New York ISO
Independent System Operator

Winter Reliability Capacity Enhancements: Seasonal Elections

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Capacity & New Resource Integration Market Design

ICAPWG

April 9, 2025

Agenda

- Project Overview
- Annual Elections
- Questions for Evaluation
- Next Steps

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Project Overview

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Background

- **The NYISO's Installed Capacity (ICAP) market is seasonal, but many processes and requirements in the market are annual and based on the summer peak**
  - The current ICAP market construct may no longer provide the appropriate incentives in the winter if resource adequacy risk shifts to winter
- **The New York Control Area (NYCA) peak demand is forecasted to shift from summer to winter due to, among other things, the electrification of space heating and transportation to meet state and local clean energy goals**
  - 2024 Gold Book forecasts NYCA will become a winter peaking system by 2037-38
  - Winter risk, as measured by Loss of Load Expectation (LOLE), may arise sooner due to fuel availability constraints

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Objective

- The objective of this project is to propose potential enhancements to the ICAP market that will support efficient market outcomes as the NYCA trends towards increasing winter resource adequacy risk
  - Efforts this year are focused on developing a winter requirement, seasonal demand curves, seasonal elections and seasonal Capacity Accreditation Factors (CAFs)
- The 2025 goal for this project is Market Design Complete, with the following milestones:
  - Consumer Impact Analysis (CIA)
  - Present and seek approval of proposed enhancements at Business Issues Committee (BIC) and Management Committee (MC)

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Annual Elections

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Purpose of Annual Elections

- **In preparation for each upcoming Capability Year, annual election information is submitted to the NYISO by August 1 preceding the Capability Year**
  - For example, the annual election deadline for the 2025 – 2026 Capability Year was August 1, 2024
- **Annual elections are collected for use in the reliability studies that determine the NYCA Installed Reserve Margin (IRM) and the Locational Minimum Installed Capacity Requirements (LCRs)**
  - The starting point for each preliminary base case (PBC) is the previous year's final base case (FBC)
  - Data is refreshed and updated with each new parameter change, including the information submitted during the annual election process
  - Impact of each parameter change on reliability is conducted as a parametric analysis to show incremental IRM change for each data update

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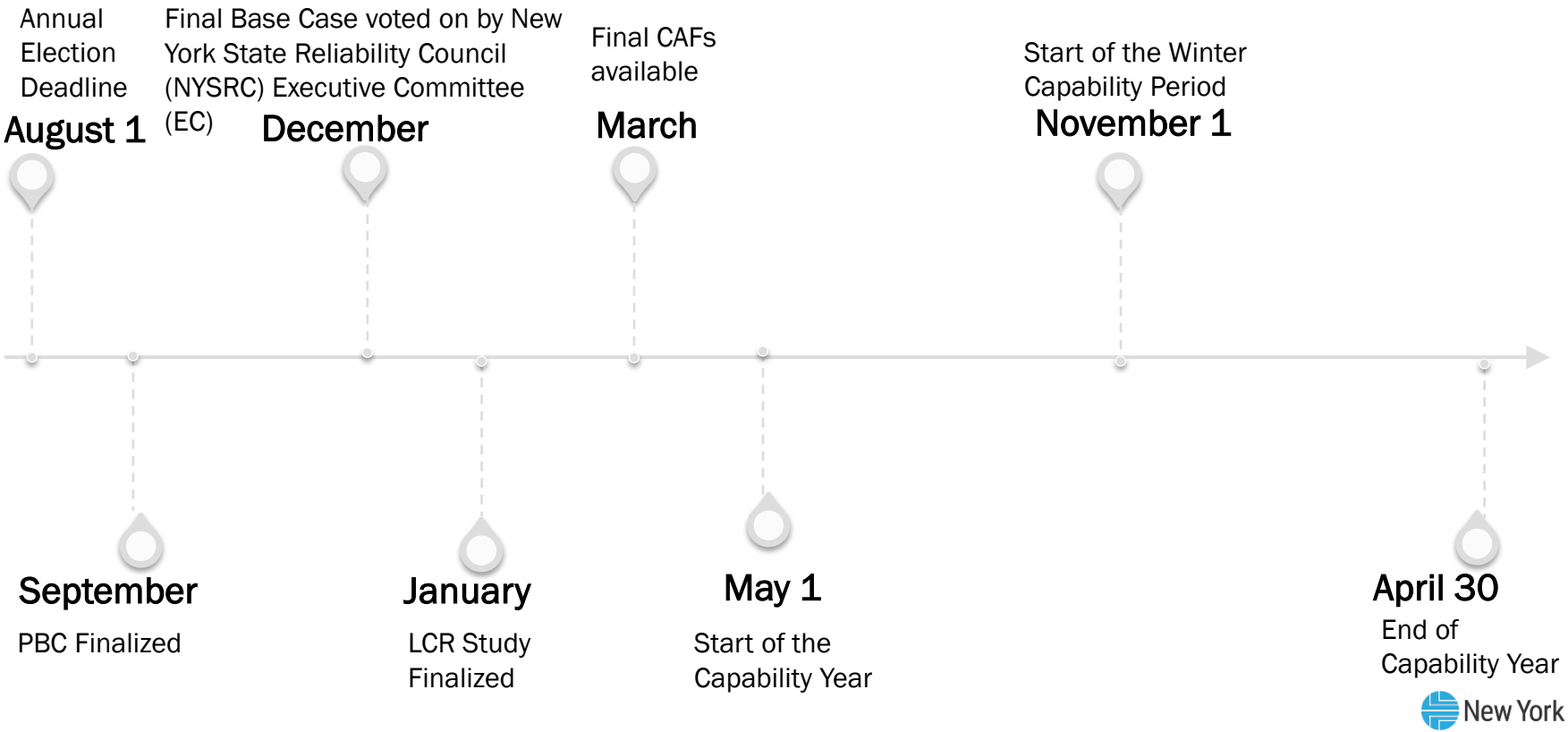
Annual Election Timeline



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UDR and EDR Elections

- **Unforced Capacity Deliverability Rights (UDRs) and External-to-Rest of State (ROS) Deliverability Rights (EDRs) are rights associated with either new incremental transmission projects that provide a transmission interface to the NYCA or increase transfer capability over an existing transmission interface as described in Section 4.14 in the ICAP Manual**
  - An incremental transmission project will be awarded UDRs or EDRs after a formal request to the NYISO. If this formal request from a rights holder for a facility is received by the NYISO after August 1, the request for UDRs or EDRs will not be granted for the upcoming Capability Year
  - Annually, prior to August 1, the holder of the existing External UDRs or EDRs must contact the NYISO to indicate the quantity of the External UDRs or EDRs returned to the NYCA for the upcoming Capability Year
- **The elections made by holders of UDRs and EDRs are an input assumption used in the IRM study**

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Duration Elections

- Resources with a limited daily run-time less than 24 hours may qualify to participate as ICAP Suppliers with an Energy Duration Limitation (EDL) as prescribed in Section 4.1.1 of the ICAP Manual
- Resources may elect an EDL, from the EDL values provided in the ICAP Manual, that is less than or equal to the Resource's ability to demonstrate sustained output at its qualified MW
  - ICAP Suppliers with a limited run-time must elect an EDL and inform the NYISO by August 1 preceding a Capability Year
  - If an election is received by the NYISO after the August 1 deadline, the election will not be effective
- The elections made by these Resources are an input assumption used in the IRM study

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Participation Model Election

- **Resources that are electrically located in the NYCA may simultaneously participate in the ICAP market and in programs or markets operated to meet the needs of distributions systems located in the NYCA or of host facilities, per Section 4.1.2 of the ICAP Manual**
  - Resources that switch from a retail load modifier to NYISO wholesale market participation must do so at the beginning of the Capability Year and must notify the NYISO of this change prior to August 1 of the year preceding the Capability Year
  - Resources engaged in Dual Participation that exit the NYISO wholesale market to be a load modifier on the distribution system must notify the NYISO of its intention to exit
    - If the notification is received by the NYISO prior to August 1 of the year preceding a Capability Year, the resource's transition to a retail load modifier will be reflected in the requirements for the Transmission District
    - If the notification is not received prior to August 1 of the year preceding a Capability Year, the resource's transition to a retail load modifier will not be reflected in the requirements for the Transmission District
- **The elections made by these Resources are an input assumption used in the IRM study**

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Participation Model Election continued

- **An individual Distributed Energy Resource (DER) is permitted to switch from one Aggregation to another, as specified in Section 4.1.3 of the ICAP Manual**
  - A DER changing from an Aggregation with a specific participation model to an Aggregation using a different participation model can only do so at the beginning of the Capability Year and must notify the NYISO of this change prior to August 1 of the year preceding the Capability Year
- **A Behind-the-Meter Net Generation Resource (BTM:NG) is a facility within a defined electrical boundary comprised of a Generator and a Host Load located at a single point identifier where the Generator routinely serves, and is assigned to, the Host Load and has excess generation capability after serving that Host Load**
  - A BTM:NG can annually, by written noticed received by the NYISO prior to August 1, elect not to participate in the NYISO Administered Markets as a BTM:NG
    - A resource that makes such an election cannot participate as a BTM:NG for the entire Capability Year for which it made the election, but can, however, prior to August 1 of any subsequent Capability Year and seek to re-qualify as a BTM:NG
- **The elections made by BTM:NGs are an input assumption used in the IRM study**

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Firm Fuel Elections

- Starting with the 2026-2027 Capability Year, an ICAP Supplier utilizing natural gas or fuel oil as its fuel may elect to enter the firm fuel Capacity Accreditation Resource Class
- An ICAP Supplier that elects to enter the firm fuel Capacity Accreditation Resource Class must notify the NYISO of its election by August 1 of the calendar year preceding the subject Capability Year
- The NYISO is currently assisting the NYSRC Installed Capacity Subcommittee (ICS) to develop the fuel availability assumptions and adoption recommendations for the 2026-2027 IRM study
  - At the 4/2/2025 ICS meeting, NYISO staff presented updated recommendations for incorporating the modeling of fuel availability constraints into the IRM model starting with the 2026-2027 study[1]
  - The recommended fuel availability constraints modeling assumptions for the 2026-2027 IRM study will be reviewed at the NYSRC EC meeting on 4/11/2025. Based on feedback at the 4/2/2025 ICS meeting, fuel availability assumptions to be presented to the EC will reflect the "available gas" values derived from the alternative regression set forth in the Appendix of the 4/2/2025 ICS presentation.

[1] https://www.nysrc.org/wp-content/uploads/2025/04/Fuel-Availability-Constraints.pdf

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Questions for Evaluation

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Questions for Evaluation

- **Annual elections prevent adjustments between the summer and winter Capability Periods**
  - This does not provide flexibility for Resources participation in the ICAP market during the Capability Year and could possibly misrepresent capability within the year
  - For example, the firm fuel election deadline is 15 months in advance of the winter season to which the election will apply
- **Collecting elections annually could result in sending inappropriate price signals to Resources depending on their capability in both the summer and winter**
- **The NYISO will evaluate the annual election process to determine if seasonal elections will better represent Resource capability**
- **The NYISO will consider collecting the elections on a semi-annual basis to have elections made for the summer and winter seasons**

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Next Steps

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Next Steps

- **Return to a future ICAPWG to continue discussions on Winter Reliability Capacity Enhancements**
  - Review annual CAF methodology
  - Review seasonal ICAP Demand Curves and monthly reference points

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Appendix

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Timeline

- **Q1 – Initial Discussions and Analysis**
  - Discuss potential ICAP market design changes and gather stakeholder feedback
  - Present data and analysis, as required, regarding potential market outcomes
- **Q2 – Refine Proposed Market Changes**
  - Review draft market design changes with ICAPWG
  - Review CIA methodology with ICAPWG and commence CIA
- **Q3 – Final Review**
  - Review proposed market design changes and associated tariff revisions with ICAPWG
  - Present CIA to ICAPWG
- **Q4 – Project Completion**
  - Seek approval of proposal at BIC and MC

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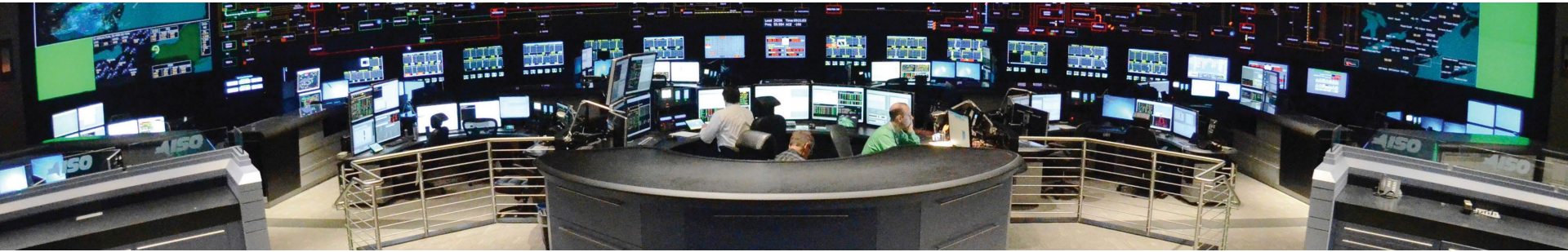
Our Mission and Vision

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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