic Congestion
Appendix H: Reliability Compliance Obligations and Activities
Appendix I: Reliability Attributes of Dispatchable Resources

Other Relevant Documents

2026 RNA Scenarios Posting
2026 Gold Book
STARs Web Location
2025 Q3 STAR Solutions Selection
2025-2034 CRP
2024 RNA

NYSRC RR rev 47
NPCC Directory 1 July 2, 2024 rev
NERC TS

Stakeholder Presentations

April 7, 2026 TPAS/LFTF/ESPWG
Various demand forecasts
April 29, 2026 MC
2025 Q3 STAR solutions
May 6, 2026 ESPWG/TPAS
RNA draft key assumptions,
RA Assumptions Matrix
TS Assumptions Matrix
RPP Manual updates
May 14, 2026 OC
RPP Manual updates
May 20, 2026 ESPWG/TPAS
RNA scenario assumptions
June 1, 2026 LFTF/TPAS/ESPWG
Additional demand forecasts
June 25, 2026 TPAS/ESPWG
RNA potential scenarios
July 7, 2026 LFTF/TPAS/ESPWG
RNA potential scenarios
Load Forecast Uncertainty updates

July 23, 2026 TPAS/ESPWG
RNA preliminary Base Case draft results
Aug 3, 2026 ESPWG/TPAS
Scenario List
Scenarios Narrative
Sept. 1, 2026 ESPWG/TPAS
Base Case Results
Sept 14, 2026 ESPWG/TPAS
Scenarios Results
Sept 21, 2026 ESPWG/TPAS
Draft RNA Report
October 1, 2026 ESPWG/TPAS
Draft Report with Executive Summary
October 8, 2026 ESPWG/TPAS
Draft RNA Report
Draft Appendices
October 15, 2026 OC
RNA Findings, Draft Report & Appendices

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Questions?

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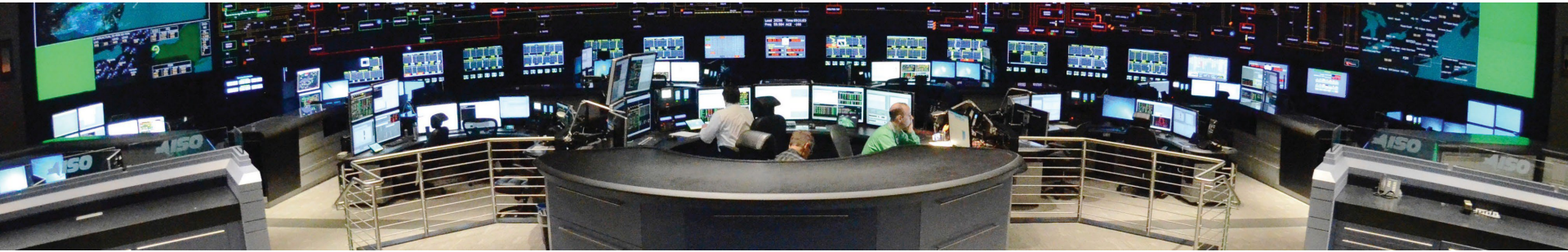
Our Mission and Vision

Mission

Ensure power system reliability and competitive markets for New York in a clean energy future

Vision

Working together with stakeholders to build the cleanest, most reliable electric system in the nation



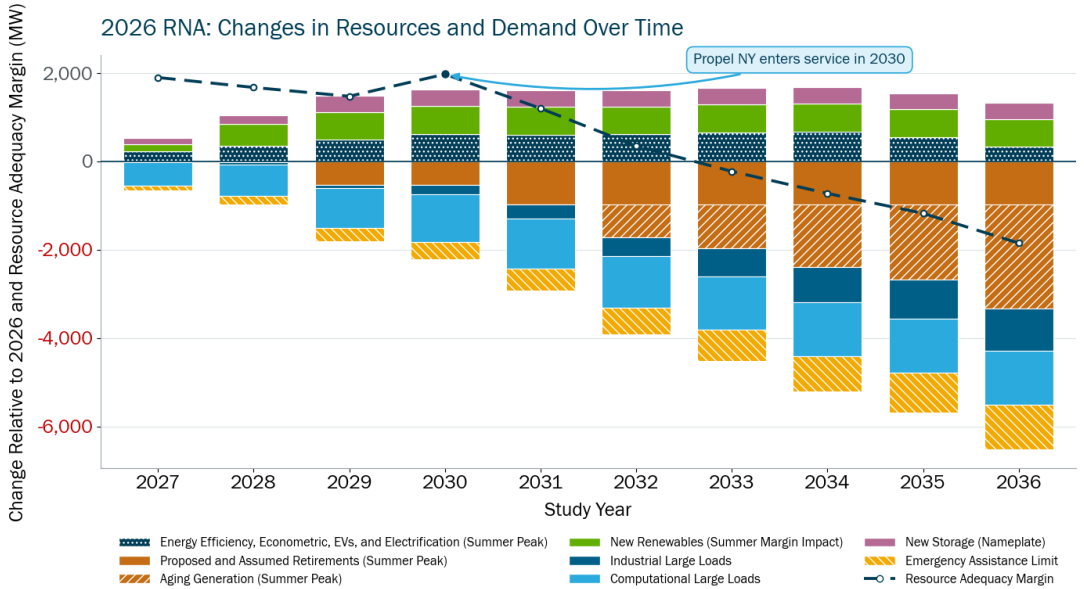
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Appendix: Additional Details

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Reliability Impact of Key Trends

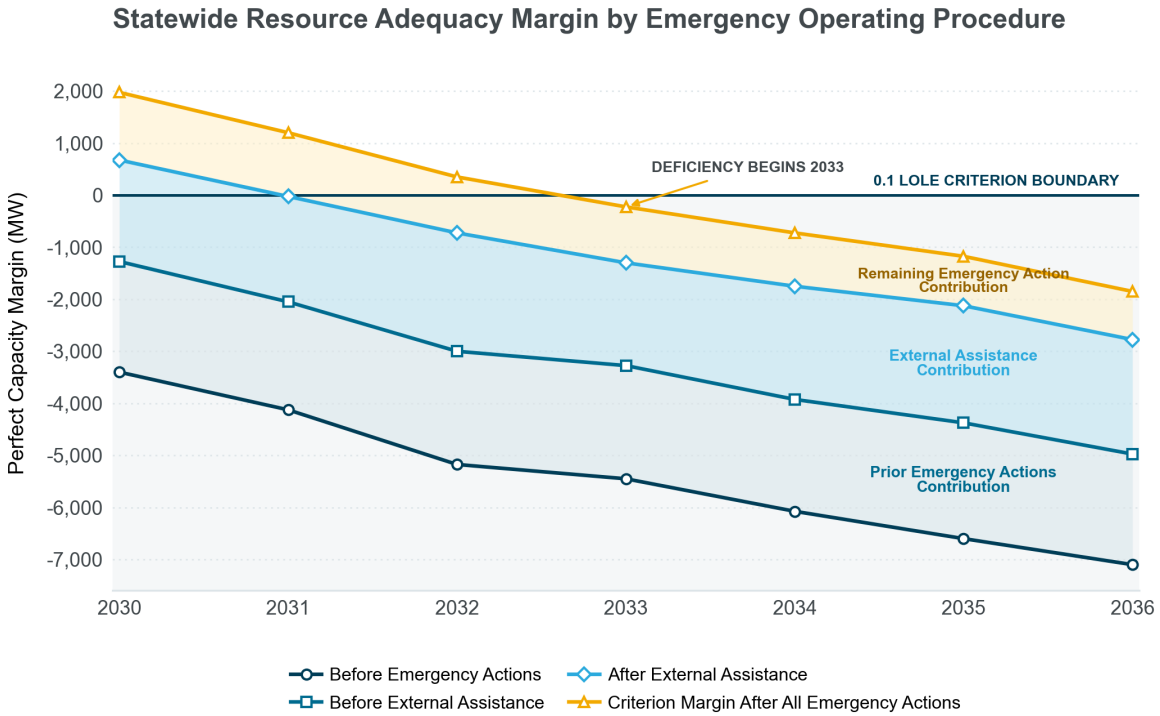


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Statewide Margin by EOPs

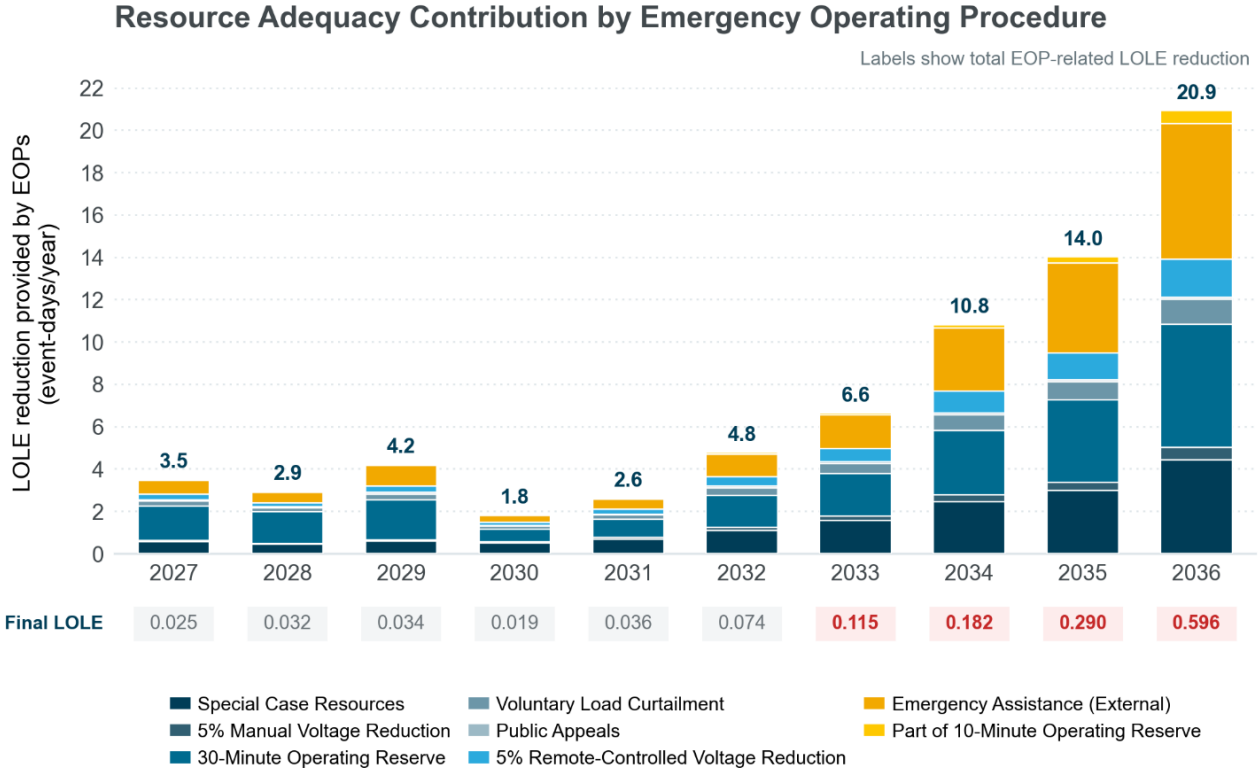
- While the identified deficiency begins in 2033, reliability conditions tighten well before a criterion violation occurs
- The analysis indicates increasing reliance on emergency operating procedures and external assistance to maintain reliability, reducing the system's ability to withstand unexpected changes in demand, resource performance, or imports



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Reliance on EOPs



Note: Each segment represents the reduction in LOLE between consecutive emergency actions.
Red Final LOLE values exceed the 0.1 event-day/year criterion.

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