

Parametric Process Improvements

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Background and Agenda

Background:

- Currently, a parametric study is conducted during the development of the installed reserve margin (IRM) base case (preliminary and final). The parametric analysis is intended to provide timely assessment of major assumption updates that have an impact on the IRM and an early indication of the potential IRM Tan45 results.
- Over the past few years, divergence between parametric results and the Tan45 results has been observed and the 2026-2027 IRM Preliminary Base Case (PBC) showed ~2% gap between the IRM identified by the parametric and Tan45 results.
- Therefore, ICS prioritized the investigation (and, if warranted, implementation) of potential enhancements to the parametric process.

Agenda:

- 1. Current parametric process
- 2. Proposed Design Principles and Potential Enhancements
- 3. Next Steps



Current Parametric Process



Current Methodology

Methodology:

1) Run Parametric Case

After each assumption input change, bring New York Control Area (NYCA) back to 0.1 loss of load expectation (LOLE).

2) Compare Outputs

Report IRM/locational requirement change vs. prior case; aggregate similar changes when possible.

3) Classify Changes

Material or non-material for ICS review.

Intended Purpose:

Show Impact

Directionality and relative size of impact on IRM/locational requirement for each input change.

Highlight Materiality

Helps ICS identify/assess changes with significant impacts.

Tan45 Indicator

Early signal of where Tan45 IRM results may land.



Current Limitations

1) Methodology Misalignment:

 Parametric and Tan45 methodologies have different designs which can adversely impact interpreting the relationship of the respective results.

2) Limited Predictive Value:

 Recent divergence of parametric outcomes from Tan45 results reduces confidence in the predicative quality of the parametric outputs.

3) Expectation Gaps:

• Parametric results may identify changes that appear potentially significantly with subsequent Tan45 results producing differing impacts.

4) Interactive Effects Obscured:

Sequential approach to parametric analysis can mask interactive effects of assumption input changes.



Proposed Design Principles and **Potential** Enhancements

Proposed Design Principles

1. Transparency

Clearly stated assumptions and model changes for each update/assessment.

2. Simplicity

Use interpretable visuals and readily understandable descriptions.

3. Consistency

For each study have an anchor point and a consistent process for comparability.

4. Enable Research

Leverage the parametric process as means to conduct testing of potential design changes. Share baseline and test results side-by-side.

5. Stability

Strive for results that remain stable; acknowledging the grid is highly dynamic and perfect stability is not practicable.



Potential Enhancements

Considerations:

Align methodology closer to Tan45

Anchor parametric shifting to Tan45 J/K shifting ratio

Maintain Distinction

Parametric analysis remains separate from Tan45; use improved parametric methodology as a test environment for potential future changes

Potential Impact:

Defragments Methodologies
 Reduces divergence but not expected to produce full alignment.

Improves Predictive Value
 Reducing divergence from Tan45 results → more confidence in parametric outputs.

- Reduces Stakeholder Confusion
 Improved alignment of early signals with final outcomes.
- Interactive Effects
 Linear/sequential process still potentially obscures interactions between changes.

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Next Steps



Next Steps

Implement and Back-Test Potential Design Changes:

 Using a subset of parametric cases from the 2026-2027 IRM PBC to compare potential changes with current methodology and Tan45.

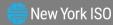
Case	Old Parametric	New Parametric	Tan45
Initial IRM	24.4	24.4	25.6
1	0.37		х
4	0.24		х
Total IRM	23.82	26.1	26.3

Additional Activities:

- Identify stable stopping criteria for Monte Carlo.
- Research alternative methodologies for capturing interactive effects.
- Investigate various shifting methodologies.
- Draft whitepaper summarizing findings and recommendations.



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



