

**Operating Committee**  
**PJM Conference & Training Center, Audubon, PA**  
**June 11, 2019**  
**9:00 a.m. – 12:30 p.m. EPT**

## Administration

1. The Operating Committee (OC) Agenda for this meeting was **approved**. Mr. Wallin notified the OC that a section has been added to the OC agenda which contains links to prior educational presentations that were delivered at the OC. Mr. Wallin also notified the OC that the June 3<sup>rd</sup> Non-Retail Behind the Meter Generation Subgroup meeting draft minutes are posted on the June 11 OC meeting website as an information only item.
2. The Draft Minutes of the May 14, 2019 OC meeting were **approved** as drafted by acclamation with 0 objections and 0 abstentions.
3. Mr. Don Wallin, PJM, reviewed the OC Work Plan. Mr. Wallin noted that the OC Work Plan was adjusted to reflect the OC Charter review which will occur annually during the months of April and May.
- 3a. Mr. Dave Souder announced that he has accepted a position as Sr. Director - System Planning effective July 1, 2019. Ms. Darlene Phillips, Sr. Director - Operations Engineering Support, will become the Operating Committee Chairperson starting at the August 2019 meeting.

## Review of Operations

4. **Review of Operational Events**  
Mr. Chris Pulong, PJM, reviewed PJM operations since the last OC Meeting.
5. **Review of Operating Metrics**  
Mr. Mike Zhang, PJM, reviewed the May 2019 PJM operating metrics slides. Metrics included PJM's load forecast error, BAAL performance, transmission / generation outage statistics, and Perfect Dispatch historical performance.

## FERC Order 841 Education

6. **FERC Order 841: Electric Storage Participation Education**  
Ms. Laura Walter, PJM, provided education regarding FERC Order 841 electric storage participation.

## Endorsements/Approvals

There were no endorsements or approvals for this month's meeting.

## First Readings

7. **Manual 14D Changes**  
Mr. Vince Stefanowicz, PJM, reviewed the proposed changes to PJM Manual 14D: Generator Operational Requirements. The review included a cover to cover review and proposed language changes regarding compliance with FERC Order 841 for energy storage participation. **The Operating Committee will be asked to endorse these changes at the September 10 OC meeting.**

## 8. Manual 36 and 40 Changes

Ms. Laura Walter, PJM, reviewed the proposed changes to PJM Manual 36: System Restoration and PJM Manual 40: Training and Certification Requirements regarding FERC Order 841 for energy storage participation. **The Operating Committee will be asked to endorse these changes at the September 10 OC meeting.**

## 9. Manual 39 Changes

Mr. Daniel Bennett, PJM, reviewed the proposed changes to PJM Manual 39: Nuclear Plant Interface Coordination. **The Operating Committee will be asked to endorse these changes at the next OC meeting.**

## 9a. Manual 13 Changes

Mr. Augustine Caven, PJM, reviewed the proposed changes to PJM Manual 13: Emergency Operations in regards to Resource Limitation Reporting. **The Operating Committee will be asked to endorse these changes at the next OC meeting.**

## OC Subcommittee / Task Force Updates

### 10. System Operations Subcommittee (SOS)

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

### 11. Data Management Subcommittee (DMS)

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

### 12. Distributed Energy Resources Subcommittee (DERS)

Mr. Scott Baker, PJM, provided a summary of the most recent DERS meeting.

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

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

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

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

## Unit Specific Parameter Updates

### 15. Unit Specific Parameter Updates

There were no Unit Specific Parameter updates for this month's meeting.

## PJM Initiatives/Education Updates

### 16. Fuel Requirements for Black Start Resources Update

There were no Fuel Requirements for Black Start Resources updates for this month's meeting. More information on this initiative can be found at PJM's Issues Tracking page.

<https://www.pjm.com/committees-and-groups/issue-tracking/issue-tracking-details.aspx?Issue={B7F726E1-9F06-414E-8516-4D69B5050AF4}>

## 17. Transient Stability Analysis and Modeling Education

Mr. Liem Hoang and Mr. Mike Zhang, PJM, provided education on how PJM models and performs transient stability analysis.

### Tool and Informational Updates

## 18. Synchronous Reserve Performance Updates

Mr. David Kimmel, PJM, provided an update on PJM's synchronous reserve performance.

## 19. Primary Frequency Response Generator Performance Update

Ms. Danielle Croop, PJM, provided an update on PJM's primary frequency response generator performance.

## 20. NERC Lessons Learned

Mr. Donnie Bielak, PJM, provided an update on three recently posted NERC lessons learned.

## 21. Reliability Compliance Update

There were no Reliability Compliance updates for this month's meeting.

## 22. Pricing Interface Update

There were no newly created pricing interfaces.

### Non-Retail Behind the Meter Generation (NRBTMG) Business Rules Issue

## 23. Non-Retail Behind the Meter Generation Data Collection Timeline Review

Ms. Terri Esterly, PJM, reviewed the proposed Non-Retail BTMG data collection template and solicited feedback from stakeholders. PJM will release the updated data collection template which incorporates stakeholder feedback ASAP following the June 11 OC meeting.

## 24. Manual 13 and 14D Changes

Mr. Chris Pilog and Ms. Terri Esterly, PJM, reviewed the proposed changes and solicited feedback from stakeholders regarding Non-Retail BTMG manual language for Manual 13: Emergency Operations and Manual 14D: Generator Operational Requirements. **The Operating Committee will be asked to endorse these changes at the next OC meeting.**

Mr. Dave Souder, PJM, notified the OC that a preliminary review of the proposed M-13 and M-14D language changes with the PJM Tariff and Reliability Assurance Agreement (RAA) indicate that no PJM Tariff or RAA changes are required. If the need for PJM Tariff or RAA changes are identified, the proposed changes will be presented at future OC meetings.

### Action Items (12:30)








1. PJM will review the request to include additional data to the Operating Metrics report in the area of Operator Biasing and Reserve Pricing.



2. PJM will review Manual 03 language changes regarding stability studies in order to align with proposed Manual 10 language changes.
3. Manual 10 endorsement vote will be deferred until after the June MIC meeting.

## Information Only

The Non-Retail Behind the Meter Generation Subgroup June 3 meeting draft minutes are posted on the June 11 OC meeting website.

## Previous OC Education

Network Model Alignment Initiative	2/5/2019	 20190205-item-21-network-model-alignm
Forecasting Education	4/9/2019	 20190409-item-19-oc-forecast-education.p
Emergency Procedures Overview	4/9/2019	 20190409-item-23b-emergency-procedure
Behind the Meter Generation Settlement History	4/9/2019	 20190409-item-23b-settlement-agreemen
Improving Load Forecast with BTM Solar Forecast	5/14/2019	 20190514-item-20-improving-load-foreca
Existing Non-Retail Behind the Meter Generation Business Rules	5/14/2019	 20190514-item-27-existing-nrbtmg-busin
Non-Wholesale Distributed Energy Resources Data Collection	5/14/2019	 20190514-item-27a-der-data-collection.pd

Process Used to Estimate Non-Retail Behind the Meter Generation in PJM	5/14/2019	 20190514-item-27b-nrbtmg-estimation-pr
Non-Retail Behind the Meter Generation Settlement Agreement – Determination of the Threshold and Cap	5/14/2019	 20190514-item-27c-threshold-and-cap-foi

## Future Meeting Dates

July 9, 2019	9:00 a.m.	PJM Interconnection - Conference and Training Center
August 6, 2019	9:00 a.m.	PJM Interconnection - Conference and Training Center
September 10, 2019	9:00 a.m.	PJM Interconnection - Conference and Training Center
October 15, 2019	9:00 a.m.	PJM Interconnection - Conference and Training Center

Author: Don Wallin

## In Attendance (In Person)

Last Name	First Name	Company	Sector
Souder (Chair)	Dave	PJM Interconnection, LLC	Not Applicable
Wallin (Secretary)	Don	PJM Interconnection, LLC	Not Applicable
Benchek	Jim	American Transmission Systems, Inc.	Transmission Owner
D'Alessandris	Lou	FirstEnergy Solutions Corp.	Transmission Owner
Foladare	Kenneth	Tangibl	Not Applicable
Johnson	Carl	Customized Energy Solutions Ltd.	Not Applicable
Kogut	George	New York Power Authority	Other Supplier
Lowe	Connie	Dominion Virginia Power	Not Applicable
Midgley	Sharon	Exelon Business Services Company, LLC	Transmission Owner
O'Connell	Robert	PPGI Fund Development LLC.	Generation Owner
Scarpignato	David	Calpine Energy Services, LP.	Generation Owner
Smith	Christen	RTO Insider	Not Applicable
Stewart	Travis	Gable and Associates	Not Applicable

Sweeney	Rory	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.	Not Applicable
Anderson	Jared	SPGlobal Inc.	Not Applicable
Barmer	Mike	Dominion Virginia Power	Transmission Owner
Bayless	Charles	North Carolina Electric Membership Corporation	Electric Distributor
Brodbeck	John	EDP Renewables North America, LLC	Other Supplier
Buhler	Tom	Consolidated Edison Company of NY. Inc.	Transmission Owner
Campbell	Bruce	Energy Connection Inc.	Other Supplier
Capra	Carlo	ITC Interconnection LLC	Other Supplier
Cocco	Michael	Old Dominion Electric Cooperative	Electric Distributor
Cox	Edward	Appalachian Power Company	Transmission Owner
Crystle	Gil	UGI Development Company	Transmission Owner
Dasher	Brett	The Energy Authority. Inc.	Other Supplier
Davis	Jim	Dominion Virginia Power	Transmission Owner
DeGiusto	Vince	UGI Development Company	Generation Owner
DiNicola	Laura	PPL Electric Utilities Corp.	Transmission Owner
Dolan	Ryan	American Municipal Power, Inc.	Electric Distributor
Dugan	Chuck	East Kentucky Power Cooperative, Inc.	Transmission Owner
Durinsky	Mike	FirstEnergy Solutions Corp.	Transmission Owner
Feller	John	PPL Electric Utilities Corp.	Transmission Owner
Filomena	Guy	Customized Energy Solutions, Ltd.	Not Applicable

Fletcher	Jennifer	The Federal Energy Regulatory Commission	Not Applicable
Garnett	Bryan	Duke Energy Ohio, Inc.	Transmission Owner
Garza	Mark	Jersey Central Power & Light Company	Transmission Owner
Gates	Terry	Appalachian Power Company	Transmission Owner
Gilani	Rehan	ConEdison Energy, Inc.	Other Supplier
Grear	Mark	Exelon Generation Co., LLC	Generation Owner
Hammack	Matthew	PPL Web	Transmission Owner
Hanebuth	Michele	Consolidated Edison Company of NY. Inc.	Transmission Owner
Hanser	Erik	Michigan Public Service Commission	Not Applicable
Heisey	Bradley	Wolf Hills Energy, LLC	Generation Owner
Hoatson	Tom	Riverside Generating, LLC	Other Supplier
Hohenshilt	Jennifer	Talen Energy Marketing, LLC	Generation Owner
Horning	Lynn Marie	Customized Energy Solutions Ltd.	Not Applicable
Horstmann	John	Dayton Power & Light Company (The)	Transmission Owner
Hunter	Andy	FirstEnergy Solutions Corp.	Transmission Owner
Hyzinski	Tom	GT Power Group	Not Applicable
Janssen	Robert	Kelson Energy	Not Applicable
Jha	Monica	PCI	Not Applicable
Kelley	Ryan	Duke Energy Ohio, Inc.	Transmission Owner
Kelly	Stephen	Brookfield Energy Marketing LP	Other Supplier
Kilgallen	Kevin	Avangrid	Other Supplier
Krawczyk	Leslie	Reliability First	Not Applicable
Libbos	Robin	FirstEnergy Solutions Corp.	Transmission Owner
Mabry	David	McNees Wallace & Nurick LLC	Not Applicable

Markiewicz	Cindy	FirstEnergy Solutions Corp.	Transmission Owner
Norton	Chris	American Municipal Power, Inc.	Electric Distributor
O'Leary	Chris	Public Service Electric and Gas Inc.	Transmission Owner
Ondayko	Brock	Appalachain Power Company	Transmission Owner
Pakela	Gregory	DTE Energy Trading, Inc.	Other Supplier
Marji	Philips	Direct Energy Business, LLC.	Other Supplier
Poulos	Greg	CAPS	Not Applicable
Robinson	Becky	Vistra Energy	Other Supplier
Sasser	Jonathan	Customized Energy Solutions, Ltd.	Not Applicable
Sells	Scott	East Kentucky Power Cooperative Inc.	Transmission Owner
Singer	Chad	Trane Grid Services LLC.	Other Supplier
Schloendorn	Ron	PECO Energy	Transmission Owner
Skumanich	William	PPL Electric Utilities Corp. dba PPL Utilities	Transmission Owner
Squibb	William	Ohio Valley Electric Corporation	Transmission Owner
Stack	James	Duquesne Light Company	Transmission Owner
Sturgeon	John	Duke Energy Carolinas LLC.	Other Supplier
Sullivan	James	Neptune Regional Transmission System, LLC.	Transmission Owner
Suh	Jung	Calpine Energy Services LP.	Generation Owner
Tangirala	Subha	ABB	Not Applicable
Vayda	Brian	Borough of Park Ridge	Electric Distributor
Whitehead	Jeffrey	GT Power Group	Not Applicable
Wisersky	Megan	Madison Gas and Electric Company	Other Supplier
York	Amy	McNees Wallace & Nurick LLC	Not Applicable

## PJM Attendees

Last Name	First Name	Company	Sector
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Anders	David	PJM Interconnection, LLC	Not Applicable
Baker	Scott	PJM Interconnection, LLC	Not Applicable
Beban	Madalyn	PJM Interconnection, LLC	Not Applicable
Bennett	Daniel	PJM Interconnection, LLC	Not Applicable
Bielak	Donnie	PJM Interconnection, LLC	Not Applicable
Boyle	Glen	PJM Interconnection, LLC	Not Applicable
Bruno	Patrick	PJM Interconnection, LLC	Not Applicable
Brown	Rich	PJM Interconnection, LLC	Not Applicable
Caven	Augustine	PJM Interconnection, LLC	Not Applicable
Chen	Hong	PJM Interconnection, LLC	Not Applicable
Ciabattoni	Joseph	PJM Interconnection, LLC	Not Applicable
Croop	Danielle	PJM Interconnection, LLC	Not Applicable
Davis	Elizabeth	PJM Interconnection, LLC	Not Applicable
Downs	Jere	PJM Interconnection, LLC	Not Applicable
Esterly	Theresa	PJM Interconnection, LLC	Not Applicable
Fabiano	Janell	PJM Interconnection, LLC	Not Applicable
Falin	Tom	PJM Interconnection, LLC	Not Applicable
Frogg	Darrell	PJM Interconnection, LLC	Not Applicable
Hauske	Tom	PJM Interconnection, LLC	Not Applicable
Genuario	Gabrielle	PJM Interconnection, LLC	Not Applicable
Greening	Michele	PJM Interconnection, LLC	Not Applicable
Hendrzak	Chantal	PJM Interconnection, LLC	Not Applicable
Herel	Suzanne	PJM Interconnection, LLC	Not Applicable
Hislop	David	PJM Interconnection, LLC	Not Applicable

Hoang	Liem	PJM Interconnection, LLC	Not Applicable
Hoey	Ed	PJM Interconnection, LLC	Not Applicable
Hsia	Eric	PJM Interconnection, LLC	Not Applicable
Jani	Alpa	PJM Interconnection, LLC	Not Applicable
Kelly	Ross	PJM Interconnection, LLC	Not Applicable
Kimmel	David	PJM Interconnection, LLC	Not Applicable
Langbein	Pete	PJM Interconnection, LLC	Not Applicable
Lee	Ray	PJM Interconnection, LLC	Not Applicable
Levitt	Andrew	PJM Interconnection, LLC	Not Applicable
Lu	Chen	PJM Interconnection, LLC	Not Applicable
McGlynn	Paul	PJM Interconnection, LLC	Not Applicable
Meadows	Nicholas	PJM Interconnection, LLC	Not Applicable
Mooney	Molly	PJM Interconnection, LLC	Not Applicable
Mulhern	Joseph	PJM Interconnection, LLC	Not Applicable
Phillips	Darlene	PJM Interconnection, LLC	Not Applicable
Pilong	Chris	PJM Interconnection, LLC	Not Applicable
Reynolds	John	PJM Interconnection, LLC	Not Applicable
Schmitt	Jeff	PJM Interconnection, LLC	Not Applicable
Schuyler	Ken	PJM Interconnection, LLC	Not Applicable
Schweizer	David	PJM Interconnection, LLC	Not Applicable
Stefanowicz	Vincent	PJM Interconnection, LLC	Not Applicable
Stone	Andy	PJM Interconnection, LLC	Not Applicable
Tacka	Natalie	PJM Interconnection, LLC	Not Applicable
Tam	Simon	PJM Interconnection, LLC	Not Applicable

Thomas	Henry	PJM Interconnection, LLC	Not Applicable
Velasco	Cheryl Mae	PJM Interconnection, LLC	Not Applicable
Zhang	Mike	PJM Interconnection, LLC	Not Applicable

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