

**Operating Committee**  
**PJM Conference and Training Center**  
**December 1, 2015**  
**9:00 a.m.**

## Administration

1. The OC Agenda for this meeting was approved.
2. Draft Minutes of the November 3, 2015 OC meeting were reviewed and approved.
3. The OC Work Plan was reviewed.
4. The OC Posting Report Card was reviewed.

## Review of Operations

5. Mr. Pilog reviewed PJM Operations since the last OC Meeting including partial November statistics through (approximately) November 17. There was 1 Synchronous Reserve event and 2 Shared Reserve events during this time. Mr. Pilog also provided a high-level review of the NERC sponsored GridEx III exercise which was held on November 18 – 19.
6. The review of the PJM Operating Metrics Slides was deferred until next month due to availability of data prior to the OC meeting.
7. There was no recent NERC Lessons Learned to review.
8. There were no new or updated Closed Loop Interfaces since the last OC.
9. Mr. Hsia provided an update on Synchronous Reserve Performance for 2015 Q3. There have been 17 Synchronous Reserve events so far in 2015, with 6 of those events occurring in Q3 (only 2 of these 6 were > 10 minutes in duration). A breakdown of resource performance during these events was also provided, along with a summary of the associated credits and penalties which were assessed. Finally, the 2016 Synchronized Reserve Penalty Days calculation was provided. The penalty days effective January 1, 2016 will be 12 days, compared to 13 days in 2015.

## OC Subcommittee Updates

10. Mr. Pilog provided a summary of the SOS meeting.
11. Mr. Graff provided a summary of the SIS meeting.
12. Mr. Boyle provided a summary of the SRCS meeting.

## Endorsements / Approvals

13. Mr. Schweizer reviewed proposed changes to Manual 10: Pre-Scheduling Operations. The changes included the renaming of several subsections under Section 2, and the addition of definitions for Generator Planned Outage, Maintenance Outage, and Unplanned (Forced) Outage under sections 2.2,

2.3, and 2.4 respectively. There were also several wording changes and deletions of outdated or redundant information throughout sections 2, 3, and 4. **The Operating Committee endorsed these changes with 0 objections and 15 abstentions.**

14. Mr. Mulhern reviewed proposed changes to Manual 39: Nuclear Plant Interface Coordination. Grammatical corrections were made to Sections 1 through 4; Attachments A through C, to align with NERC standard NUC-001-3. Section 2.6 was updated to include plant specific safe shutdown loading requirements. Attachment A; Appendix 1 was also updated to replace text taken from PJM governing documents with references to the associated document. **The Operating Committee endorsed these changes with 0 objections and 0 abstentions.**
15. Mr. Kimmel reviewed proposed changes to Manual 14D: Generator Operational Requirements. Exhibit 10 was updated to include Minimum Generation Advisory and revised Minimum Generation limits to 2500MW. The definition of Generator Planned Outage, Maintenance Outage, and Unplanned (Forced) Outage was added to sections 7.3.1, 7.3.2, and 7.3.3 respectively. Attachment D was updated to include additional reactive capability curve reporting requirements. Attachment E was updated with several changes to the Synchronous Condenser Reactive Capability Testing section. Lastly, updates were made to Attachments M and L to reflect changes to the Wind Dispatchability Check List and Wind Farm Communication Model. **The Operating Committee endorsed these changes with 0 objections and 0 abstentions.**
16. Ms. Huang presented the proposed Metering Task Force charter. The charter describes the objectives of the Task Force which include group education, review of Manual 01 to identify gaps between intended requirements and actual metering practices, and the selection of features / enhancements to PJM metering policies. **The Operating Committee endorsed the Metering Task Force charter with 0 objections and 0 abstentions.**

## First Readings

17. Mr. Boyle reviewed proposed changes to Manual 40: Training and Certification Requirements. The manual changes were based on the SOS's approved proposal to resolve the Training and Certification Non-Compliance issue. Section 3.3 was updated to include Member Representative and Compliance contact in the communication of non-compliance. Language in this section was also modified to include notice of potential OA/OATT violation, as well as language requiring operators to be removed from shift responsibilities if compliance obligations are not met. Several administrative changes were also made throughout the manual which were unrelated to the Training and Certification Non-Compliance issue. **\*\*The Operating Committee will be asked to endorse these changes at the next OC meeting.**
18. Mr. Hoang reviewed proposed changes to Manual 38: Operations Planning. The changes were administrative in nature and involved corrections to grammar, terminology changes for consistency purposes, and an update to the Interregional Study groups identified in Section 1.2. **\*\*The Operating Committee will be asked to endorse these changes at the next OC meeting.**

## Tool and Informational Updates

19. Mr. Kappagantula provided an update on NERC, SERC and RFC standards and other pertinent regulatory and compliance information, and solicited feedback from the members on the N&RC departmental efforts. There are currently several standards under development including BAL-005-0.2b, BAL-006-2, FAC-001-1, and TPL-001-5 SAR. Standards which will become enforceable on January 1, 2016 include FAC-001-2, FAC-002-2, NUC-001-3, and PRC-005-4.
20. Mr. Punjabi provided an update on the Single Sign On enhanced security effort. Changes which have already been completed include an increase in password duration and the ability for users to reset their own password without contacting the CAM. Important upcoming changes include the migration of Legacy (non-refreshed) tools to SSO in Sandbox environment on January 12, 2016, with the Production migration to occur on March 22, 2016. Inactive accounts will be disabled in the second quarter of 2016 on a date yet to be determined. Any questions related to the SSO enhancement efforts can be directed to [tools-security@pjm.com](mailto:tools-security@pjm.com).
21. Ms. Holland provided an update on the new Markets Gateway tool which will be replacing eMKT. Markets Gateway currently exists in the Sandbox environment and is schedule for a Production release (into parallel ops) on January 18, 2016. eMKT will be retired in the Train environment on February 1, 2016, followed by the Production retirement on March 1, 2016. Any related questions can be direct to [marketsgatewaysupport@pjm.com](mailto:marketsgatewaysupport@pjm.com).
22. Mr. Souder solicited OC member input into a future OC agenda item (targeted February 2016) to discuss PJM RTO Primary Frequency Response (Governor Response). As part of the future agenda item, PJM is planning on reviewing NERC BAL-003-1 implementation, FERC Orders Address Sale, Provision of Ancillary Services (<http://www.ferc.gov/media/news-releases/2015/2015-4/11-19-15-E-1.asp#.Vk8DBPmrRqY>), Blackstart and System Restoration implications, NERC Industry Advisory on Generator Governor Frequency Response (<http://www.nerc.com/pa/rmm/bpsa/Alerts%20DL/2015%20Alerts/NERC%20Alert%20A-2015-02-05-01%20Generator%20Governor%20Frequency%20Response.pdf>) as well as a summary of the recent PJM Frequency Response Survey. OC members requested that real-time unit performance, inverter connected generator obligations, fast-frequency response product, and the impact of a changing fuel mix be added as part of the future agenda item.

## Capacity Performance

23. Ms. Jani reviewed the Unit Specific Parameter Adjustment Process, and presented a comparison between this process and the Parameter Limited Schedule Exceptions. Several scenarios involving these processes were also reviewed. Questions related to the scenarios reviewed or the processes in general can be directed to [unitspecificpls@pjm.com](mailto:unitspecificpls@pjm.com).
24. Mr. Pilong and Mr. Bryson led discussions around several key Performance Assessment Hour (PAH) topics including:
  - PJM communication of PAH start / stop times
  - Desired output level of CP resources during a PAH

- PAH event triggers
- Obligations of external CP units to host TOP

PJM will continue discussions around these topics and provide an in-depth scenario review of each PAH trigger step at future OC meetings.

## Information Only

### FTR Center to Replace eFTR in 2Q 2016

eFTR is the next PJM Tool to be updated to the new PJM technology standard. FTR Center, the eFTR replacement, will go live in 2Q 2016.

FTR Center will be available 1Q 2016 for testing in [PJM's Sandbox environment](#). While no functionality or business rules have changed in the development of FTR Center, PJM's new security controls will impact participants implementing browserless communications in FTR Center.

After a period of parallel operations, eFTR will be officially retired. The exact date for the 1Q2016 FTR Center demonstration, supporting documentation availability, and the eFTR retirement date will be communicated later.

Questions or concerns can be sent to [FTRCenter@pjm.com](mailto:FTRCenter@pjm.com)

## Future Meeting Dates

January 5, 2016	9:00 am	PJM Conference and Training Center
February 9, 2016	9:00 am	PJM Conference and Training Center
March 8, 2016	9:00 am	PJM Conference and Training Center
April 5, 2016	9:00 am	PJM Conference and Training Center
May 10, 2016	9:00 am	PJM Conference and Training Center
June 7, 2016	9:00 am	PJM Conference and Training Center

Author: Jeff McLaughlin

## In Attendance (In Person)

Last Name	First Name	Company	Sector
Bryson (Chair)	Mike	PJM Interconnection, LLC	Not Applicable
McLaughlin (Secretary)	Jeffrey	PJM Interconnection, LLC	Not Applicable
Benchek	Jim	FirstEnergy Solutions Corporation	Transmission Owner
Blair	Tom	Monitoring Analytics, LLC	Not Applicable
Borgatti	Michael	Gable and Associates	Not Applicable

Brodbeck	John	EDP Renewables North America, LLC	Other Supplier
Fitch	Neal	NRG Power Marketing LLC	Generation Owner
Foladare	Kenneth	IMG Midstream LLC	Generation Owner
Gates	Terry	Appalachian Power Company	Transmission Owner
Hagaman	Derek	GT Power Group	Transmission Owner
Herel	Suzanne	RTO Insider	Not Applicable
Horstmann	John	Dayton Power & Light Company	Transmission Owner
Kogut	George	New York Power Authority	Other Supplier
Lieberman	Steve	Old Dominion Electric Cooperative	Electric Distributor
O'Connell	Bob	Main Line Electricity Market Consultants	Not Applicable
Pratzon	David	GT Power Group	Not Applicable
Scarp	David	Calpine Energy Services LP	Generation Owner
Stewart	Travis	Gable and Associates	Not Applicable
Trayers	Barry	Citigroup Energy, Inc.	Other Supplier
Weaver	David	Exelon	Transmission Owner

### In Attendance (Via Conference Call)

Last Name	First Name	Company	Sector
Ainspan	Malcolm	Energy Curtailment Specialists, Inc.	Other Supplier
Alfayyoubi	Mohammed	Dominion Virginia Power	Not Applicable
Barker	Jason	Exelon Corporation	Transmission Owner
Bolan	Martin	First Energy Solutions	
Bonner	Charles	Dominion Virginia Power	
Campbell	Bruce	EnergyConnect, Inc.	Other Supplier

Carmean	Gregory	OPSI	Not Applicable
Cicero	Nick	FirstEnergy Solutions Corporation	
Davis	Connie	City of Cleveland, DPU	Electric Distributor
DiNicola	Laura	First Energy Solutions Corporation	
Duan	Robert	Ontario Power Generation	Other Supplier
Dugan	Chuck	East Kentucky Power Cooperative, Inc.	Transmission Owner
Erickson	Bruce	Alleghany Electric Cooperative, Inc.	Electric Distributor
Farber	John	State of Delaware	Not Applicable
Filomena	Guy	Customized Energy Solutions, Ltd.*	Not Applicable
Garavaglia	John	Commonwealth Edison Company	Transmission Owner
Gebele	Don	Dayton Power & Light Company	Transmission Owner
Gebolys	Debbie	Other	Not Applicable
Gockley	Beatrice	Johnson Controls, Inc.	Not Applicable
Godson	Gloria	Pepco Holdings	
Greening	Michele	PPL EnergyPlus, L.L.C.	Transmission Owner
Guistwhite	Jeff	Johnson Controls, Inc.	Not Applicable
Gupta	Vinit	ITC Transmission	
Hanebuth	Michele	Orange & Rockland	Transmission Owner
Hastings	David	Market Interconnection LLC	Not Applicable
Hoatson	Tom	LS Power	
Hostetler	Tim	Appalachian Power Company	Transmission Owner
Hunter	Andy	First Energy Solutions Corporation	Transmission Owner
Liang-Nicol	Cecilia	First Energy Solutions Corporation	Transmission Owner

Libbos	Robin	FirstEnergy Solutions Corporation	Transmission Owner
Johnson	Carl	Customized Energy Solutions, Ltd.*	Not Applicable
Mabry	David	McNees Wallace & Nurick LLC	Not Applicable
Markiewicz	Cindy	Allegheny Power	Transmission Owner
Mok	Alan	Duke Energy	
Norton	Chris	American Municipal Power, Inc.	Electric Distributor
O'Leary	Christopher	PSEG Energy Resources and Trade LLC	Transmission Owner
Ondayko	Brock	AEP Energy Supply	Generation Owner
Pleiss	Bob	Constellation Energy	
Poellhuber	Frederic	Hydro Quebec	Not Applicable
Price	Russell	UGI Utilities, Inc.	Transmission Owner
Rohrbach	John	ACES	
Rutigliano	Tom	Achieving Equilibrium LLC	Other Supplier
Sasser	Jonathan	Customized Energy Solutions, Ltd.*	Not Applicable
Schum	Alice	Illinois Municipal Electric Agency	
Scoglietti	Barbara	Tangent Energy Solutions, Inc.	Other Supplier
Semrau	Keith	Cleveland Public Power	
Skumanich	Bill	PPL Electric Utilities	Transmission Owner
Slade	Louis	Dominion Virginia Power	Transmission Owner
Stefanowicz	Vince	Talen Energy Marketing, LLC	Generation Owner
Suh	Jung	Noble Solutions	
Wharton	Ronald	Public Service Electric & Gas Company	Transmission Owner
Whitehead	Jeff	Direct Energy	Other Supplier

Wilhite	Chad	First Energy Solutions Corporation	
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## PJM Attendees

Last Name	First Name	Company	Sector
Anders	Dave	PJM Interconnection, LLC	Not Applicable
Boyle	Glen	PJM Interconnection, LLC	Not Applicable
Bruno	Pat	PJM Interconnection, LLC	Not Applicable
Ciabattoni	Joe	PJM Interconnection, LLC	Not Applicable
Coyne	Suzanne	PJM Interconnection, LLC	Not Applicable
Ford	Adrien	PJM Interconnection, LLC	Not Applicable
Graff	Ron	PJM Interconnection, LLC	Not Applicable
Heimbach	Mark	PJM Interconnection, LLC	Not Applicable
Hendrzak	Chantal	PJM Interconnection, LLC	Not Applicable
Hoang	Liem	PJM Interconnection, LLC	Not Applicable
Holland	Risa	PJM Interconnection, LLC	Not Applicable
Hsia	Eric	PJM Interconnection, LLC	Not Applicable
Huang	Nancy	PJM Interconnection, LLC	Not Applicable
Jani	Alpa	PJM Interconnection, LLC	Not Applicable
Kenney	Susan	PJM Interconnection, LLC	Not Applicable
Kimmel	David	PJM Interconnection, LLC	Not Applicable
Mulhern	Joe	PJM Interconnection, LLC	Not Applicable
Patel	Anita	PJM Interconnection, LLC	Not Applicable
Pilong	Chris	PJM Interconnection, LLC	Not Applicable
Punjabi	Gautam	PJM Interconnection, LLC	Not Applicable

Seiler	Ken	PJM Interconnection, LLC	Not Applicable
Souder	David	PJM Interconnection, LLC	Not Applicable
Tam	Simon	PJM Interconnection, LLC	Not Applicable
Thew	Carla	PJM Interconnection, LLC	Not Applicable
Tribulski	Jen	PJM Interconnection, LLC	Not Applicable