



Consolidated Edison Company of New York, Inc.

July 2026 Reliability Needs Report

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CASE 25-E-0764

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1. Executive Summary

On December 18, 2025, the Commission directed Con Edison to develop a “New York City Reliability Contingency Plan” and to begin by filing a report with the Commission within 30 days identifying the specific reliability needs that Con Edison sees arising in its service territory, the dates of those needs, and the underlying assumptions and methodologies used in determining those needs.¹ The Commission further directed Con Edison to update that analysis every six months.²

The current July 2026 assessment updates the January 2026 findings that were filed with the Commission on January 20, 2026.³ In January 2026, Con Edison identified transmission security needs starting at 125 MW in 2032 and increasing to 750 MW in 2036.

As of July 2026, Con Edison projects transmission security needs in the New York City 345/138 kV Transmission Load Area (TLA) of 125 MW in 2033, reaching 675 MW by 2036. While the customer peak demand forecast used in the January 2026 findings remains unchanged, the projected needs have decreased and been deferred by one year. This reduction is driven by an updated transmission system topology (per the 2026 Gold Book / FERC 715 Filing), the inclusion of a 100 MW (400 MWh) energy storage project (Queue Position: 931) newly designated as a “FIRM” resource by the NYISO, and additional VDER energy storage assets that have sufficiently progressed in the SIR process since the previous forecast.

Further, Con Edison continues to project capacity shortfalls in the overall New York City 345/138 kV TLA, which constitutes the vast majority of Con Edison’s broader Transmission District,⁴ will continue to grow beyond the ten-year planning period covered by this report, reaching 850 MW by 2037 and 2,275 MW by 2045. These increasing long-term capacity shortfalls, if left unaddressed, would exacerbate the transmission security needs identified starting in 2033. The shortfalls represent straight-line mathematical projections based strictly on compounding annual load growth. On the customer and demand side, shortfalls are driven principally by continued economic growth in New York City as well as building and transportation electrification aided by state and local programs that advance the goals established by the Climate Leadership and Community Protection Act, offset partially by the adoption of distribution-connected battery energy storage systems and continued increases in energy efficiency. On the supply side, the shortfalls are driven primarily by generation retirements and state law limiting electric generation emissions, offset in part by gradual development of intermittent clean and renewable resources. The net impact of these dynamic factors in the demand and supply balance results in the expectation that capacity shortfalls in Con Edison’s Transmission District will rise significantly.

¹ Case 25-E-0764, *Proceeding on the Motion of the Commission to Address New York City Reliability Needs (Reliability Needs Proceeding)*, Order Initiating Proceeding and Directing Reliability Contingency Plan (Dec. 18, 2025), at 22.

² *Id.*

³ See *Reliability Needs Proceeding*, Con Edison January 2026 Reliability Needs Report (Jan. 20, 2026).

⁴ As defined in the NYISO Open Access Transmission Tariff (OATT), a Transmission District is “the geographic area in which a Transmission Owner, including LIPA, is obligated to serve Load, as well as the customers directly interconnected with the transmission facilities of the Power Authority of the State of New York.” See NYISO OATT, Section 1.20.

2. Introduction

This report serves as the first semiannual update to the January 2026 reliability needs assessment, as directed by the Commission. The January 2026 assessment identified a transmission security need within the New York City 345/138 kV TLA beginning in 2032 at 125 MW and increasing to 750 MW by 2036 (see Table 1 below).

Table 1: New York City 345/138 kV TLA Reliability Needs (January 2026 Assessment)

	2027-2031	2032	2033	2034	2035	2036
Peak MW Need	-	(125)	(275)	(400)	(600)	(750)
Total Hours	-	3	4	5	6	9
Start and End Time	-	- - - 15-16 16-17 17-18 - - -	- - 14-15 15-16 16-17 17-18 - - -	- - 14-15 15-16 16-17 17-18 18-19 - - -	- 13-14 14-15 15-16 16-17 17-18 18-19 - - -	12-13 13-14 14-15 15-16 16-17 17-18 18-19 19-20 20-21
~MWh by Hour	-	- - - 15-16: 125 16-17: 25 17-18: 50 - - -	- - 14-15: 100 15-16: 275 16-17: 175 17-18: 225 - - -	- - 14-15: 200 15-16: 400 16-17: 300 17-18: 375 18-19: 150 - - -	- 13-14: 175 14-15: 375 15-16: 600 16-17: 525 17-18: 575 18-19: 350 - - -	12-13: 75 13-14: 300 14-15: 525 15-16: 750 16-17: 675 17-18: 750 18-19: 500 19-20: 150 20-21: 50
Approx. MWh	-	(200)	(775)	(1,425)	(2,600)	(3,775)

The July 2026 assessment updates these findings to reflect recent grid developments, including updated transmission system topology, the formal designation of advanced resource projects as firm within the NYISO interconnection pipeline, and the inclusion of additional distribution-level storage assets enrolled in localized demand relief programs. As a result, the projected reliability need is deferred and reduced, emerging in 2033 at 125 MW and reaching 675 MW by 2036.

3. Updated Assumptions

The July 2026 assessment is based on the system represented in the database derived from the 2026 NYISO FERC Form No. 715 filing(s) and the NYISO Load & Capacity Data “Gold Book,” further updated consistent with the NYISO Reliability Planning Process practices, rules, and procedures.

The FERC Form No. 715, or the Annual Transmission Planning and Evaluation Report, is a mandatory federal filing that provides a highly granular technical snapshot of the high-voltage transmission grid. FERC

715 contains sensitive data used primarily by engineers and regulators for advanced power system modeling. Power Flow Base Cases are the core “database” component, consisting of mathematical models (typically in PSS®E format) that simulate the physics of the grid based on actual or projected grid topology. They show exactly how power moves across transmission lines, including voltages, real/reactive power flows, and transformer settings under various seasonal and future load conditions.

This database is classified as Critical Energy Infrastructure Information and can be requested directly from the NYISO.⁵

3.1 Resource Additions and Interconnection Updates

While baseline demand assumptions remain identical to the January 2026 filing,⁶ the near-term reliability gap has been mitigated by the progression of commercial and distributed energy resources through the interconnection process.

3.1.1. Large-Scale Energy Storage Systems

The July 2026 assessment incorporates a new utility-scale energy storage resource that has reached a critical regulatory and operational milestone in the regional planning process since the January report was published:

- NYISO Queue Position 931: A 100 MW / 400 MWh (4-hour duration) battery energy storage system is now modeled as an active, future in-service asset. Crucially, the NYISO formally designated this facility as a FIRM project in its Q1 2026 Short-Term Assessment of Reliability (STAR) report.⁷ Because the project has met the stringent developer and interconnection milestones necessary to achieve FIRM status under the NYISO planning rules, it is now included in the baseline reliability models starting in winter 2026. The integration of this dispatchable asset directly defers the emergence of localized transmission overloads and reduces the peak compensatory injection requirements within the TLA.

3.1.2. Value of Distributed Energy Resources (VDER)

In addition to large-scale, transmission-connected storage, the update accounts for a cumulative increase in localized, distribution-level storage assets operating under the VDER program. These distributed battery systems have advanced significantly in Con Edison’s interconnection process over the last six months.

⁵ See NYISO, Critical Energy Infrastructure Information Non-Disclosure Agreement, *available at* nyiso.tfaforms.net/187.

⁶ See *Reliability Needs Proceeding*, Con Edison January 2026 Reliability Needs Report (Jan. 20, 2026). Unless otherwise stated, all assumptions within the Company’s January 2026 Reliability Needs Report remain unchanged, including those in *Section 3.2: Generation Retirements/Additions*.

⁷ NYISO, *Short-Term Assessment of Reliability: 2026 Quarter 1*, (Apr. 15, 2026), *available at* <https://www.nyiso.com/documents/20142/16004172/2026-Q1-STAR-Report-Final.pdf/a5fd3388-ea22-ff21-7f95-490356af30f5>.

Unlike intermittent generation, these VDER storage resources are modeled with highly specific operational profiles based on standardized tariff charging windows and formal contingency program parameters:

- Charging Window: Restricted strictly to off-peak hours, typically, from midnight to 8:00 AM, ensuring these assets do not exacerbate daytime system stress.
- Discharging Windows (CSRP Blocks): Actively dispatched during periods of high system demand using call windows associated with Con Edison's Commercial System Relief Program (CSRP) at the time of the signing of the interconnection agreement. To address localized peak needs across TLA, these VDER storage projects fall into four distinct, four-hour operational capability blocks:
 - Block 1: 11:00 AM to 3:00 PM
 - Block 2: 2:00 PM to 6:00 PM
 - Block 3: 4:00 PM to 8:00 PM
 - Block 4: 7:00 PM to 11:00 PM

Because these distributed battery resources are located downstream of key transmission constraints, the progression of projects across these four CSRP discharge blocks can provide peak-shaving capabilities, especially when backed by long-term contractual performance obligations. Stacking these structured, four-hour enrollment profiles onto the 24-hour baseline system model provides targeted injections, enabling reductions in the net reliability need within the New York City 345/138 kV TLA.

4. Assessment

Con Edison's Transmission System is divided into 17 TLAs. In determining the reliability of each of the TLAs relative to the established design criteria, transmission and/or generation resource constraints are evaluated. In addition, each TLA's design contingency level depends on its Bulk Power System or Bulk Electric System status. A TLA may be designed to second contingency (N-1/-1/-0) or to first contingency (N-1/-1). The list of Con Edison's TLAs with their design contingency level can be found in Specification TP-7100 Transmission Planning Criteria.⁸

The study uses the Siemens PTI PSS®E and PowerGem TARA programs.

4.1 New York City 345/138kV Transmission Load Area – Criteria

Con Edison's New York City 345/138 kV TLA is designed and operated for the occurrence of a second contingency. Con Edison's definition of a second contingency means that a TLA is planned to withstand, at peak customer demand, the most severe of two independent contingencies and return the electrical system within its normal parameters, expressed as N-1/-1/-0. This is the sequence:

- The "N" represents the system in its normal state (i.e., all generators, transmission lines, transformers, etc. are operating in-service within normal parameters).
- The "N-1" is a basic standard for reliability. (The system is constantly operated, in technical terms "secured," to an N-1.) The system must be able to handle a single contingency without causing a power outage or damage to equipment. In this case, the rest of the system immediately and

⁸ Con Edison Transmission Planning Criteria (TP-7100-19) (effective November 2022), *available at* <https://www.coned.com/-/media/files/coned/documents/business-partners/transmission-planning/transmission-planning-criteria.pdf>.

automatically reroutes the power through remaining transmission after a contingency has occurred, and the remaining equipment handles the full load. There is no planner (or operator) action.

- The “N-1/-0” is an intermediate step where the planner (or operator) has a short time to adjust the system to stabilize it after the first loss. This could mean, for example, turning on a generator, ramping up generator output, or rerouting power flows. The goal is to get the system into a normal state ready to withstand another event.
- The “N-1/-1” represents the system in a state where one element is out-of-service and a second contingency occurs. Again, like step N-1, the system must be able to handle this contingency without causing a power outage or damage to equipment. The rest of the system immediately and automatically reroutes the power through remaining transmission after a contingency has occurred, and the remaining equipment handles the full load. There is no planner (or operator) action.
- The “N-1/-1/-0” is the final step where the planner (or operator) has a short time to adjust the system to stabilize it after the second loss. This could mean turning on a generator, ramping up generator output, rerouting power flows, etc. Again, like N-1/-0 state, the goal is to return the system to a normal state.

Essentially, N-1/-1/-0 is a planning requirement to ensure the electrical system is reliable enough to survive the two worst, sequential, and independent contingencies.

4.2 New York City 345/138kV Transmission Load Area – Assessment

In the case of Con Edison New York City 345/138 kV TLA, the reliability need was established under the sequential and independent loss of the Champlain Hudson Power Express (CHPE) (1,250 MW), followed by loss of Ravenswood 3 (986.8 MW),⁹ under which multiple 345 kV and 138 kV feeders were identified to be above their normal operating parameters (i.e., overloaded). To restore loading to within normal operating parameters, additional proxy generation was inserted downstream of the affected feeders. The magnitude of that proxy injection represents the reliability need. The July 2026 assessment, using the same baseline load forecast as the January 2026 assessment but with updated system topology and resource assumptions, reflects a deferred and reduced reliability need within the New York City 345/138 kV TLA. Under this updated assessment, the need is projected to begin in 2033 at 125 MW and increase to 675 MW by 2036, as shown in Table 2.

Table 2: New York City 345/138 kV TLA Reliability Needs (July 2026 Assessment)

	2027-2032	2033	2034	2035	2036
Peak MW Need	-	(125)	(250)	(525)	(675)
Hours	-	1	4	6	8

⁹ The assessment tested every possible combination of design contingencies to determine which two sequential and independent events would result in the worst-case scenario.

Duration	-	-	-	-	-
		-	-	13-14	13-14
		-	14-15	14-15	14-15
		15-16	15-16	15-16	15-16
		-	16-17	16-17	16-17
		-	17-18	17-18	17-18
		-	-	18-19	18-19
		-	-	-	19-20
		-	-	-	20-21
~MWh by Hour	-	-	-	-	-
		-	-	13-14: 75	13-14: 200
		-	14-15: 75	14-15: 275	14-15: 400
		15-16: 125	15-16: 250	15-16: 475	15-16: 625
		-	16-17: 100	16-17: 325	16-17: 475
		-	17-18: 150	17-18: 525	17-18: 675
		-	-	18-19: 300	18-19: 450
		-	-	-	19-20: 100
		-	-	-	20-21: 75
Approx. MWh	-	(125)	(575)	(1,975)	(3,000)

The load outlook for the New York City 345/138 kV TLA continues to increase beyond the formal ten-year planning horizon and, absent long-term solutions, the associated reliability need will continue to escalate. Table 3 presents the projected reliability need for the years 2037 through 2045.

Table 3: New York City 345/138 kV TLA Reliability Needs, 2037–2045 (July 2026 Assessment)

	2037	2038	2039	2040	2041	2042	2043	2044	2045
Peak MW Need	(850)	(1,025)	(1,225)	(1,400)	(1,575)	(1,750)	(1,925)	(2,100)	(2,275)

To properly evaluate these findings, a distinction must be made regarding the underlying engineering methodologies utilized across the distinct planning horizons:

- Years 2027–2036: The reliability deficiencies and dynamic hourly metrics identified in Table 2 are strictly power flow-based. These values are derived from detailed 24-hour nodal simulations that model the physical thermal limits, voltage constraints, and contingency performance of the transmission system topology.
- Years 2037–2045: The capacity shortfalls presented in Table 3 are not power flow-based. Instead, these values represent straight-line, spreadsheet-based mathematical projections. They are calculated by scaling the final 2036 power flow baseline against the long-term annual projected load growth.

The long-term reliability needs identified above are driven by this compounding load growth and, absent other actions, would worsen the transmission security needs identified in the first ten years of this analysis. These macro-level trends are scaled against the design-basis sequential loss of CHPE and Ravenswood 3, which together represent the two largest independent contingencies evaluated for this TLA.

5. Conclusion

The July 2026 assessment demonstrates that near-term grid reliability needs within the New York City 345/138 kV TLA have been deferred by one year and partially mitigated in magnitude. Driven by updated transmission system topology and the successful progression of key energy storage resources, the projected deficiency is now delayed until 2033, with the 2036 peak need reduced from 750 MW to 675 MW.

Nevertheless, a clear distinction remains between the first ten-year planning horizon and years 11–20. While these recent resource additions provide critical relief, they do not mitigate the system needs completely, and the reliability gap does not stop at year ten. Because long-term capacity shortfalls are driven by compounding annual load growth, the TLA's reliability deficit is projected to outpace these resource impacts, increasing to 850 MW in 2037 and reaching 2,275 MW by 2045.