

Winter Reliability Capacity Enhancements: Concept Proposal

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Capacity and New Resource Integration Market Design

NYSRC – Installed Capacity Subcommittee

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Agenda

- Project Objective
- Project Status
- Market Design Concept Proposal
- Next Steps

Project Objective

- **The NYISO's Installed Capacity (ICAP) market is seasonal, but many processes and requirements in the ICAP market are annual and currently based on the summer peak.**
 - Annually derived ICAP market parameters may no longer produce incentives that support efficient market outcomes as modeled winter resource adequacy risk becomes more pronounced.
- **The project aims to develop potential changes to the ICAP market to support efficient market outcomes as the NYCA trends towards increasing winter resource adequacy risk.**
 - This year's efforts are focused on developing winter capacity requirements, seasonal demand curves, and seasonal elections rules.

Project Status

- **The NYISO is currently discussing the Market Design Concept Proposal with its stakeholders.**
 - The most recent concept proposal was discussed at the July 29, 2025 ICAPWG meeting.
 - Additional design details were discussed at the August 19, 2025 ICAPWG meeting
- **The NYISO is now refining and updating the Market Design Concept Proposal based on feedback received from its stakeholders.**
 - The proposed concepts in the following slides are still under discussion and may be revised

Market Design Concept Proposal

Seasonal Elections for Unforced Capacity Deliverability Rights and External-to-Rest of State Deliverability Rights

■ Continuation of Existing Election Requirements:

- To support the timeline of the annual New York State Reliability Council (NYSRC) Installed Reserve Margin (IRM) study, ICAP Suppliers will continue to be required to submit elections by August 1 prior to the subject Capability Year.
- Annual participation model, duration, and firm fuel elections will continue to apply to the entire Capability Year.

■ New Market Design Element:

- On August 1 prior to the applicable Capability Year, Unforced Capacity Deliverability Rights (UDRs) and External-to-Rest of State Deliverability Rights (EDRs) holders will be required to submit distinct seasonal elections: one for the Summer Capability Period and one for the Winter Capability Period.
- These two separate election values may provide more accurate input of available capacity in the applicable season that can be reflected in the IRM study.

Seasonal NYCA Minimum ICAP Requirements

- **The NYISO proposes to expand the existing annual NYCA Minimum ICAP Requirement to develop seasonal requirements to better account for the differences in the amount of available capacity and the reliability requirements between summer and winter due to the anticipated shift in reliability risk to the winter.**
 - Historically, NYCA Minimum ICAP Requirements are allocated to Load Serving Entities for a Capability Year have been based on the summer peak.
- **The separate summer and winter requirements would be based on the final IRM study case reflecting the NYSRC-approved IRM to ensure the reliability criterion of 0.1 Loss of Load Expectation (LOLE) is met.**

Seasonal NYCA Minimum ICAP Requirements: Calculation

- Implementing seasonal requirements would update the NYISO's ICAP market processes but would not impact the NYSRC process for approving the IRM value.
- The summer requirement calculation will remain unchanged; it will continue to be consistent with the NYSRC-approved IRM value.
 - The Summer NYCA Minimum ICAP Requirement will continue to be calculated as follows:
 - Summer NYCA Minimum ICAP Requirement = NYCA Summer Forecasted Peak Load x (1 + IRM)
- The winter requirement will be derived from the available capacity in the winter peak month as modeled in the final IRM study case, which reflects the NYSRC-approved IRM.
 - The annual capacity as modeled in the NYSRC-approved IRM case will be used to determine the Winter NYCA Minimum ICAP Requirement to maintain the annual LOLE criteria.
 - Winter NYCA Minimum ICAP Requirement = NYCA Winter Forecasted Peak Load x (1 + Winter Reserve Margin)

Winter NYCA Minimum ICAP Requirement: Example

Calculating Summer Requirements:	
Summer ICAP in the Model	41,500
subtract annual ICAP removed	1,500
Summer Requirement	40,000
Summer Peak Load	34,500
Summer Reserve Margin %	116%

Illustrative numbers only

Summer NYCA Minimum Installed Capacity Requirement = NYCA Summer Forecasted Peak Load x (1 + IRM)

Calculating Winter Requirements:	
Winter ICAP in the Model	43,000
subtract annual ICAP removed	1,500
Winter Requirement	41,500
Winter Peak Load	26,000
Winter Reserve Margin %	160%

Illustrative numbers only

Winter NYCA Minimum Installed Capacity Requirement = NYCA Winter Forecasted Peak Load x (1 + Winter Reserve Margin)

Seasonal Locational Minimum Installed Capacity Requirements

- To implement NYCA seasonal requirements, seasonal Locational Minimum Installed Capacity Requirements (LCRs) must be calculated.
- The NYISO is evaluating if calculating seasonal transmission security limit (TSL) floor values will be necessary to account for seasonal differences in parameter assumptions such as, but not limited to, load forecast and bulk power transmission limits.
- The LCR study process, including inputs to the LCR optimizer such as the final IRM base case, the NYSRC-approved IRM, the targeted LOLE, and TSL floor values, will remain unchanged.
 - If seasonal TSLs are adopted, a process to account for both summer and winter TSL floor values will need to be developed.
- The Winter LCRs will be derived from the available capacity in each Locality in the winter peak month of the final IRM base case, similar to the calculation of Winter NYCA ICAP Requirement. The Winter LCRs will be calculated against the applicable Locality non-coincident peak load forecast as modeled in the final IRM base case.

Locational Winter Requirements: NYC Example

Calculating NYC Summer Requirements:	
Summer ICAP in the Model	9,500
subtract annual ICAP removed	1,000
Summer Requirement	8,500
Summer Locality Non-Coincident Peak Load	11,000
Summer LCR %	77%

Illustrative numbers only

Summer Locational Minimum Installed
Capacity Requirement = Locational *Summer*
Forecasted Peak Load x LCR%

Calculating NYC Winter Requirements:	
Winter ICAP in the Model	10,250
subtract annual ICAP removed	1,000
Winter Requirement	9,250
Winter Locality Non-Coincident Peak Load	7,500
Winter LCR %	123%

Illustrative numbers only

Winter Locational Minimum Installed
Capacity Requirement = Locational *Winter*
Forecasted Peak Load x *Winter* LCR%

Next Steps

Next Steps

- **The NYISO will continue to work with its stakeholders at the ICAPWG to finalize proposed ICAP market rule changes**
- **The NYISO will also work with the NYSRC to ensure the final market design is compatible with applicable NYSRC reliability rules.**
 - Currently, the annual NYCA Minimum ICAP Requirement that is based on summer peak is consistent with the NYSRC reliability rules on resource adequacy and capacity requirements.
- **Once finalized, the NYISO will return to the NYSRC to provide an update on the final market design**
- **The NYISO seeks to implement the final market design for the winter reliability enhancements no later than the 2027–2028 Capability Year.**

Appendix

Previous ICAPWG Presentations

Date	Working Group	Discussion Points and Links to Materials
January 30, 2025	ICAPWG	2025 Winter Reliability Capacity Enhancements: Project Kick-off https://www.nyiso.com/documents/20142/49408264/04%202025%20Winter%20Reliability%20Kick-off%20Presentation.pdf/
April 1, 2025	ICAPWG	Winter Reliability Capacity Enhancements: Winter Requirements https://www.nyiso.com/documents/20142/50614388/2025%20Winter%20Reliability%20Capacity%20Enhancements%20April%201%20ICAPWG%20(1).pdf/
April 9, 2025	ICAPWG	Winter Reliability Capacity Enhancements: Seasonal Elections https://www.nyiso.com/documents/20142/50769536/2025%20Winter%20Reliability%20-%20Seasonal%20Elections%204.9.25%20Final.pdf/
May 5, 2025	ICAPWG	Winter Reliability Capacity Enhancements: Existing Annual Capacity Accreditation Factor Methodology https://www.nyiso.com/documents/20142/51249988/Winter%20Reliability%20-%20Annual%20CAF%20Methodology%205.5.25%20-%20Final.pdf/
May 20, 2025	ICAPWG	2025 Winter Reliability Capacity Enhancements: Demand Curves Review https://www.nyiso.com/documents/20142/51501157/Winter%20Reliability%20-%20Demand%20Curves%2052025%20icap.pdf/
July 29, 2025	ICAPWG	Winter Reliability Capacity Enhancements: Concept Proposal https://www.nyiso.com/documents/20142/52778669/2025%20Winter%20Reliability%20-%20July%2029%20ICAPWG%20MDC_Final.1.pdf/
August 5, 2025	ICAPWG	Winter Reliability Capacity Enhancements: Proposed Consumer Impact Analysis Methodology https://www.nyiso.com/documents/20142/52908106/2025%20Winter%20Reliability%20-%20CIA%20Methodology%20FOR%20APPROVAL%2007302025.pdf/
August 19, 2025	ICAPWG	Winter Reliability Capacity Enhancements: Proposed Demand Curve Changes https://www.nyiso.com/documents/20142/53169595/Winter%20Reliability%20-%20Proposed%20Demand%20Curve%20Changes%20Final.pdf/

Previous ICAPWG Presentations

Date	Working Group	Discussion Points and Links to Materials
August 19, 2025	ICAPWG	Winter Reliability Capacity Enhancements: Analysis of Seasonal Capacity Accreditation Factors https://www.nyiso.com/documents/20142/53169595/2025%20Winter%20Reliability%20-%20August%2019%20ICAPWG_CAF%20Analysis.pdf/

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

