

Operating Committee
PJM Conference & Training Center, Audubon, PA
June 7, 2016
9:00 a.m. – 12:00 p.m. EPT

Administration

1. The Agenda for this meeting was approved.
2. Draft Minutes of the May 10, 2016 OC meeting were reviewed and approved.
3. The OC Work Plan was reviewed.

Review of Operations

4. Review of Operational Events

Mr. Chris Pilong, PJM, reviewed PJM Operations since the last OC Meeting. The review included a complete summary of April 2016 operational events, and a partial summary of May 2016 events. The April summary included 10 High System Voltage events, 1 Synchronous Reserve event and 1 Shared Reserve event. The May summary included 5 High System Voltage events, 1 Synchronous Reserve event and 2 Share Reserve Events.

Endorsements / Approvals

There are no items scheduled for endorsement during this Operating Committee Meeting.

First Readings

5. Manual 03A Changes

Mr. Ron Deloach, PJM, review proposed changes to *Manual 03A: Energy Management System (EMS) Model Updates and Quality Assurance (QA)* regarding administrative and modeling process updates, including data submissions for Behind the Meter generation. The Operating Committee will be asked to endorse these changes at the next OC meeting.

6. Manual 14D Changes

Mr. David Schweizer, PJM, reviewed recent changes to *Manual 14D: Generator Operational Requirements* regarding clarifications to Attachment L. These changes were already endorsed by the Markets and Reliability Committee, therefore the information was presented to the OC for informational purposes.

<http://www.pjm.com/~media/documents/manuals/m14d-redline.ashx>

7. Open Access Transmission Tariff

Ms. Jacqui Hugee, PJM, reviewed a proposed revision to the Open Access Transmission Tariff (OATT). The revision is a conforming change to Section 23.1 of PJM's OATT as a result of the previously issues FERC Order 739. PJM will file the revisions with FERC by June 30, 2016.

OC Subcommittee / Task Force Updates

8. **System Operations Subcommittee (SOS)**

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

9. **Systems Information Subcommittee (SIS)**

Mr. Mike Del Viscio, PJM, provided a summary of the most recent SIS meeting.

10. **System Restoration Coordinators Subcommittee (SRCS)**

The SRCS had not met since the last OC meeting.

11. **Metering Task Force (MTF)**

Ms. Nancy Huang, PJM, provided a summary of MTF activity since the last OC meeting.

Primary Frequency Response

12. **Generator Governor Response Survey**

Mr. David Schweizer provided a summary of the recently completed generator governor response survey. PJM found that survey responses were submitted for 95% of units. Of those units that responded, 69% indicated that their governor was operational, and 53% indicated that their governor was capable of operating within the NERC recommended settings. PJM plans to continue outreach to Generator Owners who did not respond to the survey, or provided incomplete responses. PJM will also continue to monitor frequency response performance with respect to BAL-003-1, and evaluate any FERC/NERC actions related to frequency response.

13. **Frequency Response Performance**

Ms. Danielle Croop, PJM, provided an update on PJM's Frequency Response Performance with respect to the new BAL-003-1 standard. PJM is currently exceeding the expected Frequency Response Obligation for 2016.

Tool and Informational Updates

14. **Review of Operating Metrics**

Mr. Ken Seiler, PJM, reviewed the PJM Operating Metrics Slides, updated with March metrics data. Metrics included PJM's load forecast error, BAAL performance, transmission / generation outage statistics, and Perfect Dispatch performance.

15. **2015/16 Winter Report**

Ms. Darlene Phillips, PJM, presented the 2015/16 Winter Operations Report. The presentation included metrics on the peak load for the 2015/16 winter season which occurred on January 19, 2016. A status of the 2015 Cold Weather Recommendations was also provided.

16. **Generator Cold Weather Testing**

Mr. David Schweizer led continued discussions regarding future plans for the Cold Weather Testing process. PJM's recommendation is to continue the voluntary winter testing program using the existing criteria identified in Manual 14D, Section 7.5.1. PJM's only recommended change is to discontinue

winter testing compensation for CP resources. PJM will draft Manual 14D revisions to reflect the recommended changes, and present them at the July OC meeting for a first read.

17. **Synchronous Reserve Performance**

Mr. Tom Hauske, PJM, provided an update on synchronous reserve performance for 2016 Q1. There were 3 Synchronous Reserve events in 2016 Q1, with 2 of those events lasting > 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.

18. **Upcoming MIC Problem Statement**

Mr. Tom Hauske provided an overview of the upcoming MIC problem statement related to black start service revenue requirements for new units.

19. **NERC Lessons Learned**

Mr. Ken Seiler presented the most recent NERC Lessons Learned report. The topic of the report was the loss of SCADA control and monitoring capability within a control center.

20. **Pricing Interface Update**

There have been no new or updated Closed Loop Interfaces implemented since the last OC.

21. **Tech Change Forum**

Mr. Jim Gluck, PJM, provided an overview of the new member-focused Tech Change Forum group. The group is being stood up as a result of stakeholder feedback, and will provide increased visibility to PJM tool changes. An informational session related to the Tech Change Forum has been scheduled for Thursday, July 21, 2016.

22. **Planning Center Tool Update**

Mr. Jonathan Thompson, PJM, provided an update on PJM's implementation of the new Planning Center web application in support of compliance with the NERC MOD-032-1 standard. The application went live on May 1, 2016, and acts as a portal for entities to submit modeling data in compliance with MOD-032-1 R2. PJM is requesting Generator Owners to submit modeling information by the July 31, 2016 deadline.

23. **NERC and Regional Coordination Update**

Mr. Sri Kappagantula, PJM, 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. Several standards currently under development were reviewed including TPL-007-1 and TPL-001-5, as well as several appendices within the NERC Rules of Procedure. Standards subject to future enforcement were also reviewed, including a number of CIP, MOD, PER and PRC standards which become enforceable on July 1, 2016.

24. **Special Protection Scheme (SPS) Modification**

Mr. Craig Crider, Dominion Virginia Power, reviewed planned modifications to the Clover generator shed scheme. The existing SPS will be modified to incorporate the addition of a third 500/230kV transformer at the Clover substation. The new transformer is being constructed under PJM RTEP baseline project b1907.

Capacity Performance

25. Unit Specific Parameter Process Update

Mr. Tom Hauske provided a status update on the implementation of the Unit Specific Parameter process. The final status for parameter adjustment requests for the 2016/17 delivery year were completed and provided to the resource owners by the May 15, 2016 deadline. The Capacity Performance product then became effective on June 1, 2016 for the 2016/17 delivery year. With regard to next steps, the Unit Specific Adjustment team will be updating the FAQs and process documents, and continuing to review the adjustment request process at future OC meetings. The team will also begin reviewing unit specific adjustment requests for CP resources for the 2017/18 delivery year.

26. Performance Assessment Hour (PAH) Ramp Rate

Ms. Rebecca Stadelmeyer, PJM, discussed the recent FERC Order which rejected PJM's PAH Ramp Rate proposal. PJM is currently holding internal discussions to determine next steps.

Future Meeting Dates

July 12, 2016	9:00 a.m.	PJM Interconnection - Conference and Training Center
August 9, 2016	9:00 a.m.	PJM Interconnection - Conference and Training Center
September 13, 2016	9:00 a.m.	PJM Interconnection - Conference and Training Center
October 4, 2016	9:00 a.m.	PJM Interconnection - Conference and Training Center
November 1, 2016	9:00 a.m.	PJM Interconnection - Conference and Training Center
December 13, 2016	9:00 a.m.	PJM Interconnection - Conference and Training Center

Author: Jeff McLaughlin

In Attendance (In Person)

Last Name	First Name	Company	Sector
Bryson	Mike	PJM Interconnection, LLC	Not Applicable
McLaughlin (Secretary)	Jeffrey	PJM Interconnection, LLC	Not Applicable
Benchek	Jim	FirstEnergy Solutions Corporation	Transmission Owner
Borgatti	Michael	Gabel and Associates	Not Applicable
Brodbeck	John	EDP Renewables North America, LLC	Other Supplier
Dugan	Chuck	East Kentucky Power Cooperative	Transmission Owner
Esposito-Hils	Pati	TransCanada Power Marketing Ltd.	Other Supplier
Fitch	Neal	NRG Power Marketing LLC	Generation Owner
Greiner	Gary	PSEG Energy Resources and Trade LLC	Other Supplier

Hagaman	Derek	GT Power Group	Not Applicable
Horstmann	John	Dayton Power & Light Company	Transmission Owner
Jardot	Gina	Essential Power Rock Springs, LLC	Transmission Owner
Johnson	Carl	Customized Energy Solutions, Ltd.*	Not Applicable
Kilgallen	Kevin	Iberdrola	Generation Owner
Kogut	George	New York Power Authority	Other Supplier
Lieberman	Steven	Old Dominion Electric Cooperative	Electric Distributor
Midgley	Sharon	Exelon Business Services	Transmission Owner
Pratzon	David	GT Power Group	Not Applicable
Scarpignato	David	GT Power Group	Not Applicable
Trayers	Barry	Citigroup Energy, Inc.	Other Supplier

In Attendance (Via Conference Call)

Last Name	First Name	Company	Sector
Ainspan	Malcolm	Energy Curtailment Specialists, Inc.	Other Supplier
Alfayyumi	Mohammed	Dominion Virginia Power	Not Applicable
Barker	Jason	Exelon	
Bolan	Martin	First Energy Solutions	
Bonner	Charles	Dominion Virginia Power	
Campbell	Bruce	EnergyConnect, Inc.	Other Supplier
Carmean	Gregory	OPSI	Not Applicable
Cox	Jason	Dynegy Marketing and Trade, LLC	Generation Owner
Cox	Phil	American Electric Power, Inc.	
Crider	Craig	Dominion	Transmission Owner

D'Alessandris	Lou	FirstEnergy Solutions Corporation	
Davis	Connie	City of Cleveland, DPU	Electric Distributor
DeLosa	Joe	Delaware Public Service Commission	Not Applicable
Christin	Domian	Duquesne Light Company	
Farber	John	State of Delaware	Not Applicable
Filomena	Guy	Customized Energy Solutions, Ltd.*	Not Applicable
Garavaglia	John	Commonwealth Edison Company	Transmission Owner
Garnett	Bryan	Duke Energy	Transmission Owner
Gebolys	Debbie	Other	Not Applicable
Hagaman	Derek	GT Power Group	Not Applicable
Hart	Ron	Dominion	
Hastings	David	Market Interconnection LLC	Not Applicable
Helmick	Doug	GenOps LLC	
Henry	Michelle	First Energy Corporation	
Herel	Suzanne	RTO Insider	Not Applicable
Hoatson	Tom	LS Power	
Hopkins	Sandra	Dominion	
Hostetler	Tim	Appalachian Power Company	Transmission Owner
Hyzinski	Tom	Talen Energy	Other Supplier
Jones	Ryan	CCS Energy	
Keefer	Brian	Dominion	Transmission Owner
Kelley	Ryan	Duke Energy	
Leasure	Jill	Keystone Conemaugh Projects	

Lowe	Connie	Dominion Virginia Power	Not Applicable
Lumbrazo	Laura	Rockland Electric Co.	Transmission Owner
Mabry	David	McNees Wallace & Nurick LLC	Not Applicable
Markiewicz	Cindy	Allegheny Power	Transmission Owner
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
Patel	Munjal	Public Service Electric & Gas	
Patten	Kevin	AEP Energy, Inc.	Other Supplier
Pleiss	Bob	Constellation Energy	
Rutigliano	Tom	Achieving Equilibrium LLC	Other Supplier
Santarelli	Paul	PPL Electric Utilities	Transmission Owner
Sasser	Jonathan	Customized Energy Solutions, Ltd.*	Not Applicable
Schreim	Morris	Maryland Public Service Commission	Not Applicable
Seelke	John	LS Power	
Stefanowicz	Vince	Talen Energy Marketing, LLC	Generation Owner
Sullivan	James	Neptune Regional Transmission System	Transmission Owner
Thomson	Heather	Mid-Atlantic Renewable Energy Coalition	Not Applicable
Watson	Mark	Platts, McGraw Hill Financial	Not Applicable
Weist	Jon	ITC	
Wharton	Ron	Public Service Electric & Gas	Transmission Owner
White	Doug	North Carolina Electric Membership Corporation	Electric Distributor

Whitehead	Jeff	Direct Energy Business	Other Supplier
Wilhite	Chad	First Energy Solutions Corporation	
Wilson	James	Wilson Energy Economics	
Yu	Joel	Consolidated Edison	Not Applicable

PJM Attendees

Last Name	First Name	Company	Sector
Anders	Dave	PJM Interconnection, LLC	Not Applicable
Bell	Jerry	PJM Interconnection, LLC	Not Applicable
Carroll	Rebecca	PJM Interconnection, LLC	Not Applicable
Croop	Danielle	PJM Interconnection, LLC	Not Applicable
Del Viscio	Michael	PJM Interconnection, LLC	Not Applicable
Deloach	Ron	PJM Interconnection, LLC	Not Applicable
Driscoll	Mary Ellen	PJM Interconnection, LLC	Not Applicable
Endress	Eric	PJM Interconnection, LLC	Not Applicable
Fabiano	Janell	PJM Interconnection, LLC	Not Applicable
Fan	Zhenyu	PJM Interconnection, LLC	Not Applicable
Gluck	James	PJM Interconnection, LLC	Not Applicable
Hauske	Tom	PJM Interconnection, LLC	Not Applicable
Heimbach	Mark	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
Hugee	Jacqui	PJM Interconnection, LLC	Not Applicable

Kappagantula	Sri	PJM Interconnection, LLC	Not Applicable
Kenney	Susan	PJM Interconnection, LLC	Not Applicable
Keshavamurthy	Bhavana	PJM Interconnection, LLC	Not Applicable
Kimmel	David	PJM Interconnection, LLC	Not Applicable
Lee	Ray	PJM Interconnection, LLC	Not Applicable
Maxwell	Melissa	PJM Interconnection, LLC	Not Applicable
Phillips	Darlene	PJM Interconnection, LLC	Not Applicable
Pilong	Christopher	PJM Interconnection, LLC	Not Applicable
Schmitt	Jeff	PJM Interconnection, LLC	Not Applicable
Schweizer	David	PJM Interconnection, LLC	Not Applicable
Seiler	Ken	PJM Interconnection, LLC	Not Applicable
Souder	Dave	PJM Interconnection, LLC	Not Applicable
Stadelmeyer	Rebecca	PJM Interconnection, LLC	Not Applicable
Strella	Lauren	PJM Interconnection, LLC	Not Applicable
Tam	Simon	PJM Interconnection, LLC	Not Applicable
Thompson	Jonathan	PJM Interconnection, LLC	Not Applicable
Walter	Laura	PJM Interconnection, LLC	Not Applicable
Ward	Mike	PJM Interconnection, LLC	Not Applicable

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