

LOCATIONAL MINIMUM INSTALLED CAPACITY REQUIREMENTS STUDY

For the 2025-2026 Capability Year

I. Recommendation

This report documents a study conducted by the New York Independent System Operator, Inc. (NYISO) to determine Locational Minimum Installed Capacity Requirements (LCRs) for the Localities of New York City (Load Zone J), Long Island (Load Zone K), and the G-J Locality (Load Zones G, H, I, and J) for the 2025-2026 Capability Year beginning May 1, 2025.

On December 6, 2024, the New York State Reliability Council, L.L.C. (NYSRC) approved a New York Control Area (NYCA) Installed Reserve Margin (IRM) value of 24.4% for the 2025-2026 Capability Year. The NYISO then determined the LCRs for the 2025-2026 Capability Year using the 2025-2026 IRM study database and the NYSRC approved IRM.

Based on the NYSRC IRM study final base case for the 2025-2026 Capability Year, and the NYSRC approved IRM value of 24.4%, the NYISO's calculations result in a New York City LCR of 78.5%, a Long Island LCR of 106.5%, and a G-J Locality LCR of 78.8% for the 2025-2026 Capability Year.

IRM	J LCR	K LCR	G-J LCR
24.4%	78.5%	106.5%	78.8%

II. Starting Point Database

As its starting point, the 2025-2026 LCR study utilized the NYSRC's 2025-2026 IRM study database. The IRM study information is available on the NYSRC website.¹ The 2025-2026 IRM study final base case results maintain the loss of load expectation (LOLE) criterion at no more than 0.100 event-days/year with a statewide reserve margin of 24.4% and corresponding preliminary locational requirements of 75.6% and 107.3% for New York City and Long Island, respectively.

The NYISO follows the "Locational Minimum Installed Capacity Requirements Determination Process" to develop the LCRs for Load Zone J, Load Zone K, and the G-J Locality.² Since the IRM determined by the 2025-2026 IRM study final base case matches the NYSRC-approved IRM of 24.4%, no adjustment to the IRM study database was needed. The target LOLE for the study, based on the NYSRC-approved 24.4% IRM value, was 0.100 event-days/year (<u>i.e.</u>, the LOLE determined for the final base case results of the 2025-2026 IRM study).

¹ NYSRC New York Control Area Installed Capacity Requirement Reports:

https://www.nysrc.org/documents/reports/nysrc-new-york-control-area-installed-capacity-requirement-reports

² Locational Minimum Installed Capacity Requirements Determination Process:

https://www.nyiso.com/documents/20142/21537892/LCR-determination-process-2021.pdf

III. Changes from the April 19, 2024 LCR Report for the 2024-2025 Capability Year

The 2025-2026 IRM study included several impactful modeling changes compared to the 2024-2025 IRM study. For example, the 2025-2026 IRM study implemented the enhanced Special Case Resource (SCR) modeling construct.³ The 2025-2026 IRM study also included several assumptions changes recommended by the NYSRC, including: (1) the limitation to three calls per year for voluntary curtailment and public appeals in the modeling of the emergency operating procedure steps; (2) dynamically applying emergency assistance limits across all PJM interfaces; and (3) updating from 5 year to 10 year cable outage rates.⁴ The 2025-2026 IRM study also reflected the addition of 267 MW of new in-front-of-the-meter solar resources and the deactivation of 165.4 MW of thermal resources.⁵

In addition to the changes in the IRM study final base case for the 2025-2026 Capability Year, there were two changes implemented in this year's methodology for calculating the TSL floor values used in the 2025-2026 LCR study. The calculation was updated to utilize the coincident peak load for the applicable UCAP requirement calculation to improve consistency with the transmission security assessment conducted in NYISO planning studies. The NYISO also used the methodology described in Attachment N of the Installed Capacity Manual for determining derating factor calculation for intermittent resources to provide consistency with the generator UCAP to ICAP conversions used in the ICAP market as a result of implementing the capacity accreditation framework.⁶

The 2025-2026 LCR study also incorporated the proposed net cost of new entry (CONE) for the 2025-2026 Capability Year based on the ICAP Demand Curve reset (DCR) proposal the NYISO filed with the Federal Energy Regulatory Commission (FERC) on November 29, 2024.⁷ Section 5.11.4 of

⁴ NYSRC Recommendations for Adoption for 2025-2026 IRM Study: <u>https://www.nysrc.org/wp-content/uploads/2024/06/NYSRC-Recommendations-for-Adoption v233558.pdf</u>

⁵ 2025-2026 IRM Study Final Base Case Model Assumptions Matrix: https://www.nysrc.org/wp-content/uploads/2024/10/IRM-2025-2026-FBC-Assumptions-Matrix-v1.0-10042024-ICS.pdf

⁷ New York Independent System Operator, Inc., 2025-2029 ICAP Demand Curve Reset Proposal, FERC Docket No. ER25-596-000 (November 29, 2024): https://elibrary.ferc.gov/eLibrary/filelist?accession_number=20241129-5009&optimized=false

³ IRM Impact Assessment of Enhanced SCR Modeling: <u>https://www.nysrc.org/wp-content/uploads/2024/01/SCR-Modeling-ICS-01302024-Market-Sensitive27154.pdf</u>

⁶ 2025-2026 Transmission Security Limit Floor Values Calculation: <u>https://www.nyiso.com/documents/20142/47886327/Final%20TSL%20Floor%20Values_110424%20icap.pdf</u>

the Market Administration and Control Area Services Tariff requires the NYISO to use the filed net CONE values applicable for the first Capability Year covered by a quadrennial DCR. Therefore, the 2025-2026 final net CONE curves are based on a 200 MW, 2-hour battery energy storage in each capacity region as proposed by the NYISO in its filed proposal for the 2025-2029 DCR.

IV. LCR Determination Process

The LCR calculation methodology utilizes an economic optimization algorithm to minimize the total cost of capacity for the NYCA, taking into account net CONE curves as shown in the table below. Such net CONE curves account for the applicable net Energy and Ancillary Services revenue offset⁸ of the applicable peaking plant used to establish each ICAP Demand Curve.

Location (Peaking Plant Size)	LCR (%)	2025 - 2026 Final Net CONE Curves (\$/kw-yr)		
NYCA (200 MW)	110.0	49.52		
	113.0	49.90		
	116.0	49.71		
	119.0	50.12		
	125.0	51.15		
	128.0	51.74		
G - J (200 MW)	69.0	37.22		
	72.0	41.55		
	75.0	45.73		
	78.0	48.68		
	84.0	52.27		
	87.0	54.02		
Zone J (200 MW)	68.4	122.25		
	71.4	127.37		
	74.4	132.32		
	77.4	136.45		
	83.4	141.48		
	86.4	143.26		
Zone K (200 MW)	93.3	28.91		
	96.3	34.58		
	99.3	39.88		
	102.3	44.22		
	108.3	49.83		
	111.3	51.83		

⁸ See Section 5.14.1.2.2 of the NYISO Market Administration and Control Area Services Tariff.

Using this methodology, the NYSRC's LOLE resource adequacy standard will be met while utilizing the NYSRC-approved IRM and maintaining capacity requirements greater than or equal to the applicable TSL floor values, as shown in the table below.⁹

Transmission Security Limit	Formula	G-J	NYC	LI	Notes
Non-Coincident Load Forecast (MW)	[A] = IRM Study Assumption	15,205	11,044	5,092	[1]
Coincident Load Forecast	[P] = IRM Study Assumption	14,962	10,802	5,016	[1]
Bulk Power Transmission Limit (MW)	[B] = Studied	4,500	2,875	275	[2]
Net Flow Adjustment (MW)	[N] = Study Assumption	275			[3]
Offshore Wind (MW)	[O] = Calculated	0	0	38.4	[4]
UCAP Requirement (MW)	[C] = [P]-[B]+[N]+[O]	10,737	7,927	4,779	
UCAP Requirement Floor	[D] = [C]/[A]	70.6%	71.8%	93.9%	
5-Year Derating Factor	[E] = Calculated	5.90%	3.26%	8.37%	[5]
Special Case Resources (MW)	[F] = IRM Study Assumption	569.3	478.7	30.6	[6]
ICAP Requirement (MW)	[G] = ([C]/(1-[E]))+[F]	11 <mark>,</mark> 980	8,673	5,247	
TSL Floor (%)	[H] = [G]/[A]	78.8%	78.5%	103.0%	

[1] 2025 Fall Load Forecast¹⁰

[2] 2025-2026 Locality Bulk Power Transmission Capability Report¹¹

[3] Long Island Bulk Power Transmission Limit Adjustment

[4] Difference in Resource Adequacy and Transmission Security UCAP Valuation

[5] 5-Year Derating Factor reflecting generation mix in the 2025-2026 IRM Final Base Case

[6] The SCR MW value reflects the assumptions used for the 2025–2026 IRM Final Base Case¹²

V. Summary of Study

The calculations and analysis in this study use the NYISO process for setting the LCRs, with the NYSRC-approved statewide IRM of 24.4% for the 2025-2026 Capability Year.

Based on the 2025-2026 IRM final base case, the applicable LOLE criterion is met with an LCR of 78.5% for the New York City Locality, an LCR of 106.5% for the Long Island Locality, and an LCR of 78.8% for the G-J Locality. The TSL floor values for Load Zone J and the G-J Locality were binding in the results of the 2025-2026 LCR study.

¹⁰ NYSRC 2025-2026 Fall Forecast Update:

https://www.nyiso.com/documents/20142/47217178/01%20NYSRC%20Fall%20Forecast%20Update%20Proposed%202025%20IR M%20Forecast.pdf

¹¹ 2025-2026 Locality Bulk Power Transmission Report: <u>https://www.nyiso.com/documents/20142/47642242/2025-</u> 26%20Locality%20Bulk%20Power%20Transmission%20Capability%20Report Final.pdf

¹² Demand Response Final Model Values for 2025-2026 IRM Study: https://www.nysrc.org/wp-content/uploads/2024/07/2024-ICS_Final-SCR-Model-Values_ICS0730202433999.pdf

^{9 2025-2026} Transmission Security Limit Floor values: https://www.nyiso.com/documents/20142/47886327/Final%20TSL%20Floor%20Values_110424%20icap.pdf