

**Operating Committee**  
**PJM Conference & Training Center, Audubon, PA**  
**August 8, 2017**  
**9:00 a.m. – 12:00 p.m. EPT**

## Administration

1. The agenda for this meeting was approved.
2. Draft Minutes of the July 11, 2017 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. There were 10 Hot Weather Alerts called during the month of July, occurring between July 9 and July 22. There were no synchronous reserve events, and 3 Shared Reserve Events. A review of the July 27 event was also provided which involved a sustained LMP price spike observed across most of the RTO for nearly an hour.

### 5. Review of Operating Metrics

Mr. Joe Ciabattoni, PJM, reviewed the PJM Operating Metrics slides updated with May metrics data. Metrics included PJM's load forecast error, BAAL performance, transmission / generation outage statistics, and Perfect Dispatch performance. A new metric was also presented which captured additional Day Ahead Scheduling Reserve (DASR) MWs committed as part of any PJM Hot Weather Alerts, and the associated clearing price of DASR during those alerts.

### 6. Transient Shortage Pricing

Ms. Lisa Morelli, PJM, provided an update on Transient Shortage Pricing. The update included education on the differences between reserve values calculated by the Real-Time Security Constrained Economic Dispatch (RT SCED) engine, and those estimated by PJM's Energy Management System (EMS) and displayed in the Data Viewer application. Complete data sets have been posted as part of the August OC meeting materials. PJM intends to leave the RT SCED look-ahead interval at 10 minutes for further evaluation.

## Endorsements / Approvals

### 7. Manual 3A Changes

Ms. Diane Lake, PJM, reviewed proposed changes to *Manual 03A: EMS Model Updates and Quality Assurance*. The changes were part of the manual's periodic review, and included numerous administrative changes to update reference links and modify formatting. Changes were also made throughout Section 3.2 of the manual including the reordering and reformatting of content for clarity, as well as the addition of details and references. **The Operating Committee endorsed these changes with 0 objections and 0 abstentions.**

## 8. TO/TOP Matrix – Version 11

Mr. Sri Kappagantula, PJM, reviewed proposed changes to the TO/TOP Matrix. The changes involved the addition of new requirements from NERC standards COM-001-3 and TOP-018-(i). There were also a number of standards which recently became inactive, and were therefore removed from the matrix. Lastly, based on a ReliabilityFirst review of the current matrix, several reference documents have been updated (through the PJM stakeholder process as applicable) to properly map assigned tasks within the matrix to the PJM governing document. Several additional assigned tasks are currently under review, with the potential for future PJM manual updates. **The Operating Committee endorsed a recommendation of approval to the TOA-AC with 0 objections and 0 abstentions.**

## 9. Dynamic Schedule Pro Forma Agreement

Mr. Phil D'Antonio, PJM, reviewed the proposed Dynamic Schedule Pro Forma Agreement. Similar to the ongoing Pseudo-Tie Pro Forma agreement effort, PJM would like file and receive FERC approval of a Pro Forma agreement to add transparency and standardization to the Dynamic Schedule implementation process. Assuming there are no delays, PJM would like to submit this filing to FERC in November of 2017. **The Operating Committee endorsed this agreement with 0 objections and 0 abstentions.**

## First Readings

There were no first readings scheduled for this month.

## OC Subcommittee / Task Force Updates

### 10. System Operations Subcommittee (SOS)

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

### 11. Data Management Subcommittee (DMS)

There were no DMS updates to be presented at this OC meeting. Registration is now open for the next DMS-Joint meeting, scheduled for August 24, 2017.

### 12. System Restoration Coordinators Subcommittee (SRCS)

Mr. Ryan Lifer, PJM, provided a summary of recent SRCS activities. The Fall 2017 Restoration Drill schedule has been set, with drills beginning on September 25 and running through November 3.

### 13. Primary Frequency Response Sr. Task Force (PFRSTF)

Mr. Glen Boyle, PJM, provided an update on recent PFRSTF activities. The task force kick-off meeting was held on July 25 during which the education efforts began. The education phase is expected to continue for the next several meetings due to the complex, technical nature of the topics.

## Capacity Performance

### 14. Unit Specific Parameter (USP) Process Update

Ms. Alpa Jani, PJM, provided an update on the implementation of the Unit Specific Parameter process, as well as updates to the soak time and minimum run time parameters. The new soak time parameter

will be formally added to the USP process beginning with the 2019/20 Delivery Year (DY). Market Sellers will be asked to submit soak time information for their resources for the 2018/19 DY, however, this information will be for reference purposes only (not actually used in the generation dispatch tools or the calculation of make whole payments until 2019/20 DY).

## Tool and Informational Updates

### 15. Distributed Energy Resources (DER) Update

Mr. Scott Baker, PJM, provided an update on the DER Stakeholder Process efforts.

### 16. System Resilience

Mr. Dave Souder, PJM, provided an update on PJM's resilience efforts related to system operations. Current areas of focus include contingency screening and monitoring as well as an evaluation of black start unit fuel type and cranking paths for system restoration purposes.

### 17. Regulation Update

Ms. Danielle Croop, PJM, provided an update on Regulation Performance. PJM implemented new regulation requirements and a corresponding regulation signal on January 9, 2017. Signal tuning has occurred since implementation to enhance signal performance. Since this deployment, PJM has observed improved ACE control. Performance statistics were provided for average median daily ACE, mileage ratio, and percent of time at full raise/lower (signal pegging).

### 18. NERC Lessons Learned

Mr. Donnie Bielak, PJM, reviewed the recently posted NERC Lessons Learned reports. The topic of the report was 'Loss of Wind Turbines due to Transient Voltage Disturbances on the Bulk Transmission System'.

### 19. NERC and Regional Coordination Update

Mr. Preston Walker, PJM, provided an update on NERC, SERC and RF standards, and other pertinent regulatory and compliance information, and solicited feedback from the members on N&RC efforts. Several project updates were provided, including modifications to TPL-007-2 and PRC-025-2. Standards subject to future enforcement were also reviewed, including COM-001-3 and IRO-002-5 which become enforceable on October 1, 2017.

### 20. Stakeholder Satisfaction Survey

Ms. Janell Fabiano, PJM, provided an update related to the 2017 Stakeholder Satisfaction Survey. The survey will be sent out on September 11, 2017.

### 21. Pricing Interface Update

There were no newly created pricing interfaces.

## Future Meeting Dates

September 12, 2017	9:00 a.m.	PJM Interconnection - Conference and Training Center
October 10, 2017	9:00 a.m.	PJM Interconnection - Conference and Training Center
November 7, 2017	9:00 a.m.	PJM Interconnection - Conference and Training Center
December 12, 2017	9:00 a.m.	PJM Interconnection - Conference and Training Center

Author: Jeff McLaughlin

## In Attendance (In Person)

Last Name	First Name	Company	Sector
Seiler (Chair)	Ken	PJM Interconnection, LLC	Not Applicable
McLaughlin (Secretary)	Jeffrey	PJM Interconnection, LLC	Not Applicable
Benchek	Jim	First Energy Solutions	Transmission Owner
Borgatti	Michael	Gabel and Associates	Not Applicable
Braerman	Ken	Baltimore Gas & Electric	Transmission Owner
Foladare	Ken	Tangibl Group	
Ford	Adrien	Old Dominion Electric Cooperative	Electric Distributor
Giraldo	Juan	Monitoring Analytics	Not Applicable
Greiner	Gary	PSEG Energy Resources and Trade LLC	Other Supplier
Horstmann	John	Dayton Power & Light Company	Transmission Owner
Johnson	Carl	Customized Energy Solutions, Ltd.*	Not Applicable
Kogut	George	New York Power Authority	Other Supplier
Lowe	Connie	Dominion Virginia Power	
Midgley	Sharon	Exelon Business Services	Transmission Owner
Pratzon	David	GT Power Group	Not Applicable
Scarpignato	David	Calpine Energy Services, L.P.	Generation Owner
Stewart	Travis	Gabel and Associates	Not Applicable
Sweeney	Rory	RTO Insider	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
Alfayyoumi	Mohammed	Dominion Virginia Power	Transmission Owner
Blackshear	David	Gridforce Energy Management, LLC	Other Supplier
Bolan	Martin	First Energy Solutions	
Bonner	Charles	Dominion Virginia Power	
Campbell	Bruce	CPower	
Carmean	Gregory	OPSI	Not Applicable
Cox	Phil	American Electric Power, Inc.	
Davis	Becky	Talen Energy Marketing, LLC	Generation Owner
DeGiusto	Vince	UGI Utilities Inc.	Transmission Owner
DeLosa	Joe	Delaware Public Service Commission	Not Applicable
Domian	Christin	Duquesne Light Company	Transmission Owner
Dugan	Chuck	East Kentucky Power Cooperative, Inc.	Transmission Owner
Farber	John	Delaware Public Service Commission	Not Applicable
Filomena	Guy	Customized Energy Solutions, Ltd.	Not Applicable
Fitch	Neal	NRG Power Marketing LLC	Generation Owner
Frederickson	Joe	Public Service Electric & Gas	Transmission Owner
Gagen	Rod	Dominion	
Gilani	Rehan	Consolidated Edison	Transmission Owner
Grear	Mark	Constellation Energy	Generation Owner
Guntle	Vince	UGI Development Company	Generation Owner

Hanebuth	Michele	Orange & Rockland	Transmission Owner
Heisey	Bradley	Tenaska Pennsylvania Partners, LLC	Generation Owner
Hoatson	Tom	LS Power	
Holland	Cynthia	New Jersey Board of Public Utilities	Not Applicable
Hopkins	Sandra	Dominion	
Horning	Lynn	LMH Energy	Not Applicable
Hunter	Andy	FirstEnergy Solutions Corp.	Transmission Owner
Hyzinski	Tom	Talen Energy Marketing, LLC	Generation Owner
Janicki	Diane	Boston Energy Trading and Marketing LLC	Generation Owner
Jones	Ryan	CCS Energy	
Kowalczyk	Nick	Orange & Rockland	Transmission Owner
Krawczyk	Leslie	ReliabilityFirst	Not Applicable
Leasure	Jill	Keystone Projects	Not Applicable
Libbos	Robin	FirstEnergy Solutions Corporation	Transmission Owner
Little	Tyler	Direct Energy Business, LLC	Other Supplier
Mabry	David	McNees Wallace & Nurick LLC	Not Applicable
Markiewicz	Cindy	Allegheny Power	Transmission Owner
Norton	Chris	American Municipal Power, Inc.	Electric Distributor
O'Connell	Bob	PPGI Fund A/B Development, LLC	Generation Owner
Ondayko	Brock	AEP Energy Supply	Generation Owner
Patten	Kevin	AEP Energy, Inc.	Other Supplier
Phillips	Marji	Direct Energy Business, LLC	Other Supplier
Ruck	Andrew	Public Service Electric & Gas	

Runowski	Brian	Commonwealth Edison Company	Transmission Owner
Sasser	Jonathan	Customized Energy Solutions, Ltd.*	Not Applicable
Sillin	John	Federal Energy Regulatory Commission	Not Applicable
Skumanich	Bill	PPL Electric Utilities	Transmission Owner
Slagel	Ron	MICS	Not Applicable
Smaczniak	Kim	Earthjustice	Not Applicable
Sullivan	James	Power Bridge LLC	Transmission Owner
Tsao	Stephanie	S&P Global Market Intelligence	Not Applicable

## PJM Attendees

Last Name	First Name	Company	Sector
Anders	Dave	PJM Interconnection, LLC	Not Applicable
Baker	Scott	PJM Interconnection, LLC	Not Applicable
Bielak	Donnie	PJM Interconnection, LLC	Not Applicable
Boyle	Glen	PJM Interconnection, LLC	Not Applicable
Bryson	Mike	PJM Interconnection, LLC	Not Applicable
Cawley	Troy	PJM Interconnection, LLC	Not Applicable
Ciabattoni	Joe	PJM Interconnection, LLC	Not Applicable
Croop	Danielle	PJM Interconnection, LLC	Not Applicable
D'Antonio	Phil	PJM Interconnection, LLC	Not Applicable
Del Viscio	Mike	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

George	Gina	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
Hugee	Jacqui	PJM Interconnection, LLC	Not Applicable
Jani	Alpa	PJM Interconnection, LLC	Not Applicable
Kappagantula	Sri	PJM Interconnection, LLC	Not Applicable
Keech	Adam	PJM Interconnection, LLC	Not Applicable
Lake	Diane	PJM Interconnection, LLC	Not Applicable
Lifer	Ryan	PJM Interconnection, LLC	Not Applicable
Morelli	Lisa	PJM Interconnection, LLC	Not Applicable
Olaleye	Michael	PJM Interconnection, LLC	Not Applicable
Patel	Keyur	PJM Interconnection, LLC	Not Applicable
Pilong	Chris	PJM Interconnection, LLC	Not Applicable
Schweizer	David	PJM Interconnection, LLC	Not Applicable
Souder	Dave	PJM Interconnection, LLC	Not Applicable
Stadelmeyer	Rebecca	PJM Interconnection, LLC	Not Applicable
Stefanowicz	Vince	PJM Interconnection, LLC	Not Applicable
Walker	Preston	PJM Interconnection, LLC	Not Applicable
Ward	Mike	PJM Interconnection, LLC	Not Applicable