



Market Efficiency Update

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PJM Market Simulation

Transmission Expansion Advisory Committee

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2022/23 Market Efficiency Cycle

- Back in January, PJM posted a preliminary ME Base Case:
 - Included the reliability upgrades from the 2022 Window 1 and 2022 Multi-Driver Window.
 - Preliminary case was posted on the [ME secure page](#).
- Updated Market Efficiency Assumptions [whitepaper](#) posted with the July TEAC materials.
 - Summarizes Market Efficiency input assumptions presented at TEAC meetings March through July.
 - Whitepaper included for consideration by the PJM board at the July meeting.
- Updates to the Market Efficiency Base Case will be posted as necessary.

- The generation expansion provides a comfortable reserve margin even with the higher level of loads from the 2023 PJM Load Forecast Report.
- When using the high 2023 data center load forecast, PROMOD SCED engine has difficulty achieving a reasonable dispatch for the 2030 and 2033 simulations
 - A high number of hours have emergency energy and overloads.
 - The extreme levels of PROMOD congestion are an indicator of reliability violations and prevent further evaluation of the congestion patterns.
- PJM delayed the opening of the 2022/2023 Long-Term Window until the reliability violations for the 2022 Window 3 (Dominion data center loads) are addressed.
- PJM will continue to monitor the progress and provide additional details to stakeholders at future TEAC meetings.

- Preliminary congestion analysis showed some 138 kV ComEd constraints binding independently of the Dominion data center load issue.
 - ComEd constraints were identified and posted as reliability violations in the 2023 RTEP Window 1 that opened on July 24, 2023.
- PJM will reassess ComEd congestion after the 2023 RTEP Window 1 is completed.



2023 Acceleration Analysis of RTEP Reliability Projects

- Scope
 - Determine which Reliability upgrades, if any, have an economic benefit if accelerated or modified.
- Study Assumptions
 - Analysis will utilize the most recent Market Efficiency Base Case available.
 - Two sets of input assumptions used to study impacts of approved RTEP reliability projects:
 - Near-Term simulations
 - Future simulations
- Process
 - Compare market congestion for near term vs. future simulations.
 - Estimate economic impact of accelerating planned reliability upgrades.

- Currently finalizing production cost modeling work.
- Complete production cost simulations
 - Near-Term and Future study years with AS-IS Topology.
 - Near-Term and Future study years with RTEP Topology.
- Identify any board approved reliability upgrades that are responsible for congestion reductions between the AS-IS and RTEP topology cases.
- Determine and evaluate potential project acceleration candidates.
- Analysis to be completed before the end of the year.

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