

Market Implementation Committee PJM Conference & Training Center, Audubon, PA September 13, 2017 9:00 a.m. – 3:30 p.m. EPT

Administration

- 1. Ms. Christina Stotesbury, PJM, provided announcements and reviewed the Antitrust, Code of Conduct, and Public Meetings/Media Participation Guidelines.
- 2. The committee approved the draft minutes from the August 9, 2017 Market Implementation Committee meeting by acclamation with 0 objections and 0 abstentions.
- 3. A. Ms. Christina Stotesbury, PJM, reviewed the active MIC issues on Issue Tracking.
 - B. Mr. Thomas Zadlo, PJM, provided a brief update on the release of Data Miner 2.
 - C. Mr. Jeff Schmitt, PJM, notified stakeholders the deadline to submit Fuel Cost Policies for Intraday Offers was September 15, 2017. All currently approved Fuel Cost Policies expire on November 1, 2017, and as part of the Annual Review Process, require updated policies to specify the resource's Intraday Offers election, and must be approved no later than November 1, 2017.

Market Sellers that plan to participate in the Offer Verification Exercise are required to have their unit cost data entered in COA by October 1, for the exercise scheduled on October 5. Registration for the Offer Verification Exercise is posted on the <u>Tech Change Forum</u>. All Market Sellers are required to have the resource cost data in COA by November 1 to be eligible for make-whole greater than \$1,000/MWh.

Endorsements/Approvals

4. Manual 11 Revisions for Intraday Offers

- A. Ms. Lisa Morelli, PJM, reviewed conforming revisions to Manual 11: Energy & Ancillary Services, associated with the implementation of Intraday Offers. The committee endorsed the manual revisions with 99 in favor (72%), 38 opposed (28%), and 21 abstentions.
- B. Ms. Lisa Morelli, PJM, presented a first read of Operating Agreement and Manual 11 revisions to amend the offer capping logic resulting from the PJM/IMM discussions at the August MIC meeting. The committee will be asked to endorse the manual revisions at the October MIC meeting.

5. Annual Revenue Requirements for new Black Start Units – Phase 2

Mr. Tom Hauske, PJM, reviewed the PJM & IMM proposal to address Minimum Tank Suction Levels (MTSL) as part of Phase 2 for the Annual Revenue Requirements for new Black Start units. The Committee did not endorse the proposed solution with 71 opposed (52%), 66 in favor (48%), and 26 abstentions.



6. Manual 6 Revisions for FTR Forfeiture revisions

Mr. Brian Chmielewski, PJM, reviewed Manual 6: Financial Transmission Rights revisions associated with FTR Forfeitures. The committee endorsed the Manual 6 revisions with 114 in favor (82%), 25 opposed (18%) and 35 abstentions.

7. Manual 28 Revisions for Intraday Offers

Mr. Ray Fernandez, PJM, reviewed Manual 28: Operating Agreement Accounting revisions associated with the implementation of Intraday Offers. The committee endorsed the Manual 28 revisions by acclamation with 0 objections and 0 abstentions.

First Readings

8. Revisions to Manual 11: Energy and Ancillary Services Market

- A. Mr. Rami Dirani, PJM, reviewed updated revisions to Manual 11 associated with the offer verification process for the implementation of Order 831: Energy Offer Verification. The committee will be asked to endorse the manual revisions at the October MIC meeting.
- B. Dr. Catherine Tyler, Monitoring Analytics, presented concerns related to the offer verification process.

9. Proposed Credit Requirements

Mr. Hal Loomis, PJM, presented a first read of Tariff revisions for a proposed change in credit requirements for regulation resources. The Credit Subcommittee (CS) unanimously endorsed the proposal at the August 11 CS meeting. The committee will be asked to endorse the Tariff revisions at the October meeting.

10. Winter DR Load Calculation – Problem Statement and Issue Charge

Mr. Chuck Dugan, EKPC, presented a first read of a problem statement and issue charge related to the DR CP Winter Load calculation. The committee will be asked to endorse the problem statement and issue charge at the October meeting.

11. Long Term FTR Market – Problem Statement and Issue Charge

Dr. Catherine Tyler, Monitoring Analytics, presented a first read of a problem statement and issue charge related to the Long Term FTR Market. The committee will be asked to endorse the problem statement and issue charge at the October meeting.

Working Issues

12. Market Path/Interface Pricing Point Alignment

Mr. John Dadourian, Monitoring Analytics, reviewed the Market Path/Interface Pricing Point Alignment issue approved at the August 9 MIC, provided education and reviewed a proposed solution for expedited resolution.

Additional Updates

13. Offer Cap Balancing Ratio

Mr. Adam Keech, PJM, reviewed a proposal to address an offer cap balancing ratio issue identified for the next BRA. More information will be provided at the September MRC.



14. SPS Retirements

- A. Mr. Evan Ferrell, FirstEnergy, provided an update on the Yards Creek SPS retirement.
- B. Mr. Alan Engelmann, ComEd, provided an update on the Aurora Energy Center SPS retirement.

15. Energy Efficiency in Kentucky (2:50-3:00)

Mr. Chris O'Hara, PJM, provided an update regarding Energy Efficiency in Kentucky.

16. 2017/2018 Winter Transmission Outages

Mr. Lagy Mathew, PJM, reviewed significant transmission outages for the 2017/2018 winter season.

17. Interregional Coordination Activity

Mr. Phil D'Antonio, PJM, provided an update on Interregional Coordination efforts.

Informational Section

Credit Subcommittee (CS)

Meeting materials will be posted to the <u>CS website</u>.

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.

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.

October 11, 2017	9:00 a.m.	PJM Interconnection – Conference & Training Center
November 8, 2017	9:00 a.m.	PJM Interconnection – Conference & Training Center
December 13, 2017	9:00 a.m.	PJM Interconnection – Conference & Training Center
January 10, 2018	9:00 a.m.	PJM Interconnection – Conference & Training Center
February 7, 2018	9:00 a.m.	PJM Interconnection – Conference & Training Center
March 7, 2018	9:00 a.m.	PJM Interconnection – Conference & Training Center
April 4, 2018	9:00 a.m.	PJM Interconnection – Conference & Training Center
May 2, 2018	9:00 a.m.	PJM Interconnection – Conference & Training Center
June 6, 2018	9:00 a.m.	PJM Interconnection – Conference & Training Center

Meeting Attendees

Hendrzak, Chantal (Chair) Stotesbury, Christina (Secretary) Anders, David Auerbach, Daniel PJM Interconnection, LLC PJM Interconnection, LLC PJM Interconnection, LLC Direct Energy Business Not Applicable Not Applicable Not Applicable Other Supplier



Benner, Scott Bresler, Stu Chmielewski, Brian Ciabattoni, Joe Crystle, Gil Curley, Maureen Dillon, Matthew Dirani, Rami Dadourian, John Drauschak, Lisa Driscoll, Mary Ellen Dugan, Chuck Fabiano, Janell Fernandez, Ray Fitzpatrick, Brian Fitch, Neal Foladare, Kenneth Ford, Adrien Foster, Denise Fuess, James Giacomoni, Anthony Greiner, Gary Guerry, Katie Hauske, Thomas Hoatson, Tom Holland, Risa Holter, Natasha Horstmann, John Hsia, Eric Jardot, Gina Johnson, Carl Josyula, Siva Keech, Adam Kogut, George Lieberman, Steven Loomis, Harold Mabry, David Mathew, Lagy Midgley, Sharon Morelli, Lisa Perera, Asanga Pilong, Melissa Poulos, Greg Romero-Luna, Joel

PJM Interconnection, LLC PJM Interconnection, LLC PJM Interconnection, LLC PJM Interconnection, LLC **UGI** Development Company PJM Interconnection, LLC UGI Development Company PJM Interconnection, LLC Monitoring Analytics, LLC PJM Interconnection, LLC PJM Interconnection, LLC East Kentucky Power Cooperative, Inc. PJM Interconnection, LLC PJM Interconnection, LLC PJM Interconnection, LLC NRG Power Marketing LLC Tangibl Old Dominion Electric Cooperative PJM Interconnection, LLC **PBF** Power Marketing LLC PJM Interconnection, LLC PSEG Energy Resources and Trade LLC EnerNOC, Inc. PJM Interconnection, LLC Riverside Generating, LLC PJM Interconnection, LLC PJM Interconnection, LLC Dayton Power & Light Company (The) PJM Interconnection, LLC Essential Power Rock Springs, LLC Customized Energy Solutions, Ltd.* Monitoring Analytics, LLC PJM Interconnection, LLC New York Power Authority American Municipal Power, Inc. PJM Interconnection, LLC McNees Wallace & Nurick LLC PJM Interconnection, LLC Exelon Business Services Company, LLC PJM Interconnection, LLC PJM Interconnection, LLC PJM Interconnection, LLC CAPS Monitoring Analytics, LLC

Not Applicable Not Applicable Not Applicable Not Applicable Transmission Owner Not Applicable Generation Owner Not Applicable Not Applicable Not Applicable Not Applicable Transmission Owner Not Applicable Not Applicable Not Applicable Generation Owner Not Applicable Electric Distributor Not Applicable Generation Owner Not Applicable Other Supplier Other Supplier Not Applicable Other Supplier Not Applicable Not Applicable Transmission Owner Not Applicable Transmission Owner Not Applicable Not Applicable Not Applicable Other Supplier **Electric Distributor** Not Applicable Not Applicable Not Applicable Transmission Owner Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable



Stewart, Travis Suh, Jung Sweeney, Rory Tribulski, Jennifer Tyler, Catherine Wadsworth, Joe Whitehead, Jeffrey Williams, Stanley Wilson, Bram Zadlo, Thomas Gable and Associates Noble Americas Energy Solutions LLC RTO Insider PJM Interconnection, LLC Monitoring Analytics Vitol Inc. GT Power Group PJM Interconnection, LLC Diamond State Generation Partners, LLC PJM Interconnection, LLC

Energy Curtailment Specialists, Inc.

Not Applicable Other Supplier Not Applicable Not Applicable Other Supplier Not Applicable Not Applicable Generation Owner Not Applicable

In Attendance via WebEx / Teleconference

Ainspan, Malcolm Atkins, Blain Aung, Thinzar Barker, Jason Bazar, Kevin Bearden, Joel Benchek, Jim Bennett, Stephen Bolan, Martin Bonanni, John Bowring, Joe Britt, Debbie Brodbeck, John Brown, Rich Bryson, Mike Burlew, Jim Callaghan, Chris Campbell, Bruce Carmean, Gregory Carroll, Rebecca Cawley, Troy Celestine, Kizi Chen, Jennifer Chocarro Aguirrebengoa, Iker Cocco, Michael Cockrell, Justin Cox. Edward P. Cox, Phil Coyne, Suzanne Croop, Danielle Cummings, Bridgid Currier, Jeff

Duke Energy Business Services, LLC PJM Interconnection, LLC Exelon Business Services Company, LLC PJM Interconnection, LLC Cargill Power Markets LLC FirstEnergy Solutions Corp. PJM Interconnection, LLC FirstEnergy Solutions Corp. NRG Power Marketing LLC Monitoring Analytics, LLC North Carolina Electric Membership Corporation EDP Renewables North America, LLC PJM Interconnection, LLC PJM Interconnection, LLC PJM Interconnection, LLC PJM Interconnection, LLC EnergyConnect, Inc. OPSI PJM Interconnection, LLC PJM Interconnection, LLC Appalachian Power Company Natural Resources Defense Council E.ON Climate & Renewables North America, Inc. **Old Dominion Electric Cooperative** Energy Authority, Inc. (The) Appalachian Power Company Appalachian Power Company PJM Interconnection, LLC PJM Interconnection, LLC PJM Interconnection, LLC **Dominion Virginia Power**

Other Supplier Transmission Owner Not Applicable Transmission Owner Not Applicable Other Supplier **Transmission Owner** Not Applicable Transmission Owner **Generation Owner** Not Applicable **Electric Distributor** Other Supplier Not Applicable Not Applicable Not Applicable Not Applicable Other Supplier Not Applicable Not Applicable Not Applicable Transmission Owner Not Applicable Generation Owner **Electric Distributor** Not Applicable Transmission Owner Transmission Owner Not Applicable Not Applicable Not Applicable Not Applicable



Dantonio, Phil Dasher, Brett Daugherty, Suzanne Davis, James Del Viscio, Mike DeLosa, Joseph Dessender, Harry Dhuri, Bhushan DiNicola, Laura Domian, Christin Doolittle, Robin Drom, Richard Egan, Amanda Endress, Eric Engelmann, Alan Farber, John Feierabend, Rick Ferrell, Evan Filomena, Guy Fox, Angela Gahimer, Mike Garnett, Bryan Gebolys, Debbie Genuario, Gabby Gilani, Rehan Glazer, Craig Godson, Gloria Gorman, Kevin Greening, Michele Halay, Alina Hanser, Erik Harmon, Mike Hartman, Carla Hastings, David Hebert, Christopher Heinle, Frederick Helms, Joseph Hepplewhite, Peter Hohenshilt, Jennifer Holdbrook, Ruth Horger, Tim Horning, Lynn Horton, Dana Hudson, Wesley

PJM Interconnection, LLC Energy Authority, Inc. (The) PJM Interconnection, LLC Dominion Energy Marketing, Inc. PJM Interconnection, LLC **DE Public Service Commission** Customized Energy Solutions, Ltd. PJM Interconnection, LLC FirstEnergy Solutions Corp. Mitsubishi Electric Power Products Inc. Royal Bank of Canada **Eckert Seamans** PJM Interconnection, LLC PJM Interconnection, LLC Commonwealth Edison Company **DE Public Service Commission Dominion Virginia Power** FirstEnergy Solutions Corp. Customized Energy Solutions, Ltd. Wylan Energy, L.L.C. IN Office of Utility Consumer Counselor Duke Energy Ohio, Inc. Public Utilities Commission of Ohio (The) PJM Interconnection, LLC ConEdison Energy, Inc. PJM Interconnection, LLC Exelon/Pepeco Highlands Energy Group LLC (The) PPL Electric Utilities Corp. dba PPL Utilities Federal Energy Regulatory Commission (The) Michigan Public Service Commission Union Electric Company d/b/a Ameren Missouri Adapt2 Solutions, Inc. D Hast Co. Beacon Power, LLC Office of the People's Counsel Rainbow Energy Marketing Corporation DC Energy East, LLC Talen Energy Marketing, LLC Northern Virginia Electric Cooperative PJM Interconnection, LLC LMH Energy Appalachian Power Company **Dominion Virginia Power**

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



Hurwich, Mark Hyzinski, Tom Janicki, Diane Jha, Monica Johnston, Dave Kaczanowski, Marek Karnik, Rashmi Kauffman, Brian Kazerooni, Hamid Keeney, Jerry Kelly, Stephen Kilgallen, Kevin Kimmel, David Kingston, Amber Kinser, Cynthia Knies, Heather Kormos, Mike Kuo, Dave Labij, Christina Langbein, Pete LaRocque, Matthew Leasure, Jill Lee, Lori Murphy Lejcar, Jamie Leopold, Chris Liang-Nicol, Cecilia Linda, Clarke Logan, Sharon Lokhandwalla, Faizmin Loudenburg, Zack Lowe, Connie Ma. Alex Mariam, Yohannes Markiewicz, Cindy Martin, Valerie Marton, David Marzewski, Skyler Matheson, Doug McLaughlin, Jeffrey McLaverty, Megan Metzler, Jacob Miller, John Mok, Alan Norton, Chris

Elliott Bay Energy Trading, LLC GT Power Group Boston Energy Trading & Marketing, LLC PCI Indiana Utility Regulatory Commission Baltimore Gas and Electric Company Other NRG Curtailment Solutions Talen Energy Marketing, LLC Dynegy Marketing & Trade, LLC Brookfield Energy Marketing LP Avangrid Renewables LLC PJM Interconnection, LLC North Carolina Electric Membership Corporation Tennessee Department of Agriculture EDF Trading North America, LLC Exelon Generation Co., LLC DC Energy EcoGrove Wind, LLC PJM Interconnection, LLC PJM Interconnection, LLC **Keystone Projects** PJM Interconnection, LLC Allegheny Electric Cooperative Appalachian Power Company Monongahela Power Company d/b/a Allegheny Power **Powerex Corporation** The Federal Energy Regulatory Commission Dynegy Pennsylvania Renewable Resources, Associates **Dominion Virginia Power** Invenergy, LLC Office of the Peoples Counsel for the District of Columbia FirstEnergy Solutions Corp. The Federal Energy Regulatory Commission FirstEnergy Solutions Corp. Monitoring Analytics, LLC EnerNOC, Inc. PJM Interconnection, LLC PJM Interconnection, LLC Castleton Commodities Merchant Trading L.P. Commonwealth Edison Company Duke Energy Kentucky, Inc. American Municipal Power, Inc.

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



O'Connell, Robert Olaleye, Michael Ondayko, Brock Pacella, Chris Pakela, Greg Patel, Keyur Patten, Kevin Peoples, John Phillips, Amanda Phillips, Darlene Piovesan, Lori Powers, Sean Pratzon, David Price, Mark Price, Ruth Ann Prokop, Brenda Rajan, Abhijit Ramsey, James Rayhorn, Carolyn Richardson, Frank Robson, Matt Rohrbach, John Rothey, Kristin Ruck, Andrew Rushing, Nathan Saini, Ishwar Sasser, Jonathan Scarpignato, David Schmatz, Peter Schmitt, Jeffrey Schweizer, David Shah, Vijay Shanker, Roy Sillin, John Sitarchyk, Mike Skucas, Ruta Smaczniak, Kim Snyder, Sue Souder, Rich Steele, Bob Stern, Alexander Stone, Andy Swigonski, Frank Tam, Simon

PPGI Fund A/B Development, LLC PJM Interconnection, LLC Appalachain Power Company PJM Interconnection, LLC DTE Energy Trading, Inc. PJM Interconnection, LLC Appalachain Power Company Duquesne Light Company Wabash Valley Power Association, Inc. PJM Interconnection, LLC **Powerex Corporation** Linde Energy Services, Inc. **GT** Power Group DC Energy Mid-Atlantic, LLC Division of the Public Advocate of the State of Delaware ITC Mid-Atlantic Development LLC **Dominion Resources** Suffolk Fund LLC **Dominion Virginia Power** PPL Electric Utilities Corp. dba PPL Utilities SESCO Enterprises LLC Southern Maryland Electric Cooperative American Municipal Power, Inc. PSEG Energy Resources and Trade, LLC CPV Maryland, LLC Macquarie Energy LLC Customized Energy Solutions, Ltd.* Calpine Energy Services, L.P. PSEG Energy Resources and Trade, LLC PJM Interconnection, LLC PJM Interconnection, LLC PJM Interconnection, LLC H. Q. Energy Services (U.S.), Inc. The Federal Energy Regulatory Commission PJM Interconnection, LLC Pierce Atwood Earth Justice PJM Interconnection, LLC PJM Interconnection, LLC Acorn Energy Trading, LLC Public Service Electric & Gas Company PJM Interconnection, LLC Advanced Energy Economy PJM Interconnection, LLC

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



Tangirala, Subha Tatum, Edward Thomson, Heather Tibbetts, Maeve Tran, Stephanie Trayers, Barry Tsao, Stephanie Vavda, Brian Velasco, Cheryl Mae Villeneuve, Alexandre Walter, Laura Wang, Nick Ward, Michael Wei, Jane Wicks, Tonja Wilhite, Chad Wilkie, Brian Williams, Amber Wilmoth, Emily Wilson, James Wilson, Sam Wood, Gordon Wunderlich, David Xenopoulos, Damon Yang, Dan Yu, Joel Zhou, Yuan

ABB

American Municipal Power Mid-Atlantic Renewable Energy Pierce Atwood Adapt2 Solutions, Inc. Citigroup Energy, Inc. SPGlobal Borough of Park Ridge, NJ PJM Interconnection, LLC MAG Energy Solutions, Inc. PJM Interconnection, LLC CCI PJM Interconnection, LLC Monitoring Analytics, LLC **Duquesne Light Company** FirstEnergy Solutions Corp. Consolidated Edison Solutions, Inc. New York State Electric & Gas Corporation **Dominion Virginia Power** Wilson Energy Economics International Motor Press Association ETC Endure Energy L.L.C. Royal Bank of Canada Stone Mattheis Xenopoulos & Brew, PC Parma Energy LLC Rockland Electric Company CCI

Not Applicable **Electric Distributor** Not Applicable Not Applicable Not Applicable Other Supplier Not Applicable Electric Distributor Not Applicable Other Supplier Not Applicable Not Applicable Not Applicable Not Applicable **Transmission Owner** Transmission Owner **Transmission Owner** Other Supplier Not Applicable Not Applicable Not Applicable Other Supplier Other Supplier Not Applicable Other Supplier Transmission Owner Not Applicable

Author: Christina Stotesbury

Provide feedback on the progress of this group: <u>*Facilitator Feedback Form*</u> Visit <u>*learn.pim.com*</u>, an easy-to-understand resource about the power industry and PJM's role.