



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. Issue Tracking: Variable Operating and Maintenance Cost

6. Residential Customer Measurement and Verification for Demand Response





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. Reserve Price Formation Manual Revisions

- 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

- 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.
 Issue Tracking: Operating Reserve Clarification for Resources Operating as Requested by PJM
- 10. <u>Critical Natural Gas Infrastructure Demand Response Participation</u>

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.

Issue Tracking: Capacity Offer Opportunities for Generation with Co-Located Load

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. Quadrennial Review

Adam Keech discussed follow-up items from the recent Quadrennial Review

14. 2023 PJM Capital Budget

Jim Snow reviewed updates to PJM's 2023 Capital Budget.

15. Reserve Price Formation Simulations

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.

16. 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).

17. 2024/2025 Base Residual Auction Update

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.

18. Cost Development Subcommittee Update

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 DLRTF website

<u>Fast Start Pricing Monthly Metrics Update</u> Materials are posted as informational only.

<u>Interregional Coordination Update</u>

Materials are posted as informational only.

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

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

Regulation Market Design Senior Task Force (RMDSTF)

Meeting materials are posted to the RMDSTF website.

Reactive Power Compensation Task Force (RPCTF)

Meeting materials are posted to the RPCTF website.

<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</u> website.

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

Market Settlements Subcommittee (MSS)
Meeting materials are posted to the MSS website.

OC/MIC Fuel Requirements for Black Start Resources

Meeting materials are posted to the Operating Committee website.

Report on Market Operations

The Report on Market Operations will be reviewed during the MC Webinar.





In-Person Attendees

Name	Company	Sector
Anders, David (Facilitator)	PJM Interconnection	None
Martin, Amanda (Secretary)	PJM Interconnection	None

Afelumo, Foluso PJM Interconnection None Barker, Jason Constellation Energy Generation, LLC

Generation Owner Benchek, James American Transmission Systems, Inc. Transmission Owner Bennett, Daniel PJM Interconnection None

PJM Interconnection Boyle, Glen None Brooks, Michael RTO Insider None PJM Interconnection Cao, Roger None Carroll, Rebecca PJM Interconnection None

Chang, Sean Shell Energy North America (US), L.P. Other Supplier Chmielewski, Brian PJM Interconnection None

Covle. Michael PJM Interconnection None None Croop, Danielle PJM Interconnection Egan, Amanda PJM Interconnection None PJM Interconnection None Esterly, Theresa None Fereshetian, Damon PJM Interconnection Foley, Sheila PJM Interconnection None

Old Dominion Electric Cooperative Electric Distributor Ford, Adrien

Greening, Michele PJM Interconnection None Herrera, Maria PJM Interconnection None Horger, Tim PJM Interconnection None

Horning, Lynn Marie American Municipal Power, Inc. Electric Distributor

Keech, Adam PJM Interconnection None Kim, Sung PJM Interconnection None Kogut, George New York Power Authority Other Supplier PJM Interconnection Langbein, Peter None Lu, Chenchao PJM Interconnection None

Exelon Business Services Company, LLC Transmission Owner Midgley, Sharon

Muhl, Nancy PJM Interconnection None Olaleye, Michael PJM Interconnection None Poulos, Greg PJM Committee Voting Generic Account None

PJM Interconnection

Scarp, David Calpine Energy Services, L.P. Generation Owner

Souder, Michelle PJM Interconnection None Stadelmeyer, Rebecca PJM Interconnection None Starkov. Stefan PJM Interconnection None Suh, Jung Calpine Energy Solutions, LLC Other Supplier Tangent Energy Solutions, Inc. Swalwell, Brad Other Supplier None Sweeney, Rory Power Prose. Inc. Terranova, Chris PJM Interconnection None

Webex Meeting Attendees

Tribulski, Jennifer

Sector Name Company

None

Anderson, Jared S&P Global Inc. None Bleiweis, Bruce DC Energy LLC Other Supplier Monitoring Analytics, LLC Bowring, Joe None EDF Trading North America, LLC Other Supplier Bradley, Gregg Breidenbaugh, Aaron Rodan Energy Solutions (USA) Inc. Other Supplier Brodbeck, John EDP Renewables North America, LLC Generation Owner

Bruno, Joshua PJM Interconnection, LLC None





None

Bruno, Patrick	PJM Interconnection, LLC	None
Bryson, Michael (Mike)	PJM Interconnection, LLC	None
Campbell, Bruce	Campbell Energy Advisors, LLC	None

Transmission Owner Canter, David AEP Appalachian Transmission Company, Inc.

Carmean, Gregory **OPSI**

Carrier, Ronald (Ron) Big Lake Consulting None Carson, Donna East Kentucky Power Cooperative, Inc. Transmission Owner

Cerchio, Gerard Monitoring Analytics, LLC None Chee, Yee Hong MCG Energy Solutions None Christopher, Mahila Public Utilities Commission of Ohio (The) None

Ciabattoni, Joseph PJM Interconnection. LLC None

Old Dominion Electric Cooperative Cocco, Michael Electric Distributor Corash, Richard (Rich) PSEG Energy Resources & Trade LLC Other Supplier None

Dominion Virginia Power Coyle, Billy Davis, David Strata Solar

None Di Iorio, Michelle PSEG Energy Resources & Trade LLC Other Supplier Dillon, Matthew **UGI Development Company** Generation Owner

Disciullo, Nicholas PJM Interconnection, LLC None Domian, Christin **Duguesne Light Company** Transmission Owner

Dorko, Keri Monitoring Analytics, LLC None Drom, Richard (Rick) **Eckert Seamans** None

Dugan, Chuck East Kentucky Power Cooperative, Inc. Transmission Owner PJM Interconnection. LLC None Egan, Amanda

Ericson, Christine Illinois Commerce Commission None Esquivel, Manuel Enel Trading North America, LLC Other Supplier

Evrard, David Pennsylvania Office of Consumer Advocate **End-Use Customer**

Fabiano, Janell PJM Interconnection, LLC None Fernandez, Ray PJM Interconnection, LLC None Filomena, Guy Customized Energy Solutions, Ltd.* None Fink, Regan Pine Gate Mid-Atlantic, LLC Other Supplier Fishback, Luke Affirmed Energy LLC Other Supplier

Fitzpatrick, Brian PJM Interconnection, LLC None Foladare, Kenneth (Ken) Geenex Solar LLC Other Supplier

Foster Cronin, Denise Transmission Owner East Kentucky Power Cooperative, Inc. Fuess, Christian PBF Power Marketing, LLC Generation Owner

Garnett, Bryan Duke Energy Ohio, Inc. Transmission Owner Gilani, Rehan Other Supplier ConEdison Energy, Inc. Gorman, Brad Transmission Owner FirstEnergy Corporation Graf, Walter PJM Interconnection, LLC None

Granstrand, Luke Dominion Virginia Power None Green, Ben AEP Appalachian Transmission Company, Inc. Transmission Owner

Green, Robert PSEG Energy Resources & Trade LLC Other Supplier Green, Zachary World Resources Institute None

Greiner, Gary PSEG Energy Resources & Trade LLC Other Supplier

Handlin, Michael PJM Interconnection, LLC None

Hanser, Erik Michigan Public Service Commission None Market Interconnection Consulting Services (MICS) Hastings, David None Hatch, Kevin PJM Interconnection, LLC None

Hauske, Thomas PJM Interconnection, LLC None Heinle, Frederick (Erik) Office of the Peoples Counsel for the District of Columbia End-Use Customer

Heisey, Bradley Wolf Hills Energy, LLC Generation Owner PJM Interconnection, LLC Helm, Gary None Hepplewhite, Peter

Wrigley Capital LLC Other Supplier Herbert, Sebastian DC Energy LLC Other Supplier Hickey, Mike PJM Interconnection. LLC None Hicks, Colleen PJM Interconnection, LLC None





Hoatson, Thomas (Tom)	Riverside Generating, LLC
Hohenshilt, Jennifer	Talen Energy Marketing, LLC
Holter, Natasha	PJM Interconnection, LLC
Hudis, Gabriella	Jersey Green Energy LLC
Hull, Gerit	American Municipal Power, Inc.
Huntoon, Stephen	Chesapeake Transmission LLC
Hurwich, Mark	Elliott Bay Energy Trading, LLC
Hyatt, Earl	Monitoring Analytics, LLC
Hyzinski Tom	GT Power Group

ller, Arthur (Art) Indiana Office of Utility Consumer Counsel Janicki. Diane Boston Energy Trading & Marketing, LLC Jardot, Gina Essential Power Rock Springs, LLC Johnson, Carl Customized Energy Solutions, Ltd.* Johnston, David Indiana Utility Regulatory Commission Indiana Office of Utility Consumer Counsel Jones, Scott

Kalaskar, Rahul AES Ohio Generation, LLC

Keenan, Matthew Jpower USA

Kelly, Stephen Brookfield Energy Marketing LP **Duguesne Light Company** Kent, Janessa Kilgallen, Kevin Avangrid Renewables LLC

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Lawton, Nick Earthjustice Keystone Projects Leasure. Jill Lee, Ray PJM Interconnection, LLC Lejcar, Jamie Allegheny Electric Cooperative, Inc.

Liang-Nicol, Cecilia Monongahela Power Company d/b/a Allegheny Power

Libbos, Robin FirstEnergy Corporation Luna, Joel Monitoring Analytics, LLC Lund, Louisa Daymark Energy Advisors McNees Wallace & Nurick LLC Mabry, David

Mariam, Yohannes Office of the Peoples Counsel for the District of Columbia

PJM Interconnection, LLC

Martin, Valerie The Federal Energy Regulatory Commission

Mason, Gary FirstEnergy Corporation Matheson, Eric Pennsylvania Public Utility Commission

Marzewski, Skyler

PJM Interconnection, LLC McAnany, James McLaverty, Megan PJM Interconnection, LLC

Office of the Attorney General, Kentucky McNeil, Justin

McNicholas, Daniel Nautilus Power, LLC

Miller, John Commonwealth Edison Company Montalvo, Marc NY Utility Intervention Unit Mooney, Jeffrey (Jeff) FirstEnergy Corporation

Moye, Bob Rainbow Energy Marketing Corporation

Ohara, Bernard Sargent and Lundy

Ondayko, Brock AEP Appalachian Transmission Company, Inc.

Pakela, Gregory (Greg) DTE Energy Trading, Inc. Patel, Keyurbhai (Keyur) PJM Interconnection, LLC Pelletier, Eveline Hydro-Quebec

Peoples, John **Duquesne Light Company**

Phillips, Amanda Wabash Valley Power Association, Inc.

Pilong, Christopher PJM Interconnection, LLC Pincus, Steven PJM Interconnection, LLC

CAPS Poulos. Grea

Procuniar, Jason Buckeye Power, Inc. Rahimi, Farrokh OATI Energy Trading

The Federal Energy Regulatory Commission Redwine, Arlo

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	Vista Energy Marketing, L.P.	Other Supplier
Rogers, Aaron	East Kentucky Power Cooperative, Inc.	Transmission Owner
Rohrbach, John	Southern Maryland Electric Cooperative, Inc.	Electric Distributor

R Roychowdhury, Meghadeep Yes Energy, LLC None Rumler, Ed Atlas Renewable Energy None Sasser, Jonathan Customized Energy Solutions, Ltd.* None Scheidecker, Paul PJM Interconnection, LLC None Schisler, Kenneth (Ken) Enerwise Global Technologies, LLC Other Supplier New Jersey Board of Public Utilities Schmitt, David None Schreim. Morris Maryland Public Service Commission None Schwarz, Stephanie PJM Interconnection. LLC None Schweizer, David PJM Interconnection, LLC None Scott, Nicole PJM Interconnection, LLC None Servera, Max Unicia Energy LP Other Supplier PJM Interconnection, LLC Shah, Vijay None Shanker, Roy H.Q. Energy Services (U.S.), Inc. Other Supplier

Sloan, Ben Organization of PJM States, Inc. (OPSI) None Smith, Kara Buckeye Power, Inc. Electric Distributor Snow, Jim PJM Interconnection, LLC None

PSEG Energy Resources & Trade LLC Other Supplier Sock. Brvan AEP Appalachian Transmission Company, Inc. Transmission Owner Sorrels, James

Sotkiewicz, Paul E-Cubed Policy Associates None Souder, Michelle PJM Interconnection. LLC None Stemetzki, Michael PJM Interconnection, LLC None Stone, Andy PJM Interconnection, LLC None Duke Energy Carolinas, LLC Other Supplier Sturgeon, John Sussler, Philip State of Maryland None

Svenson, Heather Public Service Electric & Gas Company Transmission Owner

Swigonski, Frank Advanced Energy Economy, Inc. None Tangirala, Subha ABB Enterprise Software Inc. None Tibbetts, Maeve K & L Gates None

Tubrity, Meg Rockland Electric Transmission Owner Tyler, Catherine Monitoring Analytics, LLC None

Pennsylvania Public Utility Commission None Van De Verg, Christopher VanBlargan, Bryna Resource Investments None Voreis, Kreig Aces Power Marketing None Walcavich, Colin National Grid Renewables, LLC None Warner-Freeman, Jennifer PJM Interconnection, LLC None Waweru, James PJM Interconnection, LLC None Weathers, Brian PJM Interconnection, LLC None Wehnes, Kathleen Maryland Public Service Commission None

Whitehead, Jeffrey (Jeff) GT Power Group None

Wylie-Chambers, Ericka Exelon Business Services Company, LLC Transmission Owner

Yovanovich, Laura PJM Interconnection, LLC None

Zemanek, Kevin Electric Distributor Buckeye Power, Inc.

None Zhao, Tong PJM Interconnection, LLC

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

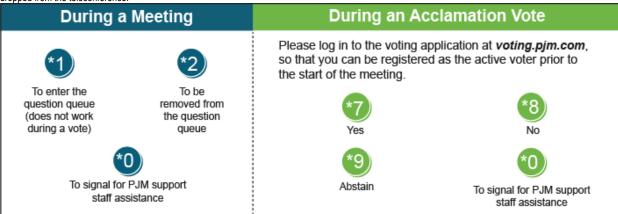
As a mandatory condition of attendance at today's meeting, attendees agree to adhere to the PJM Code of Conduct as detailed in PJM Manual M-34 section 4.5, including, but not limited to, participants' responsibilities and rules regarding the dissemination of meeting discussion and materials.

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- Dialing *1 enters you into the question queue; the three dial tones are an auditory indication that you have successfully been placed in the queue.
- Questions are taken during the meeting when natural breaks occur and are asked in the order they are received.

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- 1. Join meeting in the WebEx desktop client
- 2. Enter name (First and Last*) and corporate email
- 3. Call in to the operator-assisted number

*Note: Anonymous users or those using false usernames or emails will be dropped from the teleconference.

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Visit <u>learn.pjm.com</u>, an easy-to-understand resource about the power industry and PJM's role.