

Market Implementation Committee WebEx / Conference & Training Center September 7, 2022 9:00 a.m. – 4:00 p.m. EPT

Administration

Amanda Martin reviewed the Antitrust, Code of Conduct, Public Meetings/Media Participation and the WebEx Participant Identification Requirements.

The Committee approved the draft minutes from the August 10, 2022 Market Implementation Committee with **0 objections and 0 abstentions**

- 2. Amanda Martin reviewed the MIC Work Plan.
- 3. Michele Greening provided an update on the October Annual Meeting.

Endorsements/Approvals

- 4. Fuel Requirements for Black Start Resources
 - a. Janell Fabiano provided background, polling results, and an overview of the voting process for this issue.
 - b. Dan Bennett reviewed the Package H proposal
 - c. Joe Bowring, IMM, reviewed the IMM proposal.

The committee was asked to vote on the proposals via an offline vote in the PJM Voting Application which opened on September 8 and will close on September 13. Issue Tracking: Fuel Requirements for Black Start Resources

5. Variable Operations & Maintenance Cost Development

Roger Cao reviewed the PJM and Constellation proposals and poll results addressing development of variable operations and maintenance costs that was developed through the Cost Development Subcommittee

The committee endorsed the PJM proposal with 184 (77%) in favor, 54 (23%) opposed, and 7 abstentions. A second vote showed stakeholders preferred the PJM proposal over status quo with 170 (71%) in favor, 68 (29%) opposed, and 7 abstentions.

The committee endorsed the Constellation proposal with 130 (54%) in favor, 109 (46%) opposed, and 6 abstentions. A second vote showed stakeholders preferred the Constellation proposal over status quo with 124 (52%) in favor, 115 (48%) opposed, and 6 abstentions

The PJM proposal moves to the Market and Reliability Committee (MRC) as the primary motion. The Constellation proposal moves to the MRC as the alternate motion. <u>Issue Tracking: Variable Operating and Maintenance Cost</u>

6. <u>Residential Customer Measurement and Verification for Demand Response</u>



Ken Schisler, CPower, reviewed a Problem Statement and Issue Charge addressing Residential Customer Measurement and Verification for Demand Response.

Updates were made to the Expected Deliverables section of the issue charge during the meeting and then the vote was taken on that revised version. The revised issue charge is posted under the meeting materials.

The committee did not approve the revised Issue Charge with 98 (43%) in favor, 129 (57%) opposed, and 12 abstentions.

7. Manual 18 and Manual 18B Revisions

Theresa Esterly reviewed revisions to Manual 18: PJM Capacity Market, and Manual 18B: Energy Efficiency Measurement & Verification as part of the periodic review. **The committee endorsed the Manual 6 revisions by acclamation with 0 objections and 0 abstentions.**

- 8. <u>Reserve Price Formation Manual Revisions</u>
 - a. Brian Chmielewski provided an overview of FERC's order approving the implementation of the Reserve Price Formation changes, effective October 1, 2022. Rebecca Stadelmeyer, Damon Fereshetian and Michael Olaleye reviewed conforming revisions to Manual 27: Open Access Transmission Tariff Accounting, Manual 28: Operating Agreement Accounting, Manual 29: Billing to address the Reserve Price Formation implementation, and Manual 11: Energy & Ancillary Services Market

b. Catherine Tyler, IMM, reviewed the IMM's observations of the Manual 11 revisions.

The committee endorsed all revisions by acclamation with 0 objections and 1 abstention.

First Readings

- 9. Operating Reserve Clarification for Resources Operating as Requested by PJM Rebecca Stadelmeyer reviewed a proposal to proceed with removal of the CT Rule in Manual 28 in advance of the remainder of the work on this issue charge. The committee will be asked to endorse the revisions to Manual 28 at its next meeting. <u>Issue Tracking: Operating Reserve Clarification for Resources Operating as Requested by PJM</u>
- 10. Critical Natural Gas Infrastructure Demand Response Participation

Pete Langbein provided a first read of a proposal addressing prohibition of Critical Natural Gas Infrastructure load as a demand response resource. This proposal was developed at the Demand Response Subcommittee pursuant to recommendations included in the FERC/NERC report on the severe cold weather event in Texas and South Central US in February 2021.

The committee will be asked to endorse the proposal and the associated manual revisions at its next meeting.

Working Items

11. Capacity Offer Opportunities for Generation with Co-Located Load (12:40 - 1:55)



Due to time constraints, this agenda item was removed during the meeting. Additional special sessions of the MIC will be held to discuss this issue further. <u>Issue Tracking: Capacity Offer Opportunities for Generation with Co-Located Load</u>

- 12. Day-ahead Zonal Load Bus Distribution Factors
 - a. Amanda Martin presented education on the use of zonal load bus distribution factors.
 - b. Dave Anders facilitated a discussion to solicit interests, design components, design component options and packages addressing Day-ahead Zonal Load Bus Distribution Factors. The committee will continue working the Consensus Based Issue Resolution (CBIR) process by continuing to solicit design components, solution options, and packages. Additional design components, solution options, and packages can be provided in advance of the next meeting. The post-meeting version of the matrix is posted with the materials.

Issue Tracking: Day-ahead Zonal Load Bus Distribution Factors

Additional Items

- 13. <u>Quadrennial Review</u> Adam Keech discussed follow-up items from the recent Quadrennial Review
- 14. <u>2023 PJM Capital Budget</u> Jim Snow reviewed updates to PJM's 2023 Capital Budget.
- <u>Reserve Price Formation Simulations</u> Joey Tutino provided an overview of analysis that was conducted to simulate the impact of the pending Reserve Price Formation rule changes on the energy and reserve markets.
- Order Directing Reports on Energy and Ancillary Service Market Reforms Rebecca Carroll provided an update on the FERC order directing reports on energy and ancillary service market reforms (FERC Docket No. AD21-10).
- <u>2024/2025 Base Residual Auction Update</u> Pete Langbein provided an update on the forced outages rates (EFORd) that will be used in the upcoming 2024/2025 base residual auction for the capacity market.
- <u>Cost Development Subcommittee Update</u> Nicole Scott provided an informational update on the work to be performed at the Cost Development Subcommittee.

Informational Section

Southeast/Southwest Aggregates Removal

The presentation provides an overview of updates being made to the Southeast/Southwest Aggregates. Materials are posted as informational only.

Dynamic Line Ratings Task Force (DLRSTF) Update



The DLRTF kickoff meeting will be September 30. The Task Force is assigned to the Operating Committee but will cover topics related to the MIC and PC as well. Information will be posted to the <u>DLRTF website</u>

Fast Start Pricing Monthly Metrics Update Materials are posted as informational only.

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Interregional Coordination Update Materials are posted as informational only.

<u>Stability Limits in Markets and Operations</u> Materials are posted as informational only.

<u>ARR FTR Market Task Force (AFMTF)</u> Meeting materials are posted to the <u>AFMTF website</u>.

<u>Regulation Market Design Senior Task Force (RMDSTF)</u> Meeting materials are posted to the <u>RMDSTF website</u>.

<u>Reactive Power Compensation Task Force (RPCTF)</u> Meeting materials are posted to the <u>RPCTF website</u>.

<u>Cost Development Subcommittee (CDS)</u> Meeting materials are posted to the <u>CDS website</u>.

<u>Demand Response Subcommittee (DRS)</u> Meeting materials are posted to the <u>DRS website</u>.

<u>DER & Inverter-based Resources Subcommittee (DIRS)</u> Meeting materials are posted to the <u>DIRS website.</u>

<u>Market Settlements Subcommittee (MSS)</u> Meeting materials are posted to the <u>MSS website</u>.

<u>OC/MIC Fuel Requirements for Black Start Resources</u> Meeting materials are posted to the <u>Operating Committee website</u>.

<u>Report on Market Operations</u> The Report on Market Operations will be reviewed during the <u>MC Webinar</u>.



Company

In-Person Attendees

Name Anders, David (Facilitator) Martin, Amanda (Secretary) Afelumo, Foluso Barker, Jason Benchek, James Bennett, Daniel Boyle, Glen Brooks, Michael Cao, Roger Carroll, Rebecca Chang, Sean Chmielewski, Brian Covle, Michael Croop, Danielle Egan, Amanda Esterly, Theresa Fereshetian, Damon Foley, Sheila Ford, Adrien Greening, Michele Herrera, Maria Horger, Tim Horning, Lynn Marie Keech, Adam Kim, Sung Kogut, George Langbein, Peter Lu, Chenchao Midgley, Sharon Muhl, Nancy Olaleye, Michael Poulos, Greg Scarp, David Souder, Michelle Stadelmeyer, Rebecca Starkov. Stefan Suh, Jung Swalwell, Brad Sweeney, Rory Terranova, Chris Tribulski, Jennifer

PJM Interconnection PJM Interconnection PJM Interconnection Constellation Energy Generation, LLC American Transmission Systems, Inc. PJM Interconnection **PJM Interconnection** RTO Insider PJM Interconnection PJM Interconnection Shell Energy North America (US), L.P. **PJM Interconnection** PJM Interconnection **PJM Interconnection PJM Interconnection** PJM Interconnection **PJM Interconnection** PJM Interconnection Old Dominion Electric Cooperative **PJM Interconnection PJM Interconnection** PJM Interconnection American Municipal Power, Inc. **PJM Interconnection PJM Interconnection** New York Power Authority PJM Interconnection PJM Interconnection Exelon Business Services Company, LLC **PJM Interconnection** PJM Interconnection PJM Committee Voting Generic Account Calpine Energy Services, L.P. **PJM Interconnection PJM Interconnection** PJM Interconnection Calpine Energy Solutions, LLC Tangent Energy Solutions, Inc. Power Prose. Inc. **PJM Interconnection**

Sector None None None Generation Owner Transmission Owner None None None None None Other Supplier None None None None None None None Electric Distributor None None None Electric Distributor None None Other Supplier None None Transmission Owner None None None Generation Owner None None None Other Supplier Other Supplier None None None

Webex Meeting Attendees

Name

Anderson, Jared Bleiweis, Bruce Bowring, Joe Bradley, Gregg Breidenbaugh, Aaron Brodbeck, John Bruno, Joshua

Company

S&P Global Inc. DC Energy LLC Monitoring Analytics, LLC EDF Trading North America, LLC Rodan Energy Solutions (USA) Inc. EDP Renewables North America, LLC PJM Interconnection, LLC

PJM Interconnection

None Other Supplier None

Sector

None Other Supplier Other Supplier Generation Owner None



Bruno, Patrick Bryson, Michael (Mike) Campbell, Bruce Canter, David Carmean, Gregory Carrier, Ronald (Ron) Carson, Donna Cerchio, Gerard Chee, Yee Hong Christopher, Mahila Ciabattoni, Joseph Cocco, Michael Corash, Richard (Rich) Coyle, Billy Davis, David Di Iorio, Michelle Dillon, Matthew Disciullo. Nicholas Domian, Christin Dorko, Keri Drom, Richard (Rick) Dugan, Chuck Egan, Amanda Ericson, Christine Esquivel, Manuel Evrard, David Fabiano, Janell Fernandez, Ray Filomena, Guy Fink, Regan Fishback, Luke Fitzpatrick, Brian Foladare, Kenneth (Ken) Foster Cronin, Denise Fuess, Christian Garnett, Bryan Gilani, Rehan Gorman, Brad Graf, Walter Granstrand, Luke Green, Ben Green, Robert Green, Zachary Greiner, Gary Handlin, Michael Hanser, Erik Hastings, David Hatch, Kevin Hauske, Thomas Heinle, Frederick (Erik) Heisey, Bradley Helm, Gary Hepplewhite. Peter Herbert, Sebastian Hickey, Mike Hicks, Colleen

PJM Interconnection, LLC PJM Interconnection, LLC Campbell Energy Advisors, LLC AEP Appalachian Transmission Company, Inc. OPSI Big Lake Consulting East Kentucky Power Cooperative, Inc. Monitoring Analytics, LLC MCG Energy Solutions Public Utilities Commission of Ohio (The) PJM Interconnection. LLC Old Dominion Electric Cooperative PSEG Energy Resources & Trade LLC **Dominion Virginia Power** Strata Solar PSEG Energy Resources & Trade LLC UGI Development Company PJM Interconnection, LLC Duquesne Light Company Monitoring Analytics, LLC Eckert Seamans East Kentucky Power Cooperative, Inc. PJM Interconnection. LLC Illinois Commerce Commission Enel Trading North America, LLC Pennsylvania Office of Consumer Advocate PJM Interconnection, LLC PJM Interconnection, LLC Customized Energy Solutions, Ltd.* Pine Gate Mid-Atlantic, LLC Affirmed Energy LLC PJM Interconnection, LLC Geenex Solar LLC East Kentucky Power Cooperative, Inc. PBF Power Marketing, LLC Duke Energy Ohio, Inc. ConEdison Energy, Inc. FirstEnergy Corporation PJM Interconnection, LLC Dominion Virginia Power AEP Appalachian Transmission Company, Inc. PSEG Energy Resources & Trade LLC World Resources Institute PSEG Energy Resources & Trade LLC PJM Interconnection, LLC Michigan Public Service Commission Market Interconnection Consulting Services (MICS) PJM Interconnection, LLC PJM Interconnection, LLC Office of the Peoples Counsel for the District of Columbia Wolf Hills Energy, LLC PJM Interconnection, LLC Wriglev Capital LLC DC Energy LLC PJM Interconnection, LLC PJM Interconnection. LLC

None None None Transmission Owner None None Transmission Owner None None None None Electric Distributor Other Supplier None None Other Supplier Generation Owner None Transmission Owner None None Transmission Owner None None Other Supplier End-Use Customer None None None Other Supplier Other Supplier None Other Supplier Transmission Owner Generation Owner Transmission Owner Other Supplier Transmission Owner None None Transmission Owner Other Supplier None Other Supplier None None None None None End-Use Customer Generation Owner None Other Supplier Other Supplier None None



Hoatson, Thomas (Tom) Hohenshilt, Jennifer Holter, Natasha Hudis, Gabriella Hull, Gerit Huntoon, Stephen Hurwich, Mark Hyatt, Earl Hyzinski, Tom ller, Arthur (Art) Janicki. Diane Jardot, Gina Johnson, Carl Johnston, David Jones, Scott Kalaskar, Rahul Keenan, Matthew Kelly, Stephen Kent, Janessa Kilgallen, Kevin Laios. Takis Lawton, Nick Leasure. Jill Lee, Ray Lejcar, Jamie Liang-Nicol, Cecilia Libbos, Robin Luna, Joel Lund, Louisa Mabry, David Mariam, Yohannes Martin, Valerie Marzewski, Skyler Mason, Gary Matheson, Eric McAnany, James McLaverty, Megan McNeil, Justin McNicholas, Daniel Miller. John Montalvo, Marc Mooney, Jeffrey (Jeff) Moye, Bob Ohara, Bernard Ondayko, Brock Pakela, Gregory (Greg) Patel, Keyurbhai (Keyur) Pelletier, Eveline Peoples, John Phillips, Amanda Pilong, Christopher Pincus, Steven Poulos. Grea Procuniar, Jason Rahimi, Farrokh Redwine, Arlo

Riverside Generating, LLC Talen Energy Marketing, LLC PJM Interconnection, LLC Jersey Green Energy LLC American Municipal Power, Inc. Chesapeake Transmission LLC Elliott Bay Energy Trading, LLC Monitoring Analytics, LLC GT Power Group Indiana Office of Utility Consumer Counsel Boston Energy Trading & Marketing, LLC Essential Power Rock Springs, LLC Customized Energy Solutions, Ltd.* Indiana Utility Regulatory Commission Indiana Office of Utility Consumer Counsel AES Ohio Generation, LLC Jpower USA Brookfield Energy Marketing LP Duquesne Light Company Avangrid Renewables LLC AEP Appalachian Transmission Company, Inc. Earthjustice **Keystone Projects** PJM Interconnection, LLC Allegheny Electric Cooperative, Inc. Monongahela Power Company d/b/a Allegheny Power FirstEnergy Corporation Monitoring Analytics, LLC Daymark Energy Advisors McNees Wallace & Nurick LLC Office of the Peoples Counsel for the District of Columbia The Federal Energy Regulatory Commission PJM Interconnection. LLC FirstEnergy Corporation Pennsylvania Public Utility Commission PJM Interconnection, LLC PJM Interconnection, LLC Office of the Attorney General, Kentucky Nautilus Power, LLC Commonwealth Edison Company NY Utility Intervention Unit FirstEnergy Corporation Rainbow Energy Marketing Corporation Sargent and Lundy AEP Appalachian Transmission Company, Inc. DTE Energy Trading, Inc. PJM Interconnection, LLC Hydro-Quebec **Duquesne Light Company** Wabash Valley Power Association, Inc. PJM Interconnection, LLC PJM Interconnection, LLC CAPS Buckeye Power, Inc. OATI Energy Trading The Federal Energy Regulatory Commission

Generation Owner Generation Owner None Other Supplier Electric Distributor Other Supplier Other Supplier None None End-Use Customer Other Supplier Generation Owner None None End-Use Customer Generation Owner None Other Supplier Transmission Owner Generation Owner Transmission Owner None None None Electric Distributor Transmission Owner Transmission Owner None None None End-Use Customer None None Transmission Owner None None None End-Use Customer Generation Owner Transmission Owner None Transmission Owner Other Supplier None Transmission Owner Other Supplier None None Transmission Owner Electric Distributor None None None Electric Distributor None None



Robinson, Becky Rogers, Aaron Rohrbach, John Roychowdhury, Meghadeep Rumler, Ed Sasser, Jonathan Scheidecker, Paul Schisler, Kenneth (Ken) Schmitt, David Schreim. Morris Schwarz, Stephanie Schweizer, David Scott, Nicole Servera, Max Shah, Vijay Shanker, Roy Sloan, Ben Smith, Kara Snow, Jim Sock. Brvan Sorrels. James Sotkiewicz, Paul Souder. Michelle Stemetzki, Michael Stone, Andy Sturgeon, John Sussler, Philip Svenson, Heather Swigonski, Frank Tangirala, Subha Tibbetts, Maeve Tubrity, Meg Tyler, Catherine Van De Verg, Christopher VanBlargan, Bryna Voreis, Kreig Walcavich, Colin Warner-Freeman, Jennifer Waweru, James Weathers, Brian Wehnes, Kathleen Whitehead, Jeffrey (Jeff) Wylie-Chambers, Ericka Yovanovich, Laura Zemanek. Kevin Zhao, Tong

Vista Energy Marketing, L.P. East Kentucky Power Cooperative, Inc. Southern Maryland Electric Cooperative, Inc. Yes Energy, LLC Atlas Renewable Energy Customized Energy Solutions, Ltd.* PJM Interconnection, LLC Enerwise Global Technologies, LLC New Jersey Board of Public Utilities Maryland Public Service Commission PJM Interconnection. LLC PJM Interconnection, LLC PJM Interconnection, LLC Unicia Energy LP PJM Interconnection, LLC H.Q. Energy Services (U.S.), Inc. Organization of PJM States, Inc. (OPSI) Buckeye Power, Inc. PJM Interconnection, LLC PSEG Energy Resources & Trade LLC AEP Appalachian Transmission Company, Inc. E-Cubed Policy Associates PJM Interconnection. LLC PJM Interconnection, LLC PJM Interconnection, LLC Duke Energy Carolinas, LLC State of Maryland Public Service Electric & Gas Company Advanced Energy Economy, Inc. ABB Enterprise Software Inc. K & L Gates **Rockland Electric** Monitoring Analytics, LLC Pennsylvania Public Utility Commission **Resource Investments** Aces Power Marketing National Grid Renewables, LLC PJM Interconnection, LLC PJM Interconnection, LLC PJM Interconnection, LLC Maryland Public Service Commission GT Power Group Exelon Business Services Company, LLC PJM Interconnection, LLC Buckeye Power, Inc.

PJM Interconnection, LLC

Other Supplier Transmission Owner Electric Distributor None None None None Other Supplier None None None None None Other Supplier None Other Supplier None Electric Distributor None Other Supplier Transmission Owner None None None None Other Supplier None Transmission Owner None None None Transmission Owner None Transmission Owner None Electric Distributor None

Future Meeting Dates and Materials			Materials Due to Secretary	Materials Published
Date	Time	Location	5 p.m.	4 p.m.
October 6	9 a.m.	WebEx / Conference & Training Center	September 26	September 29





November 2	9 a.m.	WebEx / Conference & Training Center	October 21	October 26
December 7	9 a.m.	WebEx / Conference & Training Center	November 23	November 30

Author: Amanda Martin

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Code of Conduct:

As a mandatory condition of attendance at today's meeting, attendees agree to adhere to the PJM Code of Conduct as detailed in PJM Manual M-34 section 4.5, including, but not limited to, participants' responsibilities and rules regarding the dissemination of meeting discussion and materials.

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