

Market Implementation Committee
PJM Conference & Training Center, Audubon, PA
July 10, 2019
9:00 a.m. – 4:00 p.m. EPT

Administration

Ms. Bhavana Keshavamurthy and Ms. Chantal Hendrzak provided announcements; reviewed the Antitrust, Code of Conduct, Public Meetings/Media Participation and the WebEx Participant Identification Requirement.

Ms. Susan Riley, PJM, addressed the stakeholders and stated that she is looking forward to working closely with PJM stakeholders and staff in her role as interim CEO.

Ms. Hendrzak announced that she will transition her role as Facilitator of the Market Implementation Committee (MIC) to Ms. Lisa Morelli effective August 2019.

The Committee approved the draft minutes from the June 12, 2019 Market Implementation Committee meeting with **0 objections and 0 abstentions**.

- A. Mr. Stan Williams, PJM, provided an update on the recent FERC Order EL08-14 related to Marginal Line Loss. Additional updates including detailed plans on actual settlement action will be shared by PJM at future stakeholder meetings.
- B. Mr. Pete Langbein, PJM, provided an update on the recent FERC order ER19-1012-000 and ER19-1012-001 related to Price Responsive Demand.

Endorsements/Approvals

2. **Periodic Review of Manual 18**

Ms. Terri Esterly, PJM, presented proposed revisions to Manual 18: PJM Capacity Market as part of the periodic review. The revisions address administrative updates, deletion of outdated provisions and clarifications of existing provisions. The revisions also include conforming revisions due to FERC Orders. **The committee endorsed the manual revisions with 0 objections and 0 abstentions.**

3. **Periodic Review of Manual 28**

Mr. Ray Fernandez, PJM, presented revisions to Manual 28: Operating Agreement Accounting as part of the periodic review. The revisions include the process to handle the case of unavailable state estimator loss data in calculating transmission loss de-rating factors and an update to credit calculations for Resources providing Reactive Services. **The committee endorsed the manual revisions with 0 objections and 0 abstentions.**

4. **Manual 11, 15, and 18 revisions for Electric Storage Participation – FERC Order 841**

- A. Ms. Laura Walter, PJM, provided a brief background on Order 841, and reviewed changes to Manual 11 – Energy & Ancillary Services Market Operations & Manual 18 – PJM Capacity Market, related to the FERC Order 841 compliance filing.

- B. Ms. Danielle Croop, PJM, provided a review of Manual 15 – Cost Development Guidelines changes related to cost offers for batteries and flywheels.

The committee endorsed the manual revisions with 0 objections and 0 abstentions.

[Issue Tracking: Electric Storage Participation FERC Order 841](#)

First Readings

5. **Manual 27 and 28 revisions for Electric Storage Participation – FERC Order 841**

Mr. Andrew Levitt, PJM, provided a review of Manual 27: Open Access Transmission Tariff Accounting and Manual 28: Operating Agreement Accounting revisions associated with settlements changes related to FERC Order 841 compliance filing.

[Issue Tracking: Electric Storage Participation FERC Order 841](#)

6. **Modeling Units with Stability Limitations – Problem Statement & Issue Charge**

Mr. Robert O’Connell, Panda Power Funds, provided a first read of a problem statement and issue charge related to modeling units with stability limitations.

7. **Opportunity Cost Calculator**

Mr. Glen Boyle, PJM, provided a summary of the work done by the MIC Special Sessions: Opportunity Cost Calculator. Mr. Robert O’Connell, Panda Power Funds, provided a summary of the three proposals.

[Issue Tracking: Opportunity Cost Calculator](#)

8. **Fuel Cost Policy**

Ms. Bhavana Keshavamurthy, PJM, provided a summary of the work done by the MIC Special Sessions: Fuel Cost Policy.

A. Mr. Joel Luna, Monitoring Analytics, presented the IMM proposal.

B. Mr. Glen Boyle, PJM, presented the PJM proposal.

C. Ms. Adrien Ford, Old Dominion Electric Cooperative and Mr. Nathan Rushing, CPV Power Holdings, presented the Joint Stakeholder proposal.

[Issue Tracking: Fuel Cost Policy](#)

9. **Gas Contingency Cost Recovery**

Mr. Thomas DeVita, PJM, provided an overview of draft Tariff revisions associated with gas contingencies cost recovery. Stakeholders requested additional time to review the tariff revisions and also requested an additional meeting to continue discussions on this issue. An additional MIC Special Session has been scheduled for July 19, 2019 to continue discussion on this topic. This agenda item will be presented as a first read at the August MIC. Members are encouraged to review the posted Tariff revisions and provide comments to: Thomas.DeVita@pjm.com.

10. **Manual 11 Updates**

Mr. Michael Olaleye, PJM, provided an overview of clarifications being added to Manual 11: Energy & Ancillary Services associated with regulation historical performance scores and reserve requirements.

Working Issues

11. Fuel Requirements for Black Start Resources

Ms. Janell Fabiano, PJM, provided a status update on the Fuel Requirements for Black Start Resources issue.

[Issue Tracking: Fuel Requirements for Black Start Resources](#)

12. Fast Start Pricing Compliance Filing Details

A. Mr. Vijay Shah, PJM, reviewed the offer verification impacts of the fast start pricing implementation.

B. Mr. Ray Fernandez, PJM, reviewed the settlement impacts of fast start pricing implementation.

13. Five Minute Dispatch and Pricing

A. Mr. Siva Josyula, Monitoring Analytics, presented education on RT SCED execution and solution timeline, statistics on some of the inputs used and approval rate of RT SCED cases.

B. Mr. Aaron Baizman, PJM, presented education on Real Time Security Constrained Economic Dispatch (RT SCED) engine.

Note: Work on the Interregional Incremental Auction Revenue Rights issue will resume at the August Market Implementation Committee.

[Issue Tracking: Interregional Incremental Auction Revenue Rights](#)

Informational Section

Credit Subcommittee (CS)

Meeting materials will be posted to the [CS website](#).

Demand Response Subcommittee (DRS)

Meeting materials will be posted to the [DRS web site](#).

Intermittent Resources Subcommittee (IRS)

Meeting materials will be posted to the [IRS web site](#).

Interregional Coordination Update

Materials are posted as informational only.

Market Settlements Subcommittee (MSS)

Meeting materials are posted to the [MSS web site](#).

Report on Market Operations

The Report on Market Operations will be reviewed during the [MC Webinar](#).

Future Meeting Dates

| | | |
|--------------------|-----------|---|
| August 7, 2019 | 9:00 a.m. | PJM Conference & Training Center/ WebEx |
| September 11, 2019 | 9:00 a.m. | PJM Conference & Training Center/ WebEx |
| October 16, 2019 | 9:00 a.m. | PJM Conference & Training Center/ WebEx |



Draft Minutes

November 13, 2019
December 11, 2019

9:00 a.m.
9:00 a.m.

PJM Conference & Training Center/ WebEx
PJM Conference & Training Center/ WebEx

Author: Bhavana Keshavamurthy

In-Person Meeting Attendees

| Names | Company Name | Sector |
|------------------------------------|-------------------------------------|----------------------|
| Hendrzak, Chantal (Chair) | PJM Interconnection, LLC | Not Applicable |
| Keshavamurthy, Bhavana (Secretary) | PJM Interconnection, LLC | Not Applicable |
| Anders, David | PJM Interconnection, LLC | Not Applicable |
| Antonelli, Diane | PJM Interconnection, LLC | Not Applicable |
| Baizman, Aaron | PJM Interconnection, LLC | Not Applicable |
| Benchek, Jim | American Transmission Systems, Inc. | Transmission Owner |
| Bleiweis, Bruce | DC Energy LLC | Other Supplier |
| Borgatti, Michael | Gabel and Associates | Not Applicable |
| Boyle, Glen | PJM Interconnection, LLC | Not Applicable |
| Brodbeck, John | EDP Renewables North America, LLC | Other Supplier |
| Bruno, Patrick | PJM Interconnection, LLC | Not Applicable |
| Canchi, Devendra | Monitoring Analytics, LLC | Not Applicable |
| Canter, David | Appalachian Power Company | Transmission Owner |
| Carroll, Rebecca | PJM Interconnection, LLC | Not Applicable |
| Ciabattoni, Joe | PJM Interconnection, LLC | Not Applicable |
| Croop, Danielle | PJM Interconnection, LLC | Not Applicable |
| D'Alessandris, Lou | FirstEnergy Solutions Corp. | Transmission Owner |
| D'Antonio, Phil | PJM Interconnection, LLC | Not Applicable |
| DeVita, Thomas | PJM Interconnection, LLC | Not Applicable |
| Fabiano, Janell | PJM Interconnection, LLC | Not Applicable |
| Fernandez, Ray | PJM Interconnection, LLC | Not Applicable |
| Filomena, Guy | Customized Energy Solutions, Ltd. | Not Applicable |
| Fitch, Neal | NRG Power Marketing LLC | Generation Owner |
| Fitzpatrick, Brian | PJM Interconnection, LLC | Not Applicable |
| Foldare, Kenneth | Tangible | Not Applicable |
| Ford, Adrien | Old Dominion Electric Cooperative | Electric Distributor |
| Fuess, Christian | PBF Power Marketing | Generation Owner |
| Genuario, Gabrielle | PJM Interconnection, LLC | Not Applicable |
| George, Brian | FERC | Not Applicable |
| Greening, Michele | PJM Interconnection, LLC | Transmission Owner |
| Greiner, Gary | PSEG Energy Resources and Trade LLC | Other Supplier |
| Hauske, Thomas | PJM Interconnection, LLC | Not Applicable |
| Hoatson, Tom | LS Power | Not Applicable |
| Holter, Natasha | PJM Interconnection, LLC | Not Applicable |
| Hudis, Gabriella | Jersey Green Energy LLC | Other Supplier |
| Johnson, Carl | Customized Energy Solutions, Ltd.* | Not Applicable |
| Josyula, Siva | Monitoring Analytics, LLC | Not Applicable |
| Kauffman, Brian | EnerNOC, Inc. | Other Supplier |
| Keech, Adam | PJM Interconnection, LLC | Not Applicable |
| Kenney, Susan | PJM Interconnection, LLC | Not Applicable |
| Kogut, George | New York Power Authority | Other Supplier |
| Levitt, Andrew | PJM Interconnection, LLC | Not Applicable |
| Lieberman, Steve | American Municipal Power, Inc. | Electric Distributor |
| Lowe, Connie | Dominion Virginia Power | Not Applicable |
| Lu, Chenchao | PJM Interconnection, LLC | Not Applicable |
| Luna, Joel | Monitoring Analytics, LLC | Not Applicable |
| Mabry, David | McNees Wallace & Nurick LLC | Not Applicable |

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|--------------------|---------------------------------------|--------------------|
| Marcino, Angelo | PJM Interconnection, LLC | Not Applicable |
| Marzewski, Skyler | Monitoring Analytics, LLC | Not Applicable |
| Midgley, Sharon | Exelon Business Services Company, LLC | Transmission Owner |
| Morelli, Lisa | PJM Interconnection, LLC | Not Applicable |
| Nix, Emma | PJM Interconnection, LLC | Not Applicable |
| O'Connell, Robert | PPGI Fund A/B Development, LLC | Generation Owner |
| Olaleye, Michael | PJM Interconnection, LLC | Not Applicable |
| Philips, Marjorie | Direct Energy Business, LLC | Other Supplier |
| Scarpignato, David | Calpine Energy Services, L.P | Generation Owner |
| Schweizer, David | PJM Interconnection, LLC | Not Applicable |
| Shah, Vijay | PJM Interconnection, LLC | Not Applicable |
| Smith, Christen | RTO Insider | Not Applicable |
| Sturgeon, John | Duke Energy Carolinas, LLC | Other Supplier |
| Sweeney, Rory | GT Power Group | Not Applicable |
| Trayers, Barry | Citigroup Energy, Inc. | Other Supplier |
| Weathers, Brian | PJM Interconnection, LLC | Not Applicable |
| Whitehead, Jeffrey | GT Power Group | Not Applicable |
| Williams, Stanley | PJM Interconnection, LLC | Not Applicable |

Webex Meeting Attendees

| Names | Company Name | Sector |
|----------------------|---|----------------------|
| Ainspan, Malcolm | Energy Curtailment Specialists, Inc. | Other Supplier |
| Bickerstaff, Dean | Hartree Partners, LLC | Other Supplier |
| Budney, Dave | PJM Interconnection, LLC | Not Applicable |
| Campbell, Bruce | EnergyConnect, Inc. | Other Supplier |
| Carmean, Greg | OPSI | Not Applicable |
| Chandler, Kent | Public Utilities Commission of Kentucky | Not Applicable |
| Chintapalli, Raj | BP Energy Company | Power Marketer |
| Cocco, Michael | Old Dominion Electric Cooperative | Electric Distributor |
| Coffey, Ceceilia | FERC | Not Applicable |
| Crystle, Gil | UGI Development Company | Transmission Owner |
| Dasher, Brett | Energy Authority, Inc. (The) | Other Supplier |
| Daily, Mike | Northern Virginia Electric Cooperative | Electric Distributor |
| Davis, Elizabeth | PJM Interconnection, LLC | Not Applicable |
| DePillo, Ray | PSEG Energy Resources and Trade LLC | Transmission Owner |
| Dillon, Matt | UGI Development Company | Generation Owner |
| Dixon, Chad | Customized Energy Solutions. Ltd | Not Applicable |
| Duensing, Allison | Saracen Energy | Other Supplier |
| Durinsky, Mike | FirstEnergy Solutions Corp. | Transmission Owner |
| Esterly, Theresa | PJM Interconnection, LLC | Not Applicable |
| Feller, John | PPL Electric Utilities Corp. dba PPL Utilities | Transmission Owner |
| Gagen, Rod | Dominion Energy Generation Marketing, Inc. | Generation Owner |
| Gates, Terry | Appalachian Power Company | Transmission Owner |
| Harmon, Mike | Union Electric Company d/b/a Ameren Missouri | Other Supplier |
| Hastings, David | Market Interconnection LLC | Not Applicable |
| Heisey, Bradley | Wolf Hills Energy, LLC | Generation Owner |
| Herel, Suzanne | PJM Interconnection, LLC | Not Applicable |
| Hsia, Eric | PJM Interconnection, LLC | Not Applicable |
| Janicki, Diane | Boston Energy Trading & Marketing, LLC | Generation Owner |
| Keenan, Mathew | Elwood Energy | Generation Owner |
| Kozhuharov, Dimitar | Delaware Municipal Electric Corporation, Inc. | Electric Distributor |
| LaRocque, Matthew | PJM Interconnection, LLC | Not Applicable |
| Lejcar, Jamie | Allegheny Electric Cooperative, Inc. | Electric Distributor |
| Liang-Nicol, Cecilia | Monongahela Power Company d/b/a Allegheny Power | Transmission Owner |

Libbos, Robin
Long, Sharon
Lowe, Connie
Mae Velasco, Cheryl
Matsuzak, Alex
Mooney, Jeff
Norton, Chris
O'Boyle, Brian
Ondayko, Brock
O'Neill, Jack
Pakela, Gregory
Pelletier, Eveline
Peoples, John
Perera, Asanga
Poulos, Greg
Price, Ruth
Rajan , Abhijit
Robinson, Becky
Robson, Matt
Rumsey, Amanda
Rushing, Nathan
Sasser, Jonathan
Schmatz, Peter
Schmitt, Jeff
Schuyler, Ken
Sinclair, Brian
Squibb, Bill
Tangirala, Subha
Toomey, Megan
Vayda, Brian
Ward, Michael
Warshel, Kim

FirstEnergy Solutions Corp.
FERC
Virginia Electric & Power Company
PJM Interconnection, LLC
UGI Energy Services
FirstEnergy Solutions Corp.
American Municipal Power, Inc.
Consolidated Edison Solutions, Inc.
Appalachain Power Company
PJM Interconnection, LLC
DTE Energy Trading, Inc.
Hydro-Quebec
Duquesne Light Company
PJM Interconnection, LLC
CAPS
Division of the Public Advocate of the State of Delaware
Dominion Resources
Vistra Energy
SESCO Enterprises LLC
PPL Electric Utilities Corp. dba PPL Utilities
CPV Power Holdings, LP
Customized Energy Solutions, Ltd.*
PSEG Energy Resources and Trade LLC
PJM Interconnection, LLC
PJM Interconnection, LLC
Boston Energy Trading & Marketing, LLC
Ohio Valley Electric Corporation
ABB
Talen Energy Marketing, LLC
Borough of Park Ridge, NJ
PJM Interconnection, LLC
PJM Interconnection, LLC

Transmission Owner
Not Applicable
Transmission Owner
Not Applicable
Other Supplier
Transmission Owner
Electric Distributor
Transmission Owner
Transmission Owner
Not Applicable
Other Supplier
Not Applicable
Transmission Owner
Not Applicable
Not Applicable
End User Customer
Not Applicable
Not Applicable
Other Supplier
Transmission Owner
Generation Owner
Not Applicable
Transmission Owner
Not Applicable
Not Applicable
Other Supplier
Generation Owner
Not Applicable
Generation Owner
Electric Distributor
Not Applicable
Not Applicable