Market Efficiency Update

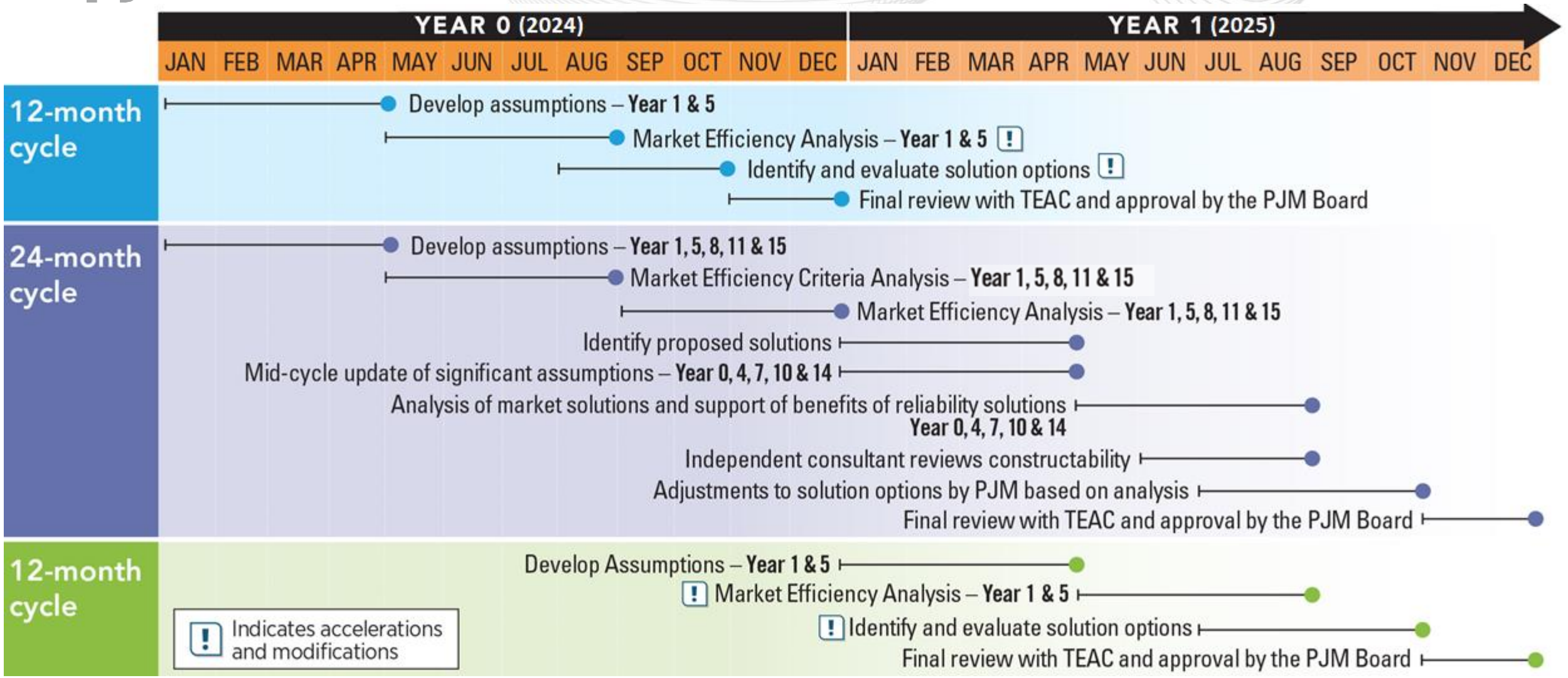
Market Simulation

Transmission Expansion Advisory Committee

April 1, 2025

2024/25 Long-Term Market Efficiency Cycle

2024/25 Market Efficiency Timeline



2024/25 Long Term Window
Market Efficiency Input Assumptions
Mid-cycle Update

2024/25 ME Base Case Status

- Upgraded to PROMOD IV user interface version 11.5. (PROMOD IV Engine I).
  - Also posted associated PROMOD CFG file on Market Efficiency secure page.
- ME Base Case updates:
  - Topology for years 2025/2029 and 2032/2035 based off the RTEP 2029 Case and RTEP 2032 Case, respectively (topology includes 2024W1 approved solutions).
  - Applied a number of rating updates received from transmission owners.
  - Updated reactive interface definitions and ratings.
  - Generation expansion for all modeled years assumes a PJM Reserve Requirement of 17.8%.
- Mid-cycle update of all modeled years posted on Market Efficiency secure page.
- Updated ME Assumptions Whitepaper posted with March TEAC materials.

2024/25 ME Window Congestion Drivers

Constraint*	Area	Type	Included in the 2024/25 ME Window	2029 Base Simulation Annual Congestion ($Million)	2032 Base Simulation Annual Congestion ($Million)	2029 Sensitivity Simulation Annual Congestion (2025 Load Report) ($Million)	Comment
Museville-Smith Mountain 138 kV	AEP	Line	Yes	11.4	24.9	20.2	Constraint has significant historical congestion. Additional future congestion increases driven by increased load forecast.
West Point-Lanexa 115 kV	DOM	Line	Yes	2.0	1.7	2.0	Congestion driven by the renewable generation buildup.
Garrett-Garrett Tap 115 kV	PN-APS	Line	Yes	1.8	2.1	1.8	Congestion driven by the renewable generation buildup.

**Includes constraints with annual simulated congestion greater than $1Million and 25 hours binding in each of 2029 & 2032 simulated years.*

- For additional details regarding congestion drivers selection process see Market Efficiency update at March TEAC.

Next Steps

- 2024/25 Long-Term Market Efficiency Window 1 to open on April 11, 2025 and close on June 10, 2025.
  - Due to the reduced number and complexity of the congestion drivers, the duration of the window will be shortened to 60 days.
- The final Market Efficiency Base Case, Sensitivity Scenarios, and Congestion Drivers to be posted before the start of the window.

2024/25 Market Efficiency Window – Congestion Drivers

Congestion Driver	Area	Type	Comment
Museville-Smith Mountain 138 kV	AEP	Line	Historical congestion. Congestion increases driven by increased load forecast.
West Point-Lanexa 115 kV	DOM	Line	Congestion driven by the renewable buildup.
Garrett-Garrett Tap 115 kV	PN-APS	Line	Congestion driven by the renewable buildup.

2025 Market Efficiency Timeline

Step	Tentative Target Date
Finalize Preliminary Congestion Drivers	March 2025
Post Final Base Case, Sensitivity Scenarios, and Congestion Drivers	April 11, 2025
Long Term ME Proposal Window (60 Days)	April 11, 2025 – June 10, 2025
Analysis of Proposed Solutions	June – September 2025
TEAC Reviews and Board Approval	October - December 2025

Contact

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Market Efficiency Update

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Revision History

- V1 – 3/27/2025 – Original slides posted.

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