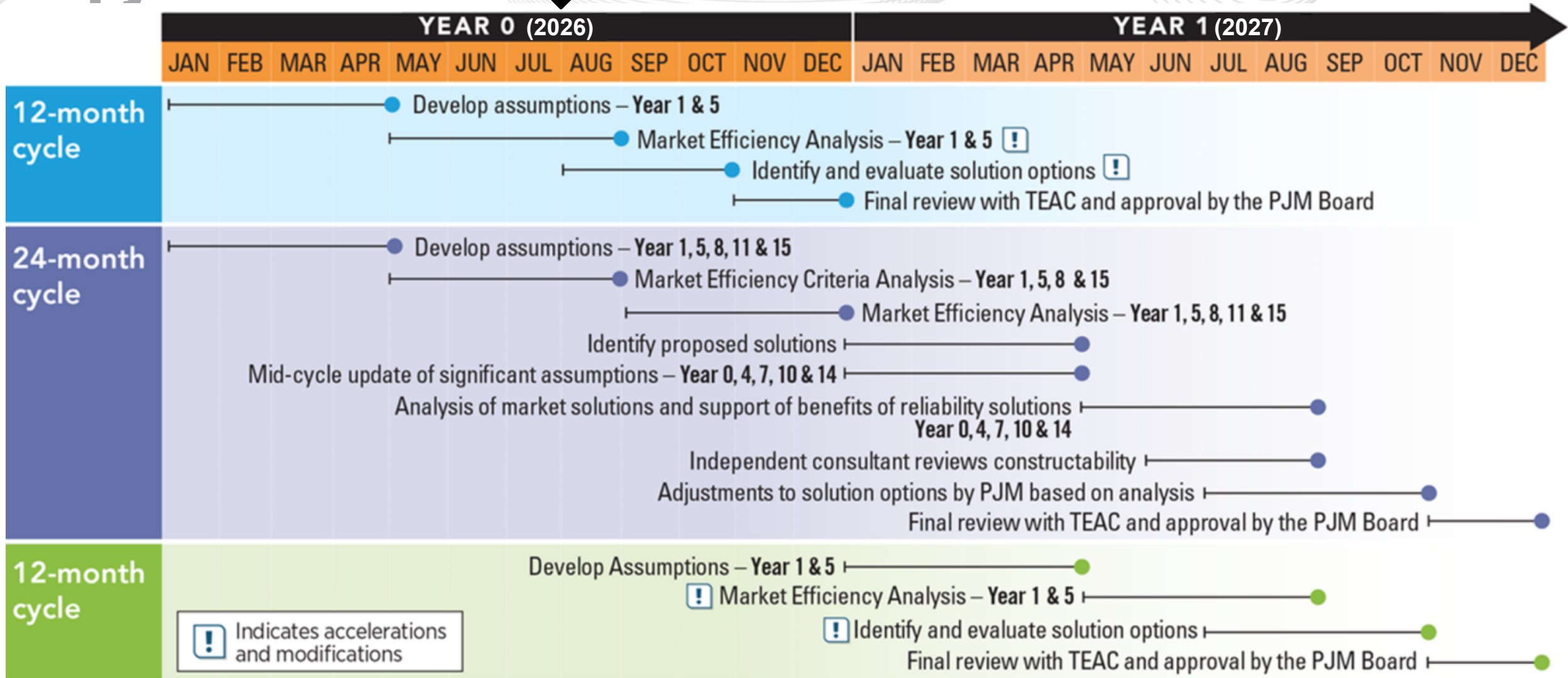


Market Simulation Update

Market Simulation
Transmission Expansion Advisory Committee
August 4, 2026

2026/27 Market Efficiency Cycle



Step	Target Date
Post Preliminary 2031 Base Case	July 2026
Stakeholders Feedback	August – October 2026
Identify Congestion Drivers	November – December 2026
Post Final Base Case and Target Congestion Drivers	January - February 2027
Long Term Proposal Window	February - May 2027
Analysis of Proposed Solutions	May – September 2027
TEAC Reviews and Board Approval	October - December 2027

- PJM posted the preliminary 2026/2027 ME Base Case database (2031 modeled year).
 - Case was posted on the [ME secure page](#) on July 15.
 - Consistent with the latest 2026W1 cases at the time of posting.
- Solicit feedback from stakeholders by September 2026.
- Next Steps:
 - Update powerflow to be consistent with the cases posted with the opening of 2026W1.
 - Update reactive interface limits.
 - Update generation expansion to observe PJM reserve requirement.
 - Update interregional data as needed.
 - Add other modeled years (2027, 2034, 2037).

- Study Years
 - 2027, 2031, 2034, 2037.
- Model and Input Assumptions presented in the [Market Efficiency Update](#) at June TEAC.
 - Market Efficiency Input Assumptions Whitepaper [posted](#) with July TEAC materials.
- Preliminary simulations performed using PROMOD IV v11.5, Engine I.

2031 Preliminary Simulated Congestion – COMED

Constraint*	Area	Simulated 2031 Annual Congestion (\$M)	M2M Coordinated	2026W1 Identified Reliability Violation	2024-2026 Historical Congestion
Cherry Valley (B)-Prairie 345 kV	COMED	>\$50M	Y	Y	Y
Prairie-Silver Lake (R) 345 kV	COMED	>\$50M	Y	Y	Y
Wayne-Tollway 345 kV	COMED	>\$50M			
Kensington Ave (B)-Kankakee (B) 138 kV	COMED	\$10M - \$50M			
Elwood (R)-Rowell 345 kV	COMED	\$10M - \$50M			Y
W Plano (R)-Plano R 138 kV	COMED	\$10M - \$50M		Y	
Miller Rd-W Plano (R) 138 kV	COMED	\$10M - \$50M		Y	
Alpine Tap (R)-Belvidere (R) 138 kV	COMED	\$10M - \$50M			Y
Nelson (B)-Herman Rd 345 kV	COMED	\$1M - \$10M	Y		
Lee County-Byron (B) 345 kV	COMED	\$1M - \$10M			
Nelson (B)-Renner Rd 345 kV	COMED	\$1M - \$10M	Y		
Dresden (B)-Kendall 345 kV	COMED	\$1M - \$10M			
Elwood (B)-Rowell 345 kV	COMED	\$1M - \$10M			Y
Sandwich (R)-Sandwich (B) 138 kV	COMED	\$1M - \$10M		Y	
Renner Rd-Lee County 345 kV	COMED	\$1M - \$10M	Y		
Kewanee-Kewanee (CB) 138 kV	COMED	\$1M - \$10M			Y
Cordova Energy Center-Nelson (B) 345 kV	COMED	\$1M - \$10M	Y		

*Includes prospective PJM and M2M constraints with annual simulated congestion greater than \$1M and binding hours greater than 25.



2031 Preliminary Simulated Congestion – PJM West (non-COMED)

Constraint*	Area	Simulated 2031 Annual Congestion (\$M)	M2M Coordinated	2026W1 Identified Reliability Violation	2024-2026 Historical Congestion
East Danville-Danville 138 kV	AEP	\$10M - \$50M			
Keywood Switching Station-Abingdon 138 kV	AEP	\$10M - \$50M			
Museville-Smith Mountain 138 kV	AEP	\$10M - \$50M			Y
Oraora-Olive 345 kV	AEP	\$10M - \$50M			
Claytor-South Christiansburg 138 kV	AEP	\$1M - \$10M			
Cook-Olive 345 kV	AEP	\$1M - \$10M	Y		Y
Fieldale-Thornton 138 kV	AEP	\$1M - \$10M			
Fieldale-Oaklevel 138 kV	AEP	\$1M - \$10M			
AH1-680 Tap-South Canton 345 kV	FE-ATSI-AEP	\$1M - \$10M			
Patriot Metals-Bluebell 138 kV	FE-ATSI	\$1M - \$10M			Y
Leroy Center Q4-Spruce Q-4 138 kV	FE-ATSI	\$1M - \$10M			
Spurlock-Stuart 345 kV	EKPC-DAY	\$1M - \$10M			

*Includes prospective PJM and M2M constraints with annual simulated congestion greater than \$1M and binding hours greater than 25.

2031 Preliminary Simulated Congestion – MAAC

Constraint*	Area	Simulated 2031 Annual Congestion (\$M)	M2M Coordinated	2026W1 Identified Reliability Violation	2024-2026 Historical Congestion
Peach Bottom #1 TR 500/230 kV	PECO	>\$50M			Y
Brunner Island Reactor-W Hempfield 230 kV	PLGRP	\$10M - \$50M			Y
Safe Harbor-Manor 69 kV	PLGRP	\$1M - \$10M			
Bennett-Milford 230 kV	DPL	\$1M - \$10M			Y
East Towanda-Canyon 230 kV	PENELEC	\$1M - \$10M		Y	Y
North Meshoppen #4 TR 230/115 kV	PENELEC	\$1M - \$10M		Y	Y

*Includes prospective PJM and M2M constraints with annual simulated congestion greater than \$1M and binding hours greater than 25.

2031 Preliminary Simulated Congestion – DOM

Constraint*	Area	Simulated 2031 Annual Congestion (\$M)	M2M Coordinated	2026W1 Identified Reliability Violation	2024-2026 Historical Congestion
Moon Corner-Northern Neck 115 kV	DOM	\$10M - \$50M			
Bremo #2 TR 230/115 kV	DOM	\$10M - \$50M			
Farmville #2 TR 230/115 kV	DOM	\$10M - \$50M			
AB2-161 Tap-Backers Pond Del Pt 115 kV	DOM	\$1M - \$10M			
Willis Mt-Farmville 115 kV	DOM	\$1M - \$10M		Y	
Gladys Tap-Altavista 69 kV	DOM	\$1M - \$10M			
Altavista #1 TR 138/115 kV	DOM	\$1M - \$10M			Y
AH1-439 Tap-Buckingham 230 kV	DOM	\$1M - \$10M			
Farmville-AH1-439 Tap 230 kV	DOM	\$1M - \$10M			
Fork Union #1 TR 230/115 kV	DOM	\$1M - \$10M			
AD2-085 Tap-Myrtle 115 kV	DOM	\$1M - \$10M			
Altavista-Otter 138 kV	DOM-AEP	\$10M - \$50M			
Kerr Dam-GW King Tap 115 kV	DOM-CPLE	\$1M - \$10M			Y

*Includes prospective PJM and M2M constraints with annual simulated congestion greater than \$1M and binding hours greater than 25.



2031 Preliminary Simulated Congestion – Tie Lines & External M2M

Constraint*	Area	Simulated 2031 Annual Congestion (\$M)	M2M Coordinated	2026W1 Identified Reliability Violation	2024-2026 Historical Congestion
Crescent Ridge (R)-Corbin 138 kV	COMED-MISO	\$10M - \$50M	Y	Y	Y
Kewanee-Putnam 138 kV	COMED-MISO	\$1M - \$10M	Y		Y
Reynolds #3 TR 765/345 kV	MISO	\$10M - \$50M	Y		
He Hubbell-Batesville 138 kV	MISO	\$10M - \$50M	Y		Y
Tazewell #1 TR 345/138 kV	MISO	\$1M - \$10M	Y		
Gray Summit-Labadie 345 kV	MISO	\$1M - \$10M	Y		Y
P9700 East-Olive 345 kV	MISO-AEP	\$1M - \$10M	Y		

*Includes prospective PJM and M2M constraints with annual simulated congestion greater than \$1M and binding hours greater than 25.

2026 Acceleration Analysis of RTEP Reliability Projects

1.5.7 Development of Economic-based Enhancements or Expansions.

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(b) Following PJM Board consideration of the assumptions, the Office of the Interconnection shall perform a market efficiency analysis to compare the costs and benefits of:

- (i) accelerating reliability-based enhancements or expansions already included in the Regional Transmission Plan that if accelerated also could relieve one or more economic constraints;
- (ii) modifying reliability-based enhancements or expansions already included in the Regional Transmission Plan that as modified would relieve one or more economic constraints; and
- (iii) adding new enhancements or expansions that could relieve one or more economic constraints, but for which no reliability-based need has been identified. Economic constraints include, but are not limited to, constraints that cause:
 - (1) significant historical gross congestion;
 - (2) pro-ration of Stage 1B ARR requests as described in the Operating Agreement, Schedule 1, section 7.4.2(c); or
 - (3) significant simulated congestion as forecasted in the market efficiency analysis.

The timeline for the market efficiency analysis and comparison of the costs and benefits for items in the Operating Agreement, Schedule 6, section 1.5.7(b)(i-iii) is described in the PJM Manuals.

(c) The process for conducting the market efficiency analysis described in subsection (b) above shall include the following:

- (ii) The Office of the Interconnection shall identify any planned reliability-based enhancements or expansions already included in the Regional Transmission Expansion Plan, which if accelerated would relieve such constraints, and present any such proposed reliability-based enhancements and expansions to be accelerated to the Transmission Expansion Advisory Committee for review and comment. The PJM Board, upon consideration of the advice of the Transmission Expansion Advisory Committee, thereafter shall consider and vote to approve any accelerations.

- Scope
 - Determine which Reliability upgrades, if any, have an economic benefit if accelerated or modified.
- Study Assumptions
 - Analysis will use the most recent Market Efficiency Base Case available at the time.
 - Two simulated years 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.

- Complete production cost simulations:
 - Near-Term and Future study years with AS-IS Topology.
 - Near-Term and Future study years with RTEP Topology.
- Identify reliability upgrades responsible for congestion reductions between the AS-IS and RTEP topology cases.
- Check the feasibility of accelerating schedules for the identified reliability upgrades.
- Results to be presented at future TEAC meetings.

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Market Efficiency Update



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- V1 – 07/30/2026 – Original slides posted.