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New York ISO
Independent System Operator

Impact Assessment of 2026-2027 Transmission Security Limit (TSL) Floor Values

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ICS Meeting #311

November 24, 2025

Background

- **The installed reserve margin (IRM) study is conducted using the Tan45 process, as outlined in the Policy 5-19, to determine the IRM for the New York Control Area (NYCA). The Tan45 process also produces preliminary locational capacity requirements (referred to as minimum locational capacity requirements or "MLCRs") for the Load Zone J, Load Zone K, and the G-J Locality.**
  - The NYSRC is responsible for establishing the IRM and the NYISO is responsible for establishing the Locational Minimum Installed Capacity Requirements (LCRs).
- **The NYSRC Executive Committee approves the IRM resulting in the production of a final case representing the NYSRC-approved IRM value. This final case, including the MLCRs, serves as the starting point database used by the NYISO to determine the final LCRs for the upcoming Capability Year.**
  - NYISO conducts its LCR study to determined the LCRs for Load Zone J, Load Zone K, and the G-J Locality
- **The LCR study utilizes an economic optimization algorithm which takes into account net cost of new entry (CONE) curves to meet the NYSRC-approved IRM, the LOLE determined for the final case results of the IRM study, and Locality-specific TSL floor values.**
  - The Locality-specific TSL floor values serve as lower bounds on the allowable LCRs.
- **In cases where the TSL floor values are greater than the MLCRs associated with the NYSRC-approved IRM, the resulting LCRs in combination with the NYSRC-approved IRM can potentially result in a system with a loss of load expectation (LOLE) that is lower than the LOLE associated NYSRC-approved IRM.**
  - The LCR study is required to maintain the NYSRC-approved IRM and cannot exceed the LOLE associated therewith, while also not exceeding the Locality-specific TSL floor values.

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2026-2027 TSL Floor Values

- The NYISO presented the recommended 2026-2027 TSL floor values (TSL Floors) to the ESPWG/ICAPWG on November 20, 2025.[1]
- Methodology changes were introduced with the intention of providing greater alignment the NYISO's reliability planning study procedures and the near-term reliability needs identified by the 2025 Q3 Short-Term Assessment of Reliability (STAR).
  - Updates to the methodology include the use of non-coincident load forecasts in determining Locality-specific UCAP requirements and the inclusion of outages related to 9300 code events in determining Locality-specific 5-year derating factor values used for UCAP-to-ICAP conversions.
  - Compared to preliminary TSL Floors produced by the NYISO in September and October, the recommended changes place upward pressure on the resulting values for all Localities.

[1] Updates to the 2026-2027 Transmission Security Limit Floor Methodology - 11/20/2025 ESPWG/ICAPWG

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2026-2027 TSL Floors - FBC

- If the NYSRC adopts the Final Base Case (FBC) as the final case, the final TSL Floors would be as follows:

Transmission Security Limit	G-J	NYC		LI
		CHPE In	CHPE Out	
Non-Coincident Load Forecast (MW)	15,305	11,089	11,089	5,128
Bulk Power Transmission Limit (MW)	4,525	2,475	2,875	275
Net Flow Adjustment (MW)	275	0	0	0
Offshore Wind (MW)	0	0	0	37.2
UCAP Requirement (MW)	11,055	8,614	8,214	4,890
UCAP Requirement Floor	72.2%	77.7%	74.1%	95.4%
5-Year Derating Factor	8.22%	4.91%	4.91%	12.62%
Special Case Resources (MW)	526.9	453.0	453.0	23.1
ICAP Requirement (MW)	12,572	9,512	9,091	5,620
TSL Floor (%)	82.1%	85.8%	82.0%	109.6%

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2026-2027 TSL Floors – Special Sensitivity Case

- If the NYSRC adopts the Special Sensitivity as the final case, the final TSL Floors are shown below.
- The difference in the TSL Floors compared to the FBC is driven by different resources included within the 5-year derating factor values.
  - The resource modeling assumption changes for the Special Sensitivity Case are provided in the Appendix.
  - Both the FBC and Special Sensitivity Case model the Champlain Hudson Power Express (CHPE) project as in-service; the FBC models the Gowanus and Narrows barges as out-of-service
    - The units on Long Island that are assumed in-service for the Special Sensitivity Case are modeled as out-of-service in the FBC
    - The Cassadaga Wind facility that is removed from the Special Sensitivity Case was modeled as in-service for the FBC

Transmission Security Limit	G-J	NYC		LI
		CHPE In	CHPE Out	
Non-Coincident Load Forecast (MW)	15,305	11,089	11,089	5,128
Bulk Power Transmission Limit (MW)	4,525	2,475	2,875	275
Net Flow Adjustment (MW)	275	0	0	0
Offshore Wind (MW)	0	0	0	37.2
UCAP Requirement (MW)	11,055	8,614	8,214	4,890
UCAP Requirement Floor	72.2%	77.7%	74.1%	95.4%
5-Year Derating Factor	8.58%	5.67%	5.67%	13.21%
Special Case Resources (MW)	526.9	453.0	453.0	23.1
ICAP Requirement (MW)	12,619	9,585	9,161	5,658
TSL Floor (%)	82.5%	86.4%	82.6%	110.3%

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Tan45 MLCRs and TSL Floor Values Comparison

- A comparison of the Tan45 MLCRs from the FBC and Special Sensitivity Case to the updated TSL Floors shows that the updated TSL Floors for Load Zone J (NYC) and Load Zone K (LI) are higher than the MLCRs established through the Tan45 process.

Case	IRM	Load Zone J MLCR	Load Zone K MLCR	G-J Locality MLCR
2026-2027 IRM FBC	**25.3%**	79.2%	106.7%	88.8%
2026-2027 IRM Special Sensitivity Case	**25.6%**	79.8%	107.5%	89.2%
2026-2027 TSL Floors - CHPE in IRM FBC	-	85.8%	109.6%	82.1%
2026-2027 TSL Floors - CHPE out IRM FBC	-	82.0%	109.6%	82.1%
2026-2027 TSL Floors - CHPE in IRM Special Sensitivity Case	-	86.4%	110.3%	82.5%
2026-2027 TSL Floors - CHPE out IRM Special Sensitivity Case	-	82.6%	110.3%	82.5%

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Impact of TSL Floors on LOLE and IRM

- **During the November 5, 2025 ICS meeting, ICS requested an analysis of the potential impact on the IRM and NYCA LOLE associated TSL Floors that will be implemented in the NYISO's 2026-2027 LCR study.**
- **NYISO has conducted the requested analysis for both the FBC and Special Sensitivity Case to help inform the NYSRC and stakeholders on the potential impact of the TSL Floors on the reliability metrics.**
  - The impact analysis presented herein is similar to the analysis developed for assessing the potential impact of the TSL Floors as part of the 2024-2025 IRM study
- **A full results table is provided in the Appendix.**
  - The Appendix includes results for a scenario that assumes the CHPE project is not modeled as in service (i.e., the "CHPE out" scenario)
  - The "CHPE out" scenario reflects one set of ICAP market parameters the NYISO would develop for potential use in administering the ICAP market for the 2026-2027 Capability Year; the other set of ICAP market parameters would be based on the "CHPE in" scenario (i.e., the FBC or Special Sensitivity Case)
    - The "CHPE out" scenario was conducted by removing CHPE from the IRM study model; the modeling assumptions for all other resources in the applicable IRM study case remain unchanged.
  - The ICAP market parameters in effect for a given month would be dependent on the CHPE project's status of participating in the ICAP market
  - Additional information regarding these market rules was presented to ICS on July 10, 2025 and August 6, 2025

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Impact Analysis Methodology

- **The NYISO utilized the GE MARS "LCR Optimizer" program that the NYISO uses for its LCR study to conduct the impact analyses.**
- **To identify the potential LOLE impact of the TSL Floors, the NYISO set the MLCRs to the applicable TSL Floors and the IRM at the Tan45 result to calculate the resulting LOLE.**
  - The resulting LOLE shows the expected NYCA LOLE associated with the combination of the applicable study result IRM value (FBC or Special Sensitivity Case) and LCRs set at the applicable TSL Floors.
- **To identify the potential IRM impact of the TSL Floors, the NYISO set the MLCRs to the applicable TSL Floors and allowed the program to lower/raise the IRM until the 0.100 loss of load event-days/year criterion was met.**
  - Capacity is removed or added from zones A/C/D
  - The resulting IRM shows the expected IRM needed to meet the LOLE criterion if the LCRs are set at the applicable TSL Floors.
  - IRM values above the identified value would result in meeting the 0.1 loss of load event-days/year criterion.
- **The NYISO prepared cases to represent the pending rule enhancements that provide for establishing two sets of ICAP market parameters for certain new resource entry.[1,2]**
  - For the 2026-2027 Capability Year, the CHPE project would be identified as a "triggering resource" and establish the need to develop two sets of ICAP market parameters.

[1] Alternative ICAP Market Parameters - 9/17/2025 BIC
[2] FERC Docket No. ER26-235

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FBC: Impact of TSL Floors

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FBC: LOLE Impact of TSL Floors

- With the MLCRs set equal to the TSL Floors and fixing the IRM at the applicable study value, the LOLE declines by 0.027.

Case	IRM	Load Zone J MLCR	Load Zone K MLCR	G-J Locality MLCR	LOLE
2026-2027 IRM FBC	**25.3%**	79.2%	106.7%	88.8%	0.100
2026-2027 IRM FBC with TSL Floors (CHPE in)	**25.3%**	85.8%	109.6%	82.1%	0.073

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FBC: IRM Impact of TSL Floors

- With the MLCRs set equal to the TSL Floors and the IRM adjusted to reflect the value necessary to achieve the LOLE criterion, the IRM could be reduced by 1.6%.

Case	IRM	Load Zone J MLCR	Load Zone K MLCR	G-J Locality MLCR	LOLE
2026-2027 IRM FBC	25.3%	79.2%	106.7%	88.8%	0.100
2026-2027 IRM FBC Alternative IRM with TSL Floors (CHPE in)	23.7%	85.8%	109.6%	82.1%	0.099

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Special Sensitivity Case: Impact of TSL Floors

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Special Sensitivity Case: LOLE Impact of TSL Floors

- With the MLCRs set equal to the TSL Floors and fixing the IRM at the applicable study value, the LOLE declines by 0.026.

Case	IRM	Load Zone J MLCR	Load Zone K MLCR	G-J Locality MLCR	LOLE
2026-2027 IRM Special Sensitivity	**25.6%**	79.8%	107.5%	89.2%	0.100
2026-2027 IRM FBC with TSL Floors (CHPE in)	**25.6%**	86.4%	110.3%	82.5%	0.074

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Special Sensitivity Case: IRM Impact of TSL Floors

- With the MLCRs set equal to the TSL Floors and the IRM adjusted to reflect the value necessary to achieve the LOLE criterion, the IRM could be reduced by 1.6%.

Case	IRM	Load Zone J MLCR	Load Zone K MLCR	G-J Locality MLCR	LOLE
2026-2027 IRM Special Sensitivity	25.6%	79.8%	107.5%	89.2%	0.100
2026-2027 IRM FBC Alternative IRM with TSL Floors (CHPE in)	24.0%	86.4%	110.3%	82.5%	0.100

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Summary

- The updated 2026-2027 TSL Floors for Load Zone J and Load Zone K are higher than the MLCRs of the 2026-2027 IRM FBC and Special Sensitivity Case.
- These conditions indicate the potential that the combination of an IRM value based solely on the IRM study results and NYISO-determined LCRs set at the TSL Floors could result in a modeled system where the NYCA LOLE is below 0.1 loss of load event-days/year.
- The NYISO's impact analysis indicates that the IRM could be potentially reduced by 1.6% from the applicable study-determined value and continue to meet the LOLE criterion if the NYISO-determined LCRs were set at the TSL Floors.
- The NYISO is actively collaborating with its stakeholders to evaluate potential enhancements to better align reliability planning studies with ICAP market requirements.
- NYISO will continue to collaborate with the NYSRC on assessing enhancements that seek to reduce potential LOLE alignment concerns resulting from the interplay of the NYSRC-approved IRM and the NYISO-determined LCRs.

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Next Steps

- **December 1, 2025 – NYISO ICAPWG: NYISO currently anticipates presenting preliminary information regarding the 2026-2027 LCRs based on the 2026-2027 IRM study FBC and Special Sensitivity Case.**
- **December 5, 2025 – NYSRC Executive Committee: The 2026-2027 IRM and final case assumptions are anticipated to be finalized by the NYSRC.**
- **December 2025/January 2026 – NYISO ICAPWG: The NYISO will present final 2026-2027 LCRs.**
  - The following are starting points inputs for the 2026-2027 LCR study: (1) the final NYSRC-approved 2026-2027 IRM, (2) LOLE value associated with the NYSRC-approved IRM value, (3) final case associated with the NYSRC-approved IRM value, (4) the applicable TSL Floors, and (5) updated net CONE curves based on the annual update results for the 2026-2027 ICAP Demand Curves
  - Consistent with the NYISO's pending "triggering resource" proposal, two sets of TSL Floors and LCRs will be determined to reflect the different potential operating status assumptions for the CHPE project
- **January 15, 2026 – NYISO Operating Committee: The NYISO anticipates presenting the final 2026-2027 LCR study results for stakeholder approval.**
  - The NYISO will seek approval of the two sets of final 2026-2027 LCRs reflecting the different potential operating status assumptions for the CHPE project consistent with the "triggering resource" rules.

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Questions?

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Our Mission & 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

Updated 2026-2027 TSL Floor Values

(Excerpt from Slides Presented at the 11/20/2025 ESPWG/TPAS/ICAPWG Meeting)

Updated 2026-2027 TSL Floor Values

- **Table below shows the updated TSL floor values reflecting the recommended load forecast and derating factor assumption adjustments (see Slides 4 and 6), based on the NYSRC-approved 2026-2027 IRM FBC assumptions**
  - Under the original TSL floor value calculations, the UCAP requirement is calculated using the applicable coincidence load forecast; under the proposal, the UCAP requirement is calculated using the applicable non-coincident load forecast
  - Under the original TSL floor value calculations, the 5-year derating factor values remove outages for 9300 code events; under the proposal, the 5-year derating factor values include outages for 9300 code events.

	Final Base Case (Prior Methodology)					Final Base Case (Recommended Methodology)				
Transmission Security Limit	Formula	G-J	NYC		LI	Formula	G-J	NYC		LI
			CHPE In	CHPE Out				CHPE In	CHPE Out	
Non-Coincident Load Forecast (MW)	[A]	15,305	11,089	11,089	5,128	[A]	15,305	11,089	11,089	5,128
Coincident Load Forecast	[P]	15,035	10,824	10,824	5,040		NA	NA	NA	NA
Bulk Power Transmission Limit (MW)	[B]	4,525	2,475	2,875	275	[B]	4,525	2,475	2,875	275
Net Flow Adjustment (MW)	[N]	275	0	0	0	[N]	275	0	0	0
Offshore Wind (MW)	[O]	0	0	0	37.2	[O]	0	0	0	37.2
UCAP Requirement (MW)	[C] = [P]-[B]+[N]+[O]	10,785	8,349	7,949	4,802	[C] = [A]-[B]+[N]+[O]	11,055	8,614	8,214	4,890
UCAP Requirement Floor	[D] = [C]/[A]	70.5%	75.3%	71.7%	93.6%	[D] = [C]/[A]	72.2%	77.7%	74.1%	95.4%
5-Year Derating Factor	[E]	6.24%	3.24%	3.24%	8.38%	[E]	8.22%	4.91%	4.91%	12.62%
Special Case Resources (MW)	[F]	526.9	453.0	453.0	23.1	[F]	526.9	453.0	453.0	23.1
ICAP Requirement (MW)	[G] = ([C]/(1-[E]))+[F]	12,030	9,082	8,668	5,265	[G] = ([C]/(1-[E]))+[F]	12,572	9,512	9,091	5,620
TSL Floor (%)	[H] = [G]/[A]	78.6%	81.9%	78.2%	102.7%	[H] = [G]/[A]	82.1%	85.8%	82.0%	109.6%

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Updated 2026-2027 TSL Floor Values – 2026-2027 IRM FBC Special Sensitivity Case

- **Table below shows the updated TSL floor values reflecting the recommended adjustments described on the prior slide, based on the Special Sensitivity Case requested by the NYSRC as part of the FBC analysis for the 2026-2027 IRM study**
  - The changes in the resource assumptions for the Special Sensitivity Case were presented at the 11/5/2025 NYSRC ICS meeting: https://www.nysrc.org/wp-content/uploads/2025/11/IRM-FBC-Special-Sensitivity-V2.pdf

	Special Sensitivity Case (Prior Methodology)					Special Sensitivity Case (Recommended Methodology)				
Transmission Security Limit	Formula	G-J	NYC		LI	Formula	G-J	NYC		LI
			CHPE In	CHPE Out				CHPE In	CHPE Out	
Non-Coincident Load Forecast (MW)	[A]	15,305	11,089	11,089	5,128	[A]	15,305	11,089	11,089	5,128
Coincident Load Forecast	[P]	15,035	10,824	10,824	5,040		NA	NA	NA	NA
Bulk Power Transmission Limit (MW)	[B]	4,525	2,475	2,875	275	[B]	4,525	2,475	2,875	275
Net Flow Adjustment (MW)	[N]	275	0	0	0	[N]	275	0	0	0
Offshore Wind (MW)	[O]	0	0	0	37.2	[O]	0	0	0	37.2
UCAP Requirement (MW)	[C] = [P]-[B]+[N]+[O]	10,785	8,349	7,949	4,802	[C] = [A]-[B]+[N]+[O]	11,055	8,614	8,214	4,890
UCAP Requirement Floor	[D] = [C]/[A]	70.5%	75.3%	71.7%	93.6%	[D] = [C]/[A]	72.2%	77.7%	74.1%	95.4%
5-Year Derating Factor	[E]	6.12%	3.23%	3.23%	9.00%	[E]	8.58%	5.67%	5.67%	13.21%
Special Case Resources (MW)	[F]	526.9	453.0	453.0	23.1	[F]	526.9	453.0	453.0	23.1
ICAP Requirement (MW)	[G] = ([C]/(1-[E]))+[F]	12,015	9,081	8,667	5,300	[G] = ([C]/(1-[E]))+[F]	12,619	9,585	9,161	5,658
TSL Floor (%)	[H] = [G]/[A]	78.5%	81.9%	78.2%	103.4%	[H] = [G]/[A]	82.5%	86.4%	82.6%	110.3%

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Results Table

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Inputs to LCR Optimizer						Case Results						
Base Case	**CHPE Assumption**	**IRM**	**G-J Floor**	**J Floor**	**K Floor**	**IRM**	**G-J**	**J**	**K**	**Annual LOLE**	**Summer LOLE**	**Winter LOLE**
FBC	O/S	25.3%	82.1%	82.0%	109.6%	25.3%	82.1%	82.0%	109.6%	0.060	96.4%	3.6%
	O/S	-	82.1%	82.0%	109.6%	22.2%	82.1%	82.0%	109.6%	0.099	91.7%	8.3%
	I/S	25.3%	82.1%	85.8%	109.6%	25.3%	82.1%	85.8%	109.6%	0.073	78.1%	21.9%
	I/S	-	82.1%	85.8%	109.6%	23.7%	82.1%	85.8%	109.6%	0.099	72.4%	27.6%
Special Sensitivity Case	O/S	25.6%	82.5%	82.6%	110.3%	25.6%	82.5%	82.6%	110.3%	0.061	96.2%	3.8%
	O/S	-	82.5%	82.6%	110.3%	22.5%	82.5%	82.6%	110.3%	0.100	91.0%	9.0%
	I/S	25.6%	82.5%	86.4%	110.3%	25.6%	82.5%	86.4%	110.3%	0.074	77.1%	22.9%
	I/S	-	82.5%	86.4%	110.3%	24.0%	82.5%	86.4%	110.3%	0.100	71.1%	28.9%

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Special Sensitivity Case - Model Assumptions

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Resources to be included in Special Sensitivity based on 2025 Q3 STAR report*

- Gowanus 2-1 – 2-8
- Gowanus 3-1 – 3-8, with exception of Gowanus 3-6
- Narrows 1-1 – 1-8
- Narrows 2-1 – 2-8, with exception of Narrows 2-1, and 2-7
- Far Rockaway GT1
- Far Rockaway GT2
- Glenwood GT3
- Shoreham IC1

Resources to be excluded in Special Sensitivity

- Cassadaga Wind after further NYISO review

* This list is a starting point for ICS discussion – the ultimate outcome of the NYISO solution solicitation may differ from the units listed here.

Total Additions:

Load Zone	Modeled Summer MW
J	512.9
K	204.4

Total Removals:

Load Zone	Modeled Summer MW
A	126.5

11/5/2025 ICS addition: As part of the generator inclusion updates listed above, the fuel availability constraints table will be updated to match. Some units are dual fuel.

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