



Operating Committee
PJM Conference & Training Center, Audubon, PA
May 1, 2018
9:00 a.m. – 4:00 p.m. EPT

Administration

- 1. The Operating Committee (OC) Agenda for this meeting was <u>approved</u> with the addition of Item 19a: Valuing Fuel Security Criteria Review.
- 2. The Draft Minutes of the April 3, 2018 Operating Committee meeting were approved as drafted.
- 3. The Operating Committee Work Plan was reviewed. PJM will continue to solicit input from stakeholders regarding future OC agenda items.
- 4. Mr. Don Wallin, PJM, provided an update on the Davis Creek and University Park North RAS/SPS status. The Davis Creek transmission work is complete under eDART ticket number 715341 and the associated RAS/SPS has been retired as of April 30. The University Park North RAS/SPS is expected to be retired after the June 22 completion of eDART ticket number 749273.

Review of Operations

5. Review of Operational Events

Mr. Chris Pilong, PJM, reviewed PJM operations since the last OC Meeting.

6. Review of Operating Metrics

Mr. Joe Ciabattoni, PJM reviewed the April 2018 PJM operating metrics slides from April 1 to April 26. Metrics included PJM's load forecast error, BAAL performance, transmission / generation outage statistics, and Perfect Dispatch historical performance. When the remainder of the April monthly metrics are collected they will be shared with the OC.

Endorsements/Approvals

7. Manual 03 Changes

Mr. Liem Hoang, PJM, reviewed the proposed changes to Manual 03: Transmission Operations. The Operating Committee <u>endorsed</u> these changes by acclamation with no objections or abstentions.

8. Manual 14D Changes

Ms. Rebecca Stadelmeyer, PJM, reviewed proposed changes to Manual 14D: Generator Operational Requirements. The Operating Committee <u>endorsed</u> these changes by acclamation with no objections or abstentions.

9. Manual 36 Changes

Mr. Glen Boyle, PJM, reviewed the proposed changes to Manual 36: System Restoration. The Operating Committee **endorsed** these changes by acclamation with no objections or abstentions.

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10. TO/TOP Matrix Changes

Mr. Mark Kuras, PJM, will review the proposed changes to the TO/TOP matrix. The Operating Committee <u>recommended approval</u> of these changes to the TOA-AC by acclamation with no objections or abstentions.

First Readings

11. Manual 11 Changes

Mr. Eric Endress, PJM, provided a review of the proposed changes to Manual 11: Energy & Ancillary Services Market Operations. The Operating Committee will be asked to endorse these changes at the next OC meeting.

11a.Fuel Assurance for Restoration OATT/Manual Changes

Mr. David Schweizer, PJM, provided a review of the proposed changes to the PJM OATT, Manual 12: Balancing Operations, Manual 14D: Generator Operational Requirements and M36: System Restoration in regards to fuel assurance for restoration. The Operating Committee will be asked to endorse these changes at the next OC meeting.

OC Subcommittee / Task Force Updates (10:00 – 10:30)

12. System Operations Subcommittee (SOS)

Mr. Chris Pilong, PJM, provided a summary of the most recent SOS meeting.

13. Data Management Subcommittee (DMS)

There were no DMS subcommittee updates for this month's meeting.

14. Distributed Energy Resources Subcommittee (DERS)

There were no DERS subcommittee updates for this month's meeting.

15. System Restoration Coordinators Subcommittee (SRCS)

There were no SRCS subcommittee updates for this month's meeting.

16. Primary Frequency Response Sr. Task Force (PFRSTF)

Mr. Glen Boyle, PJM, provided an update on the Primary Frequency Response Sr. Task Force (PFRSTF).

Capacity Performance

17. Performance Assessment Interval Communications Over ICCP Project

Ms. Alpa Jani, PJM, provided an informational update on the Performance Assessment Interval Communications Over ICCP project.





18. Unit Specific Parameter Updates

Ms. Susan Kenney, PJM, provided an update on the application of Unit Specific Parameters to Base Capacity Resources starting 6/1/2018.

19. Markets Gateway Real Time Values Update

Ms. Susan Kenney, PJM, provide an informational update regarding enhancements made to Markets Gateway to improve communication of certain real time values.

Tool and Informational Updates

19a. Valuing Fuel Security Criteria Review

Mr. Dave Souder, PJM reviewed PJM's recent release of <u>Valuing Fuel Security</u> documents. A special MRC Fuel Security Study Discussion session is scheduled May 8, 2018 starting at 9 AM.

20. Operating Agreement (OA) Confidentiality Provision

Mr. Dave Souder, PJM, provided a review of an update to the confidentiality provision of the OA to specify that PJM may share member confidential information with reliability entities in addition to NERC.

21. Synchronous Reserve Tier 1 Performance Improvement Recommendation Update

Ms. Becky Davis, PJM, provided an update on PJM's recommendations to improve PJM's Synchronous Reserve Tier 1 performance. PJM will share data for spin max vs. eco max analysis for all operating states not just during synchronized reserve events.

22. Regulation Performance Updates

Ms. Danielle Croop, PJM, provided an update on PJM's regulation performance.

23. Automatic CT Call On Update

Mr. Aaron Baizman, PJM, provided an update on PJM's efforts to automatically call-on CTs. PJM will provide additional updates to the OC as the project progresses.

24. Manual 21 Changes

Mr. Jerry Bell, PJM, provided a review of the proposed changes to Manual 21: Rules and Procedures for Determination of Generating Capability.

25. Gas/Electric Contingency Update

Mr. Brian Fitzpatrick, PJM, provided an update on PJM's gas/electric contingency efforts. PJM will share data regarding gas/electric contingencies that were analyzed as part of documented operating procedures during the Winter 2017-18 period at a future OC session.

26. Unit Restrictions Reporting & Tracking Update

Ms. Natalie Tacka, PJM, provided an update on unit restrictions reporting and tracking via Markets Gateway.





26a. New Markets Gateway Fields to Support Gas Contingency Automation Update

Mr. Augustine Caven, PJM, provided an update on new fields created in Markets Gateway to support gas contingency automation.

27. Membership Management Community - Contact Management Update

Ms. Suzanne Coyne provided an update regarding implementing a contact management feature in the new Membership Management Community.

28. Operations Assessment Task Force (OATF)

Mr. Rob Dropkin, PJM, reviewed the results of the Summer 2018 OATF Study.

29. NERC Lessons Learned

There were no recently posted NERC Lessons Learned reports for this month's meeting.

30. NERC 2017 GridEx IV Lessons Learned Review

Mr. Don Wallin, PJM, provided a review of the 2017 NERC GridEx IV exercise.

31. Reliability Compliance Update

Mr. Mark Kuras, PJM, provided an update on NERC, SERC and RFC standards, and other pertinent regulatory and compliance information, and solicited feedback from the members on Reliability Compliance efforts.

32. NERC MOD - 026/027 Standard Compliance Process Update

Ms. Lauren Strella, PJM, provided an update on upcoming changes to PJM's compliance process for NERC standards MOD-026 and 027.

33. 30 Minute Reserve Proposal Update

Mr. Vince Stefanowicz, PJM, provided an update regarding PJM's 30 minute reserve proposals. A discussion was held as to whether a dynamic 30 minute reserve value calculation should be considered vs. a static requirement.

34. Pricing Interface Update

There were no newly created pricing interfaces.

Action Items

- 1. PJM will provide updates to stakeholders on the ComEd University Park North RAS/SPS retirement if changes are made prior to the July 2018 retirement date.
- 2. PJM will share data for spin max vs. eco max analysis for all operating states not just during synchronized reserve events.
- 3. PJM will deliver a future education session on the acceptable use/application of IDR (Incremental Deliverability Rights).
- 4. PJM will share data regarding gas/electric contingencies that were analyzed as part of documented operating procedures during the Winter 2017-18 period at a future OC session.





5. PJM will review 30 minute reserves in regards to whether a dynamic 30 minute reserve value calculation should be considered vs. a static requirement.

Future Meeting Dates

June 5, 2018	9:00 a.m.	PJM Interconnection - Conference and Training Center
July 10, 2018	9:00 a.m.	PJM Interconnection - Conference and Training Center
August 7, 2018	9:00 a.m.	PJM Interconnection - Conference and Training Center
September 11, 2018	9:00 a.m.	PJM Interconnection - Conference and Training Center

Author: Don Wallin

In Attendance (In Person)

Last Name	First Name	Company	Sector
Souder	Dave	PJM Interconnection, LLC	Not Applicable
(Chair)			
Wallin (Secretary)	Don	PJM Interconnection, LLC	Not Applicable
Benchek	Jim	First Energy Solutions	Transmission Owner
Coffman	J Earl	PECO Energy Company	Transmission Owner
D'Alessandris	Lou	First Energy Solutions Corp.	Transmission Owner
Dugan	Chuck	East Kentucky Power Corporation	Transmission Owner
Fitch	Neal	NRG Power Marketing LLC	Generation Owner
Horstmann	John	Dayton Power & Light	Transmission Owner
Johnson	Carl	Customized Energy Solutions	Not Applicable
Kogut	George	New York Power	Other Supplier
Lowe	Connie	Dominion Virginia Power	Not Applicable
Midgley	Sharon	Exelon Business Services	Transmission Owner
O'Connell	Robert	PPGI Fund A/B Development	Generation Owner
Pratzon	Dave	GT Power Group	Not Applicable
Scarpignato	David	Calpine Energy Services LP	Generation Owner
Stewart	Travis	Gable and Associates	Not Applicable





Suh	Jung	Calpine Energy Services LP	Generation Owner
Sweeney	Rory	RTO Insider	Not Applicable
Trayers	Barry	Citigroup Energy Inc.	Other Supplier
Whitehead	Jeffrey	GT Power Group	Not Applicable

In Attendance (Via Conference Call)

Last Name	First Name	Company	Sector
Ainspan	Malcolm	Energy Curtailment Specialists, Inc.	Other Supplier
Alfayyoumi	Mohammed	Dominion Virginia Power	Not Applicable
Barker	Jason	Exelon Business Services	Transmission Owner
Barmer	Mike	Dominion Virginia Power	Not Applicable
Blackshear	David	Gridforce Energy	Other Supplier
Bolan	Martin	First Energy Solutions	Transmission Owner
Bonner	Charles	Dominion Virginia Power	Not Applicable
Brodbeck	John	EDP Renewables	Other Supplier
Campbell	Bruce	Energy Connect, Inc.	Other Supplier
Carmean	Gregory	OPSI	Not Applicable
Clark	Barrett	DC Energy Mid-Atlantic LLC	Other Supplier
Соссо	Michael	Old Dominion Electric Cooperative	Electric Distributor
Сох	Edward	Appalachian Power Company	Transmission Owner
Crystle	Gil	UGI Development	Transmission Owner
Dasher	Brett	Energy Authority, Inc. (The)	Other Supplier
Davis	James	Dominion Energy Marketing, Inc.	Generation Owner
DeGiusto	Vince	UGI Development Company	Generation Owner





DeLosa	Joe	Delaware Public Service Commission	Not Applicable
Denby	Brett	Novec	Not Applicable
Depillo	Raymond	PSEG Energy Resources and Trading	Other Supplier
Dolan	Ryan	AEP Energy Partners, Inc.	Other Supplier
Domian	Christin	Mitsubishi Electric Power Products Inc.	Not Applicable
Duan	Bob	Ontario Power Generation Inc.	Other Supplier
Engelmann	Alan	Commonwealth Edison	Transmission Owner
Filomena	Guy	Customized Energy Solutions, Ltd.	Not Applicable
Ford	Adrien	Old Dominion Electric Cooperative	Electric Distributor
Frederickson	Joe	Public Service Electric & Gas	Transmission Owner
Gagen	Rod	Dominion Virginia Power	Not Applicable
Garbini	Marj	Potomac Electric Power	Electric Distributor
Gebele	Don	Dayton Power & Light	Transmission Owner
Gebolys	Debbie	The Public Utilities Commission of Ohio	Not Applicable
Gilani	Rehan	ConEdison Energy, Inc.	Other Supplier
Grear	Mark	Constellation Energy	Generation Owner
Guerry	Katie	EnerNOC, Inc.	Other Supplier
Guntle	Vince	UGI Development	Generation Owner
Helms	Joe	Rainbow Energy	Other Supplier
Hoatson	Tom	Riverside Generating, LLC	Other Supplier
Hopkins	Sandra	Dominion Virginia Power	Not Applicable
Janicki	Diane	Boston Energy Trading and Marketing LLC	Generation Owner
Jha	Monica	PCI	Not Applicable





Ibrahima	Tibiri Energies	Not Applicable
Stephen	Brookfield Energy Marketing LP	Other Supplier
Cynthia	Tennessee Department of Agriculture	Not Applicable
Leslie	Reliability First Corporation	Not Applicable
Jill	Keystone Projects	Not Applicable
Phyllis	Public Service Electric & Gas Company	Transmission Owner
Laura	Orange and Rockland	Transmission Owner
Dave	McNees Wallace & Nurick LLC	Not Applicable
Amanda	NextEra Energy Power	Generation Owner
Cindy	First Energy Solutions Company	Transmission Owner
Mark	Noble Americas Gas & Power	Other Supplier
Minh	ComEd	Transmission Owner
Chris	American Municipal Power, Inc.	Electric Distributor
Brian	Noble Americas Gas & Power	Other Supplier
Chris	PSEG Energy Resources and Trade LLC	Other Supplier
Brock	AEP Energy Supply	Generation Owner
Gregory	DTE Energy Trading	Other Supplier
Kevin	AEP Energy, Inc.	Other Supplier
Marjorie	Direct Energy Business, LLC	Other Supplier
Rod	American Transmission Systems, Inc.	Transmission Owner
Greg	CAPS	Not Applicable
Mark	DC Energy Mid-Atlantic LLC	Other Supplier
Ruth Ann	Division of the Public Advocate of the State	End Use Customer
	Stephen Cynthia Leslie Jill Phyllis Laura Dave Amanda Cindy Mark Minh Chris Brian Chris Brock Gregory Kevin Marjorie Rod Greg Mark	Stephen Brookfield Energy Marketing LP Cynthia Tennessee Department of Agriculture Leslie Reliability First Corporation Jill Keystone Projects Phyllis Public Service Electric & Gas Company Laura Orange and Rockland Dave McNees Wallace & Nurick LLC Amanda NextEra Energy Power Cindy First Energy Solutions Company Mark Noble Americas Gas & Power Minh ComEd Chris American Municipal Power, Inc. Brian Noble Americas Gas & Power Chris PSEG Energy Resources and Trade LLC Brock AEP Energy Supply Gregory DTE Energy Trading Kevin AEP Energy, Inc. Marjorie Direct Energy Business, LLC Rod American Transmission Systems, Inc. Greg CAPS Mark DC Energy Mid-Atlantic LLC





		of Delaware	
Rohrbach	John	Southern Maryland Electric Cooperative	Electric Distributor
Ruck	Andrew	PSEG Energy Resources and Trade LLC	Other Supplier
Runowski	Brian	Commonwealth Edison	Transmission Owner
Sasser	Jonathan	Customized Energy Solutions, Ltd.*	Not Applicable
Sauriol	Dennis	AEP Ohio Transmission Company, Inc.	Transmission Owner
Schneider	Jon	First Energy	Transmission Owner
Schultheis	Dan	Constellation Energy	Generation Owner
Sillin	John	The Federal Energy Regulatory Commission	Not Applicable
Skumanich	William	PPL Electric Utilities Corp.	Transmission Owner
Smith	Jacquie	Duquesne Light Company	Not Applicable
Stack	James	Duquesne Light Company	Transmission Owner
Sturgeon	John	Duke Energy Carolinas LLC	Other Supplier
Whitehead	Jeffrey	GT Power Group	Not Applicable
Wilson	James	Wilson Energy Economics	Not Applicable

PJM Attendees

Last Name	First Name	Company	Sector
Anders	Dave	PJM Interconnection, LLC	Not Applicable
Bell	Jerry	PJM Interconnection, LLC	Not Applicable
Benner	Scott	PJM Interconnection, LLC	Not Applicable
Bielak	Donnie	PJM Interconnection, LLC	Not Applicable
Boyle	Glen	PJM Interconnection, LLC	Not Applicable
Brown	Rich	PJM Interconnection, LLC	Not Applicable





Bryson	Mike	PJM Interconnection, LLC	Not Applicable
Callaghan	Chris	PJM Interconnection, LLC	Not Applicable
Carroll	Rebecca	PJM Interconnection, LLC	Not Applicable
Ciabattoni	Joe	PJM Interconnection, LLC	Not Applicable
Coyne	Suzanne	PJM Interconnection, LLC	Not Applicable
Croop	Danielle	PJM Interconnection, LLC	Not Applicable
Davis	Elizabeth	PJM Interconnection, LLC	Not Applicable
Daugherty	Suzanne	PJM Interconnection, LLC	Not Applicable
Egan	Amanda	PJM Interconnection, LLC	Not Applicable
Endress	Eric	PJM Interconnection, LLC	Not Applicable
Fabiano	Janell	PJM Interconnection, LLC	Not Applicable
Fitzpatrick	Brian	PJM Interconnection, LLC	Not Applicable
Franks	Chris	PJM Interconnection, LLC	Not Applicable
Genuario	Gabrielle	PJM Interconnection, LLC	Not Applicable
Gresh	Leslie	PJM Interconnection, LLC	Not Applicable
Harris	Brad	PJM Interconnection, LLC	Not Applicable
Hauske	Tom	PJM Interconnection, LLC	Not Applicable
Herel	Suzanne	PJM Interconnection, LLC	Not Applicable
Hendrzak	Chantal	PJM Interconnection, LLC	Not Applicable
Hoang	Liem	PJM Interconnection, LLC	Not Applicable
Hsia	Eric	PJM Interconnection, LLC	Not Applicable
Jani	Alpa	PJM Interconnection, LLC	Not Applicable
Kappagantula	Srinivas	PJM Interconnection, LLC	Not Applicable





Kenney	Susan	PJM Interconnection, LLC	Not Applicable
Refilley	Susaii	F3W Interconnection, LEC	Not Applicable
Keyser	Tom	PJM Interconnection, LLC	Not Applicable
Kimmel	David	PJM Interconnection, LLC	Not Applicable
Kuras	Mark	PJM Interconnection, LLC	Not Applicable
Lakatos	Alex	PJM Interconnection, LLC	Not Applicable
McGrath	Matt	PJM Interconnection, LLC	Not Applicable
Nix	Emma	PJM Interconnection, LLC	Not Applicable
Patel	Anita	PJM Interconnection, LLC	Not Applicable
Pilong	Chris	PJM Interconnection, LLC	Not Applicable
Pincus	Steven	PJM Interconnection, LLC	Not Applicable
Quevada	Jason	PJM Interconnection, LLC	Not Applicable
Rocha-Garrido	Patricio	PJM Interconnection, LLC	Not Applicable
Schmitt	Jeff	PJM Interconnection, LLC	Not Applicable
Scheirer	Alexandra	PJM Interconnection, LLC	Not Applicable
Schuyler	Ken	PJM Interconnection, LLC	Not Applicable
Schweizer	David	PJM Interconnection, LLC	Not Applicable
Souder	Michelle	PJM Interconnection, LLC	Not Applicable
Stadelmeyer	Rebecca	PJM Interconnection, LLC	Not Applicable
Stefanowicz	Vince	PJM Interconnection, LLC	Not Applicable
Strella	Lauren	PJM Interconnection, LLC	Not Applicable
Tacka	Natalie	PJM Interconnection, LLC	Not Applicable
Thomas	Jack	PJM Interconnection, LLC	Not Applicable
Tribulski	Jennifer	PJM Interconnection, LLC	Not Applicable

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Turtle	Dave	PJM Interconnection, LLC	Not Applicable
Tutino	Joseph	PJM Interconnection, LLC	Not Applicable
Velasco	Cheryl Mae	PJM Interconnection, LLC	Not Applicable
Ward	Mike	PJM Interconnection, LLC	Not Applicable
Walker	William	PJM Interconnection, LLC	Not Applicable

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