



Operating Committee PJM Conference & Training Center, Audubon, PA September 8, 2022 9:00 a.m. - 2:00 p.m. EDT

*Operator assisted phone lines will be opened 30 minutes prior to the start of the meeting. Due to the high volume of remote participation, stakeholders are asked to connect early to allow additional time for operator queue processing.

Administration

- 1. Jeff McLaughlin, PJM, provided announcements; reviewed the Antitrust, Code of Conduct, Public Meetings/Media Participation, and the WebEx Participant Identification Requirement.
 - Reviewed and approved draft minutes from the August 11 OC meeting. The Committee approved the draft minutes from the August 11, 2022 Operating Committee meeting with 0 objections and 0 abstentions.
 - b. Reviewed the OC work plan.
 - c. Michele Greening, PJM, provided an update on the upcoming PJM Annual Meeting.

Review of Operations

2. Review of Operating Metrics

Stephanie Schwarz, PJM, reviewed the August 2022 PJM operating metrics slides. Metrics included PJM's load forecast error, BAAL performance, and transmission / generation outage statistics.

3. Security Update

Steve McElwee, PJM, provided a security briefing.

Endorsements/Approvals

4. Max Emergency Changes for Resource Limitation Reporting

A review of solution packages was performed for the Max Emergency Changes for Resource Limitation Reporting issue as part of the Consensus Based Issue Resolution (CBIR) Lite process.

- a. Chris Pilong, PJM, reviewed Package A.
- b. Joel Luna, Monitoring Analytics, reviewed Package B. Issue Tracking: Max Emergency Changes for Resource Limitation Reporting

The committee endorsed Package A with 209 (92%) in favor, 18 (8%) opposed, and 4 abstentions. A second vote showed stakeholders preferred Package A over status quo with 186 (82%) in favor, 40 (18%) opposed, and 5 abstentions.





The committee did not endorse Package B with 19 (9%) in favor, 194 (91%) opposed, and 18 abstentions. A second vote showed stakeholders did not prefer Package B over status quo with 19 (9%) in favor, 194 (91%) opposed, and 18 abstentions

Package A moves to the Market and Reliability Committee (MRC) as the primary motion.

5. Internal NITS Process

Susan McGill, PJM, reviewed the proposed solution package for the Internal Network Integration Transmission Service (NITS) Process issue as part of the CBIR Lite process.

The Operating Committee endorsed the proposed solution with 0 objections and 0 abstentions.

6. Renewable Dispatch

Mike Zhang, PJM, and Joel Luna, Monitoring Analytics, reviewed the joint solution package for the Renewable Dispatch issue as part of the CBIR process.

Issue Tracking: Renewable Dispatch

The vote to endorse the proposed solution package was deferred to allow for further discussion at the next meeting of the DIRS on September 23. The committee's intention is to vote on the solution package as the October Operating Committee meeting, depending on the progress of those discussions.

7. Fuel Requirements for Black Start Resources

A review of solution packages was performed for the Fuel Requirements and Black Start Resources issue as part of the CBIR process.

- a. Janell Fabiano, PJM, provided a brief background on the issue and a review of the unique voting procedure.
- b. Dan Bennett, PJM, reviewed Package H (PJM / Brookfield / DCOPC).
- c. Joe Bowring, Monitoring Analytics, reviewed Package B (IMM). Issue Tracking: Fuel Requirements for Black Start Resources

The Operating Committee was asked to endorse the proposed solutions after the meeting via an offline vote in the PJM Voting Application.

8. Manual 14D and Manual 13 Revisions

Ray Lee, PJM, performed a review of changes to Manual 14D: Generator Operational Requirements and Manual 13: Emergency Operation. The changes are associated with NERC standards EOP-011 – Emergency Preparedness and Operations, IRO-010 – Reliability Coordinator Data Specification and Collection, and TOP-003 – Operational Reliability Data.

The Operating Committee endorsed the changes to Manual 14D and Manual 13 with 0 objections and 0 abstentions.

9. Manual 10, Manual 12 and Manual 13 Revisions

David Kimmel, PJM, performed a review of changes associated with Reserve Price Formation impacting Manual 10: Pre-Scheduling Operations, Manual 12: Balancing Operations and Manual 13: Emergency Operations.





The Operating Committee endorsed the changes to Manual 10, Manual 12 and Manual 13 with 0 objections and 0 abstentions.

10. Manual 39: Nuclear Plant Interface Coordination

Darrell Frogg, PJM, reviewed Manual 39 changes as a part of the periodic review.

The Operating Committee endorsed the changes to Manual 39 with 0 objections and 0 abstentions.

First Reading

11. Manual 3A: Energy Management System Model Updates & Quality Assurance

Eliseo Carrasco, PJM, reviewed Manual 3A changes as a part of the periodic review.

The Operating Committee will be asked to endorse these changes at its next meeting.

Additional Items

12. 2023 Capital Project Budget

Jim Snow, PJM, will review PJM's 2023 capital project budget.

13. PPL Dynamic Line Rating Implementation Update

Dave Hislop, PJM, provided an update on the implementation of the PPL Dynamic Line Rating.

14. System Resilience

Chris Pilong, PJM, provided an update on system resilience.

Working Items

15. IROL-CIP Cost Recovery

A review of the solution package for the IROL-CIP Cost Recovery issue was performed as part of the CBIR process.

- a. Darrell Frogg, PJM, reviewed Package A.
- b. Joe Bowring, IMM, provided comments. Issue Tracking: IROL-CIP Cost Recovery

Informational Only Postings

12. 2023 Capital Project Budget

Jim Snow, PJM, reviewed PJM's 2023 capital project budget.

16. Reliability Compliance Update

Becky Davis, PJM, provided an update on NERC, SERC, RF, and NAESB standards, and other pertinent regulatory and compliance information, and solicit feedback from the members on Reliability Compliance efforts.





17. Regulation Performance Update

Ilyana Dropkin, PJM, provided an update on PJM regulation market performance.

18. Primary Frequency Response Update

Ross Kelly, PJM, provided an update on PJM primary frequency response performance.

19. Synchronous Reserve Update

Dave Kimmel, PJM, provided a review of recent synchronous reserve performance.

20. Synchrophasor Update

Chris Callaghan, PJM, reviewed recent activities around PMUs at PJM.

21. System Operations Subcommittee (SOS)

Donnie Bielak, PJM, provided a summary of the most recent SOS meeting.

22. NERC Lessons Learned

Kevin Hatch, PJM, reviewed the latest posted NERC Lessons Learned reports.

23. Dynamic Line Rating Task Force (DLRTF) Update

The first meeting of the DLRTF will be on September 30. The Task Force is assigned to the OC, but will also cover topics related to the PC and MIC. Information will be posted to the DLRTF page.

24. 2022 Annual Meeting – Part 2

Michele Greening, PJM, provided an update on the upcoming PJM Annual Meeting.

Attendance

Last Name	First Name	Company	Sector	
McGlynn (Chair)	Paul	PJM Interconnection	None	
McLaughlin (Secretary)	Jeffrey	Jeffrey PJM Interconnection None		
Advena	Chris	PJM Interconnection	None	
Aguilar	Fabiano	Storm Power, LLC	Other Supplier	
Anastasio	Elizabeth	PJM Interconnection	None	
Anders	David	PJM Interconnection	None	
baizman	aaron	PJM Interconnection	None	
Baker	Raker I lett I I luke Energy ()hig Inc		Transmission Owner	
Barker	Jason	Constellation Energy Generation, LLC	Generation Owner	





Barmer	Mike	Dominion Virginia Power		
Beban	Madalyn	PJM Interconnection	None	
Benchek	Jim	American Transmission Systems, Inc.	Transmission Owner	
Bennett	Daniel	PJM Interconnection	None	
Berton	Tyler	Appalachian Transmission Company, Inc.	Transmission Owner	
Bleiweis	Bruce	DC Energy LLC	Other Supplier	
Bloodworth	Michelle	America's Power		
Bowring	Joe	Monitoring Analytics, LLC	None	
Boyle	Sean	Constellation Energy Generation, LLC	Generation Owner	
Boyle	Glen	PJM Interconnection	None	
Brady	George	Ohio Valley Electric Corp	Transmission Owner	
Braerman	Kenneth	Baltimore Gas and Electric Company	Transmission Owner	
Brodbeck	John	EDP Renewables North America, LLC	Generation Owner	
Brooks	Michael	RTO Insider	None	
Brown	Richard	PJM Interconnection	None	
Callis	Joe	PJM Interconnection	None	
Canchi	Devendra	Monitoring Analytics, LLC	None	
Carmean	Gregory	OPSI	None	
Carrasco	Eliseo	PJM Interconnection	None	
Cerchio	Jerry	Monitoring Analytics, LLC	None	
Chang	Sean	Shell Energy North America (US), L.P.	Other Supplier	
Chen	Hong	PJM Interconnection	None	
Chmielewski	Brian	PJM Interconnection	None	
Christopher	Mahila	Public Utilities Commission of Ohio	None	
Chu	George	PJM Interconnection	None	
ciabattoni	joe	PJM Interconnection	None	
CIRCELLI	ROSEANNE	Public Service Electric & Gas Company	Transmission Owner	
Corash	Rich	PSEG Energy Resources & Trade LLC	Other Supplier	
Coyne	Suzanne	PJM Interconnection	None	
Croop	Danielle	PJM Interconnection	None	
dadourian	john	Monitoring Analytics	None	





Dajewski	Paul	PJM Interconnection	None	
Daugherty	Danielle	ReliabilityFirst	None	
Dave	Kushal	Denver Energy, LLC	Other Supplier	
Davis	Elizabeth	PJM Interconnection	None	
Davis	Jim	Dominion Energy Generation Marketing, Inc.	Generation Owner	
de la Mora	Luis	Strom Power, LLC	Other Supplier	
Derin	Bilge	PJM Interconnection	None	
Domian	Christin	Duquesne Light Company	Transmission Owner	
Downs	Jere	PJM Interconnection	None	
Dropkin	Robert	PJM Interconnection	None	
Dugan	Chuck	East Kentucky Power Cooperative, Inc.	Transmission Owner	
Dumitriu	Nick	PJM Interconnection	None	
Egan	Amanda	PJM Interconnection	None	
Elkins	Rachel	FirstEnergy Corporation	Transmission Owner	
Ericson	Christine	Illinois Commerce Commission	None	
Fabiano	Janell	PJM Interconnection	None	
Fan	Zhenyu	PJM Interconnection	None	
Fazio	Danielle	Noble Americas Gas & Power Corp.	Other Supplier	
Fereshetian	Damon	PJM Interconnection	None	
Filomena	Guy	Customized Energy Solutions, Ltd.	None	
Fink	Regan	Pine Gate Mid-Atlantic, LLC	Other Supplier	
Fitzpatrick	Brian	PJM Interconnection	None	
Foladare	Kenneth	Geenex Solar LLC	Generation Owner	
Ford	Adrien	Old Dominion Electric Cooperative	Electric Distributor	
Foster Cronin	Denise	East Kentucky Power Cooperative, Inc.	Transmission Owner	
franks	christine	PJM Interconnection	None	
Frogg	Darrell	PJM Interconnection	None	
Fuess	Christian	PBF Power Marketing, LLC	Generation Owner	
Gagen	Roderick	Dominion Virginia Power	None	
Garnett	Bryan	Duke Energy Ohio, Inc.	Transmission Owner	
Gebele	Don	Dayton Power & Light Company (The)	Transmission Owner	





Gilani	Rehan	ConEdison Energy, Inc.	Other Supplier
Gluck	Jim	PJM Interconnection	None
Greening	Michele	PJM Interconnection	None
Greiner	Gary	American PowerNet Management	End-Use Customer
Guignet	Doug	PJM Interconnection	None
Guntle	Vince	American PowerNet Management	End-Use Customer
Hastings	David	Market Interconnection Consulting Services (MICS)	None
Hauske	David	PJM Interconnection	None
Hauske	Tom	PJM Interconnection	None
Heinle	Erik	Office of the Peoples Counsel for the District of Columbia	End-Use Customer
Hepplewhite	Peter	Wrigley Capital LLC	Other Supplier
Herrera	Maria	PJM Interconnection	None
Hislop	David	PJM Interconnection	None
Hoatson	Thomas	Riverside Generating, LLC	Generation Owner
Hohenshilt	Jennifer	Talen Energy Marketing, LLC	Generation Owner
Horning	Lynn	Customized Energy Solutions, Ltd.	None
Hsia	Eric	PJM Interconnection	None
Hull	Gerit	American Municipal Power, Inc.	Electric Distributor
Hurwich	Mark	Elliott Bay Energy Trading, LLC	Other Supplier
Hyatt	Earl	Monitoring Analytics	None
Hyzinski	Tom	GT Power Group, LLC	None
ldzior	John	ReliabilityFirst	None
ller	Art	Indiana Office of Utility Consumer Counsel	End-Use Customer
James	Solon	DC Energy, LLC	Other Supplier
Janicki	Diane	Boston Energy Trading & Marketing, LLC	Other Supplier
Jardot	Gina	NRG Power Marketing, LLC	Generation Owner
Jarrah	Danny	PPL Electric Utilities Corp. dba PPL Utilities	Transmission Owner
Jett	Bill	Duke Energy Business Services LLC	Transmission Owner
Johnson	Carl	Customized Energy Solutions, Ltd.	None
Johnston	Dave	Indiana Utility Regulatory Commission	None
Jones	Scott	Indiana Office of Utility Consumer Counsel	End-Use Customer





Kazerooni	Hamid	PJM Interconnection	None
Keenan	Matthew	Jpower USA	None
Kelly	Ross	PJM Interconnection	None
Kelly	Stephen	Brookfield Energy Marketing LP	Other Supplier
Kent	Janessa	Duquesne Light Company	Transmission Owner
Kogut	George	New York Power Authority	Other Supplier
Lai	Erin	PJM Interconnection	None
Laios	Takis	AEP Appalachian Transmission Company, Inc.	Transmission Owner
Lake	David	FirstEnergy Corporation	Transmission Owner
LaRocque	Matt	PJM Interconnection	None
Leasure	JIII	Keystone Projects	None
Lee	Ray	PJM Interconnection	None
Leith Yessian	Devin	RTO Insider	None
Leon	Miguel	PJM Interconnection	None
Liang-Nicol	Cecilia	Monongahela Power Company d/b/a Allegheny Power	Transmission Owner
libbos	robin	FirstEnergy Corporation	Transmission Owner
Lynn	Brian	PJM Interconnection	None
Mabry	David	McNees Wallace & Nurick LLC	None
Mason	Gary	FirstEnergy Corporation	Transmission Owner
Matheson	Eric	Pennsylvania Public Utility Commission	None
Mathew	Lagy	PJM Interconnection	None
Matticola	Michele	PJM Interconnection	None
McElwee	Steve	PJM Interconnection	None
McLaverty	Megan	PJM Interconnection	None
McNicholas	Daniel		
Midgley	Sharon	Exelon Business Services Company, LC	Transmission Owner
Muhl	Nancy	PJM Interconnection	None
Mulhern	Joseph	PJM Interconnection	None
Okenfuss	James	Savion, LLC	None
Olaleye	Michael	PJM Interconnection	None





Ondayko	Brock	Appalachian Transmission Company, Inc.	Transmission Owner	
Pakela	Gregory	DTE Energy Trading, Inc.	Other Supplier	
patel	Anita	PJM Interconnection	None	
Patel	Shodhan	Constellation Energy Generation, LLC	Generation Owner	
Phillips	Darlene	PJM Interconnection	None	
Pilong	Melissa	PJM Interconnection	None	
Pilong	Christopher	PJM Interconnection	None	
Pincus	Steve	PJM Interconnection	None	
Price	Mark	DC Energy Mid-Atlantic, LLC	None	
Procuniar	Jason	Buckeye Power, Inc.	Electric Distributor	
Poulos	Gregory	CAPS	None	
Ramsay	Eli			
Robinson	Becky	Vista Energy Marketing, L.P.	Other Supplier	
Rohrbach	John	Southern Maryland Electric Cooperative, Inc.	Electric Distributor	
Romero Luna	Joel	Monitoring Analytics	None	
Rutledge	Craig	AEP Appalachian Transmission Company, Inc.	Transmission Owner	
Sasser	Jonathan	Customized Energy Solutions, Ltd.	None	
Scarpignato	David	Calpine Energy Services, L.P.	Generation Owner	
Schroeder	Connie	Dominion Virginia Power	Transmission Owner	
Schuyler	Ken	PJM Interconnection	None	
Schwarz	Stephanie	PJM Interconnection	None	
Schweizer	David	PJM Interconnection	None	
Servera	Max	Unicia Energy LP	Other Supplier	
Shah	Vijay	PJM Interconnection	None	
Sloan	Ben	Organization of PJM States, Inc. (OPSI)	None	
Smith	Kara	Buckeye Power, Inc.	Electric Distributor	
Snow	Jim	PJM Interconnection	None	
Sotkiewicz	Paul	E-Cubed Policy Associates	None	
Souder	Rich	PJM Interconnection	None	
Souder	Michelle	PJM Interconnection	None	
Stadelmeyer	Rebecca	PJM Interconnection	None	
Stanisz	Mark	PJM Interconnection	None	





Stemetzki	Michael	PJM Interconnection	None	
STERN	ALEX	Public Service Electric & Gas Company	Transmission Owner	
Stone	Andy	PJM Interconnection	None	
Sturgeon	John	Duke Energy Business Services LLC	Transmission Owner	
Svenson	Heather	Public Service Electric & Gas Company	Transmission Owner	
Swalwell	Brad	Tangent Energy Solutions, Inc.	Other Supplier	
Sweeney	Rory	GT Power Group	None	
Tacka Furtaw	Natalie	PJM Interconnection	None	
Tam	Simon	PJM Interconnection	None	
Terranova	Chris	PJM Interconnection	None	
Tyler	Catherine	Monitoring Analytics, LLC	None	
Walcavich	Colin	National Grid Renewables, LLC	None	
Walker	Preston	PPL Electric Utilities Corp. dba PPL Utilities	Transmission Owner	
Wehnes	Kathleen	Maryland Public Service Commission	None	
Whitehead	Jeff	GT Power Group	None	
Wray	Gizelle	Solar Energy Industries Association	None	
Wylie- Chambers	Ericka	Exelon Business Services Company, LLC	Transmission Owner	
Yovanovich	Laura	PJM Interconnection	None	
Zemanek	Kevin	Buckeye Power, Inc.	Electric Distributor	
Zhang	Michael	PJM Interconnection	None	

OC Subcommittee/ Task Force Informational Section

System Operations Subcommittee (SOS): SOS Website Data Management Subcommittee (DMS): DMS Website

DER & Inverter-Based Resources Subcommittee (DIRS): DIRS Website

Fuel Requirements for Black Start Resources: Fuel Reqt. for Black Start Resources Issue Tracker

Synchronous Reserve Deployment Task Force: SRDTF Website IROL – CIP Cost Recovery: IROL – CIP Cost Recovery Issue Tracker

Future Meeting Dates and Materials	Materials Due to Secretary	Materials Published
------------------------------------	----------------------------	------------------------





Date	Time	Location	5 p.m.	4 p.m.
September 8, 2022	9 a.m.	PJM Conference & Training Center and WebEx	August 29, 2022	September 1, 2022
October 7, 2022	9 a.m.	PJM Conference & Training Center and WebEx	September 27, 2022	September 30, 2022
November 3, 2022	9 a.m.	PJM Conference & Training Center and WebEx	October 24, 2022	October 27, 2022
December 8, 2022	9 a.m.	PJM Conference & Training Center and WebEx	November 28, 2022	December 1, 2022

Author: Jeffrey McLaughlin

Antitrust:

You may not discuss any topics that violate, or that might appear to violate, the antitrust laws including but not limited to agreements between or among competitors regarding prices, bid and offer practices, availability of service, product design, terms of sale, division of markets, allocation of customers or any other activity that might unreasonably restrain competition. If any of these items are discussed the chair will re-direct the conversation. If the conversation still persists, parties will be asked to leave the meeting or the meeting will be adjourned.

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. **Public Meetings/Media Participation:**

Unless otherwise noted, PJM stakeholder meetings are open to the public and to members of the media. Members of the media are asked to announce their attendance at all PJM stakeholder meetings at the beginning of the meeting or at the point they join a meeting already in progress. Members of the Media are reminded that speakers at PJM meetings cannot be quoted without explicit permission from the speaker. PJM Members are reminded that "detailed transcriptional meeting notes" and white board notes from "brainstorming sessions" shall not be disseminated. Stakeholders are also not allowed to create audio, video or online recordings of PJM meetings. PJM may create audio, video or online recordings of stakeholder meetings for internal and training purposes, and your participation at such meetings indicates your consent to the same.

Participant Identification in WebEx:

When logging into the WebEx desktop client, please enter your real first and last name as well as a valid email address. Be sure to select the "call me" option. PJM support staff continuously monitors WebEx connections during stakeholder meetings. Anonymous users or those using false usernames or emails will be dropped from the teleconference.

During an Acclamation Vote During a Meeting Please log in to the voting application at voting.pjm.com, so that you can be registered as the active voter prior to the start of the meeting. To enter the To be question queue removed from (does not work the question during a vote) aueue To signal for PJM support To signal for PJM support staff assistance staff assistance

Asking A Question

- 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.

Linking Teleconference Connection to Webex

When logging in to the meeting, access Webex first and select the "call me" feature to receive a direct call to your phone. Using this feature will connect your name to your Webex presence.





Join a Meeting

- 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.

Provide feedback on the progress of this group: <u>Facilitator Feedback Form</u>
Visit <u>learn.pjm.com</u>, an easy-to-understand resource about the power industry and PJM's role.