New York ISO
Independent System Operator

Parametric Whitepaper Scope

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Purpose

- Assess/identify key drivers of divergence among the Installed Reserved Margin (IRM) results between the parametric and Tan45 methodologies, particularly for the 2026-2027 IRM study.
  - Identify the 2026-2027 IRM study modeling updates that produced divergences greater than 0.5% between the parametric and Tan45 IRM results.
- Identify preliminary considerations for potential enhancements.

Agenda:

- Background
- Historical Outcomes Comparison
- Next Steps

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Background

- The parametric process evaluates the direction and magnitude of impacts from modeling and assumption changes during the development of the IRM study base case, and is intended to serve as an early indication of expected Tan45 outcomes.
- In last year's IRM study, material divergence (2.2%) between parametric and Tan45 outcomes were observed, motivating a deeper review of the parametric process.
- This presentation will function as an introduction and initial review of the parametric process based on the assessment of recent study results.
- This whitepaper aims to:
  - Identify root causes driving significant divergence between parametric and Tan45 outcomes
  - Recommend improvements to enhance alignment of parametric results with expected Tan45 behavior and reduce unexplained variance.
  - Strengthen process efficiency, ensuring the parametric workflow supports study timelines without sacrificing accuracy.

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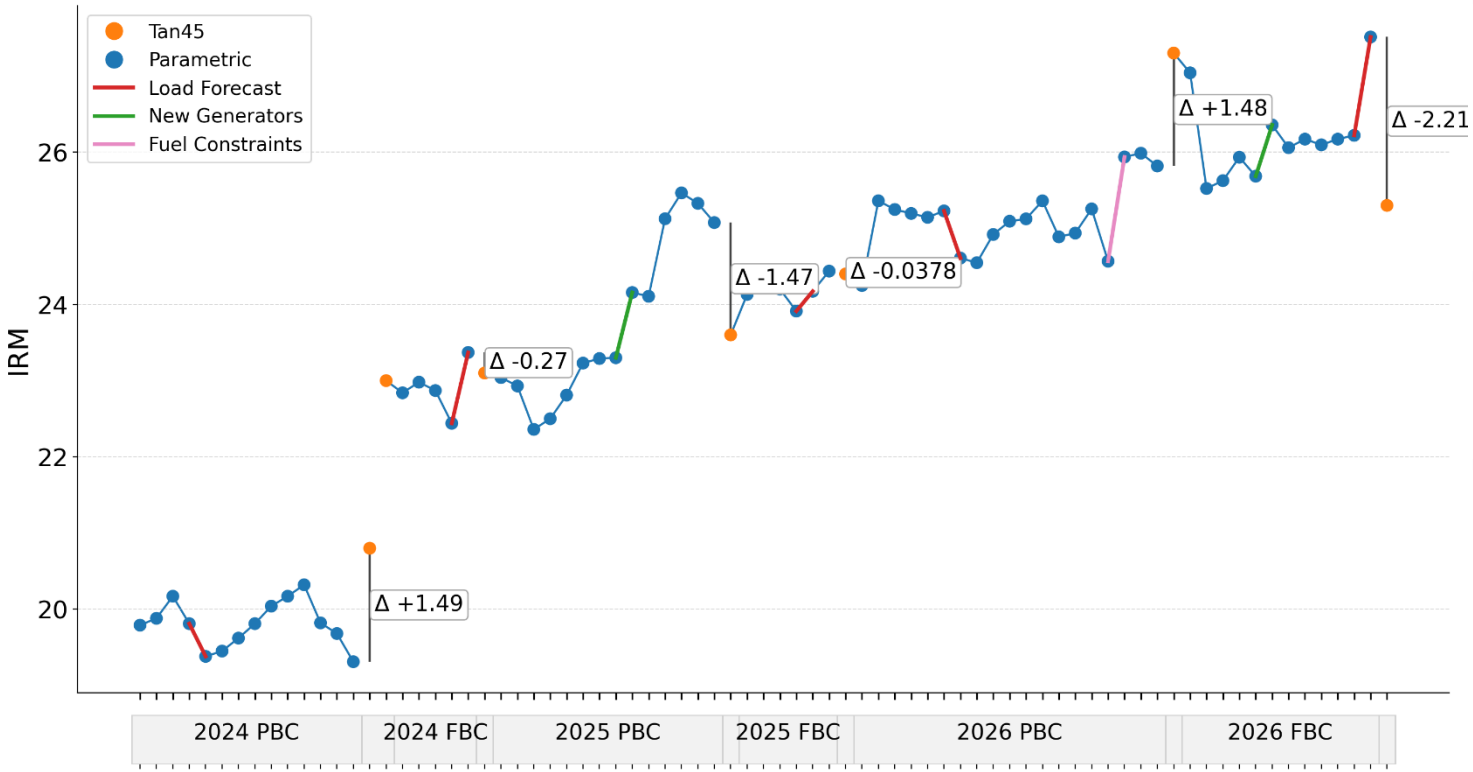
Historical Parametric and Tan45 Outcomes

Tan45 and Parametric Comparison



- The Deltas show the difference between the last parametric case in a phase of the IRM study and the subsequent Tan45.
- Last year was the first time a large delta appeared during the final base case (FBC).
- Some key recurring drivers of these deltas are (see following slides for additional information):
  - Resource updates.
  - Load forecast updates.

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Drivers of Divergence

Recurring Modeling Updates Driving Divergence

Through review of past parametric results, three recurring modeling updates consistently drove larger differences between parametric and Tan45 outcomes:

- **Load Forecast Update**
  - Load forecast updates are typically not consistent across all Load Zones. When the forecast changes are drastically different between upstate and downstate, it affects the Tan45 ratios for removals from Load Zones A, C, and D, and shifts from Load Zones J and K, which are based on excess UCAP. This has been reported on at ICS in previous years.[1]
- **Resource Updates**
  - Some resource updates may also impact excess UCAP ratios for Tan45, driving material deltas between parametric and Tan45 outcomes.
- **Occasionally, when the there is an update to the transmission system that affects the topology assumptions, it can drive large differences between parametric and Tan45 outcomes**
  - Transmission updates, especially those affecting Load Zones J and K, influence the Tan45 J/K shifting ratios. This has been reported on at ICS in previous years.[2]

[1] 2024-2025 IRM FBC Load Forecast Update Impact ICS #282
[2] 2024-2025 IRM PBC – Tan45 Results ICS #279

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2026-2027 IRM Study Divergence

- Last year's main driver of divergence was the fall load forecast update.[1]
  - NYCA load came in 1.4% below the 2025 NYISO Load & Capacity Data report (Gold Book) forecast, with a large reduction in Load Zone D.
- Tan45: The reduction in the peak load forecast for Load Zone D produced ~400 MW increase in Load Zone D excess UCAP. This change lowered the low point by shifting ~400 MW of additional capacity downstate, reducing the IRM despite the reduction in the peak load forecast.
- Parametric: No shifting impact; the reduction in the load forecast resulted in a 1.4% lower denominator, which raised IRM by ~1.3%.

2026 Summer Coincident Peak Forecast Comparison - MW

Zone	A	B	C	D	E	F	G	H	I	J	K	NYCA
2025 Gold Book Forecast for 2026	2,943	1,854	2,568	1,042	1,298	2,255	2,304	620	1,320	10,790	4,996	**31,990**
2026 IRM Forecast	2,913	1,846	2,580	659	1,275	2,261	2,290	600	1,321	10,807	5,001	**31,552**
Difference	-30	-8	12	**-383**	-23	6	-14	-20	1	17	5	**-438**
% Change	-1.0%	-0.4%	0.4%	**-36.8%**	-1.8%	0.3%	-0.6%	-3.2%	0.1%	0.2%	0.1%	**-1.4%**

2026-27 Winter Coincident Peak Forecast Comparison - MW

2026 IRM Difference w.r.t. GB	-10	0	-72	**-422**	0	0	10	0	0	0	0	**-494**
2026 IRM % Change w.r.t. GB	-0.4%	0.0%	-2.8%	**-33.8%**	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	**-2.0%**

[1] 2026 IRM Load Forecast

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Next Steps

Next Steps

- **Based on the identified key drivers, develop potential improvements to the parametric study, with the following preliminary considerations:**
  - Potential changes to the MW shifting methodology in the parametric study to better align with the shifting in the Tan45 process
    - Parametric and Tan45 treat MW shifting differently, and this difference in methodology can become material as demonstrated in load forecast updates.
  - Potential changes to the parametric study process to limit the IRM impact of assumption updates
    - Separating updates in downstate vs. upstate can potentially limit the distortion on the IRM impact in the parametric study
  - Continue to monitor the divergences and, as necessary, assess potential additional improvements.
- **Whitepaper milestone:**
  - Q1/Q2 2026: Review and discuss differences between the parametric and Tan45 methodologies
  - Q2 2026: Identify main drivers for significant gaps between parametric and Tan45 results and potential improvements
  - Q3/Q4 2026: Provide recommendations and development of a whitepaper

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Questions?

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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