



Market Efficiency Update

Nick Dumitriu

Principal Engineer, PJM Market Simulation

Transmission Expansion Advisory Committee

September 6, 2022



2022/23 Market Efficiency Cycle

- Market Efficiency input assumptions presented at TEAC meetings March through July
 - Market Efficiency Assumptions preliminary [whitepaper](#) posted with the July TEAC materials.
 - Currently being updated to include recent generation status changes.
 - The final version of the Market Efficiency Assumptions whitepaper to be presented for consideration by the PJM board at the October meeting.
- Tentative posting schedule
 - Posted in August a [draft ME Case](#) for stakeholders review.
 - Preliminary Market Efficiency Base Case to be posted by mid-September (PROMOD 11.4 XML format).
 - Final Market Efficiency Base Case and Congestion Drivers to be posted before start of 2022/23 Long-Term Window.

- Topology based on 2027 Summer Peak powerflow, consistent with 2022 Reliability Window 1.
 - Summer/Winter ratings from the 2027 Summer/Winter Peak powerflows.
 - Includes improved modeling detail and corrections from stakeholders feedback received by the end of August.
- Scheduled Interchange model
 - PJM-MISO interchange based on economic dispatch.
 - PJM-NY interchange based on three years historical scheduled interchange.
- Monitored Thermal Flowgates
 - Historical market constraints.
 - N-1 Flowgate Screening performed on Summer/Winter/LL 2027 RTEP cases.

- Reactive Interface (IROL) Limits
 - PV Analysis performed on the 2027 Summer/Winter/Light Load RTEP powerflow models.
 - Modeled interfaces: AEP-DOM, AP South, Black Oak-Bedington, 5004/5005, Central, Eastern, Western, Cleveland, BC PEPCO, CE East.
- Generation Expansion Plan
 - PJM's Generation Expansion Plan is informed by the 2027 RTEP load flow model.
 - Includes existing and ISA (Interconnection Service Agreement) level generators.
 - Based on queue status as of 5/4/2022.
 - Generators with a signed ISA or an Interim ISA, that are not suspended, are included.
 - PJM notified generator deactivations are modeled.
 - Market Efficiency Base Case reserve margin chart presented at [May TEAC](#).

- Peak Load / Annual Energy forecasts from [PJM 2022 Load Forecast Report](#).
 - See Table B-1 and Table E-1, respectively.
- Demand Response from [PJM 2022 Load Forecast Report](#) (see Table B-7).
 - By delivery year, zone and product type.
 - Location of DR informed by zip code of registration data.
 - Strike price modeled to ensure that DR is called at a level consistent with history and contractual requirements for the product type.
- Fuel/Emissions Price Forecasts from the PROMOD vendor, May 2022 update
 - see [ME Update July TEAC](#), slides 8, 9, 10.
- Financial parameters from the [TCIC workbook \(4/05/2022 version\)](#).

Step	Target Date
Stakeholders Feedback	End of August 2022
Post Preliminary ME Base Case (to be used for Acceleration and Reevaluation analyses)	September 2022
Update Interregional Data	September – October 2022
Identify and Validate Congestion Drivers	October – December 2022
2022 Reevaluation Analysis	October – December 2022
2022 Acceleration Analysis	September – November 2022
Post Final ME Base Case and Congestion Drivers	January 2023
Open Long Term Proposal Window	January 2023

2022 Multi-Driver Proposal Window 1



2022 Multi-Driver Proposal Window 1 Market Efficiency Analysis

- Window opened on 6/7/2022 and closed on 8/8/2022
 - Received [14 total proposals](#) submitted from 3 different entities.
 - Cost Estimates: Approximate range from \$215K – 127M.

FG#	Constraint	FROM AREA	TO AREA
MDW1-ME-01	Dumont to Stillwell 345 kV	AEP	NIPSCO
MDW1-ME-02	Olive to University Park North 345 kV	AEP	CE
MDW1-ME-03,MDW1-ME-04	E Frankfort to Crete to St John 345 kV	CE	NIPSCO

- Tentative Schedule
 - Market Efficiency analysis coordinated with PJM Transmission Planning.
 - Currently reviewing the PROMOD modeling information for completeness.
 - Preliminary evaluation to begin early September and expected to complete by end of the year.

Facilitator:
Sue Glatz,
Suzanne.Glatz@pjm.com

Secretary:
Michael Zhang,
Michael.Zhang@pjm.com

SME/Presenter:
Nick Dumitriu,
Nicolae.Dumitriu@pjm.com

Market Efficiency Update



Member Hotline

(610) 666 – 8980

(866) 400 – 8980

custsvc@pjm.com

- V1 – 9/1/2022 – Original slides posted

**PROTECT THE
POWER GRID**
**THINK BEFORE
YOU CLICK!**



Be alert to
malicious
phishing emails.

Report suspicious email activity to PJM.
(610) 666-2244 / it_ops_ctr_shift@pjm.com

