

Market Implementation Committee (MIC) WebEx Only July 14, 2021 9:00 a.m. – 3:30 p.m. EPT

## Administration

Nicholas DiSciullo reviewed the Antitrust, Code of Conduct, Public Meetings/Media Participation and the WebEx Participant Identification Requirements.

The Committee approved the draft minutes from the June 9, 2021 Market Implementation Committee meeting with **0 objections and 0 abstentions**.

Chen Lu provided an update on the forthcoming MOPR filing and invited stakeholders to provide feedback on the draft MOPR Tariff language.

#### Endorsements/Approvals

#### 2. Regulation Mileage Ratio

- a) Michael Olaleye reviewed the Problem Statement, Issue Charge, and the PJM solution addressing Regulation Mileage Ratio.
- b) Joe Bowring, IMM, reviewed the IMM's solution addressing Regulation Mileage Ratio.

The Issue Charge was amended during the meeting to specify that the issue will be worked through the "CBIR Lite" process, as defined in M34, Section 8.6.2, instead of the "Quick Fix" process. The Issue Charge was updated to start in August, 2021, and the Duration of Work Timeline was updated to 2 months.

A post-meeting version of the amended Issue Charge has been posted to the meeting materials. Discussion will continue on this issue during the next MIC meeting.

## The committee approved the amended Issue Charge with 204 (100%) in favor, 0 (0%) opposed, and 12 abstentions.

Issue Tracking: Undefined Regulation Mileage Ratio Calculation

#### 3. Manual 6 Revisions

Emmy Messina reviewed revisions to Manual 6: Financial Transmission Rights as part of the periodic review.

The committee endorsed the Manual 6 revisions by acclamation with 0 objections and 0 abstentions.

#### 4. Manual 28 Revisions

Rebecca Stadelmeyer reviewed revisions to Manual 28: Operating Agreement Accounting as part of the periodic review.

The committee endorsed the Manual 6 revisions by acclamation with 0 objections and 0 abstentions.



## **First Readings**

## 5. Manual 11 Revisions – 5-Minute Dispatch and Pricing

Aaron Baizman provided a first read of revisions to Manual 11: Energy & Ancillary Services Market Operations. The changes address Five Minute Long Term Changes and Transparency. The committee will be asked to endorse the revisions at its next meeting.

## 6. Manual 11, Manual 18, and Manual 28 Revisions – Fast Start Pricing

Vijay Shah and Rebecca Stadelmeyer provided a first read of revisions to Manual 11: Energy & Ancillary Services Market Operations, Manual 18: PJM Capacity Market, and Manual 28: Operating Agreement Accounting. The changes address the implementation of Fast Start Pricing. The committee will be asked to endorse the revisions at its next meeting.

## 7. Solar-Battery Hybrid Resources

- a) Scott Baker provided a summary of the Solar-Battery Hybrid Resources issue that has been worked through the DER and Inverter-based Resources Subcommittee (DIRS).
- b) Andrew Levitt provided a first read of Package A that was developed in the DIRS.
- c) Jim Davis, Dominion Energy, provided a first read of Package C that was developed in the DIRS.

Stakeholders discussed the difference between the two proposals regarding how a hybrid resource would provide Regulation to PJM.

The committee will be asked to endorse the proposals at its next meeting.

## 8. Energy Efficiency (EE) Addback

Joe Bowring, IMM, provided a first read of a Problem Statement and Issue Charge addressing the calculation of the EE Addback used in capacity market clearing.

Stakeholders suggested that this issue should be worked through the "CBIR Lite" process, as defined in M34, Section 8.6.2, instead of the "Quick Fix" process. Additional education will be provided on this issue and the committee will be asked to approve the Issue Charge during the next MIC meeting.

### Working Items

## 9. **RPM Capacity Transfer Rights**

- a) Lisa Morelli facilitated a discussion to gather solution options from the committee and develop packages.
- b) Jeff Bastian provided a hypothetical example of the proposed CTR allocation currently in the matrix vs. the status quo. Bastian also requested that stakeholders that have generation resources that satisfy the proposed eligibility requirements and for which the LSE seeks designation as a historic generation resource for purposes of the proposed CTR allocation method email PJM with a list of such resources in advance of the August MIC meeting. PJM will then post the MW quantity of qualified requests by zone with August meeting materials to assist participants in evaluating the impact of the Buckeye proposal.



A post-meeting version of the matrix has been posted to the meeting materials. Additional interests, design components, solution options, and packages can be provided in advance of the next meeting.

Issue Tracking: Capacity Transfer Rights in RPM

## 10. Regulation for Virtual Combined Cycles

- a) Tom Hauske provided education on virtual modeling of combined cycles and how it is handled in energy and ancillary service dispatch and settlements.
- b) Ron Cremeans, Vistra, provided education on operational/technical challenges resulting from unequal regulation assignments.
- c) Due to time constraints, education on the causes of virtual combined cycle units not clearing equally in the regulation market, how this issue differs from regulation awards for combined cycles that are modeled differently, and education on prior-used solutions was not presented during the July MIC meeting. It will be included on the August meeting agenda.

The committee will begin Issue Identification and creating Design Components as part of the Consensus Based Issue Resolution (CBIR) process for this issue during its next meeting. Issue Tracking: Regulation for Virtual Combined Cycles

#### 11. Behind the Meter Generation Business Rules on Status Changes

Terri Esterly provided an informational update on the Behind the Meter Generation Business Rules on Status Changes Issue and the proposed Manual 14D, Manual 14G, and OATT revisions coming out of the MIC Special Session meetings.

Issue Tracking: Behind the Meter Generation Business Rules on Status Changes

### Additional Items

## 12. Parameter Limited Schedules Show Cause Order

Chen Lu and Keyur Patel provided an overview of FERC's June 17 order to show cause on Parameter Limited Schedules and Real Time Value. Additionally, there was an initial discussion with stakeholders on next steps and possible options to address Real Time Values and Parameter Limited Schedules through the Order to Show Cause.

#### **Informational Section**

#### Pricing Interface Deletions

Materials are posted as informational only.

#### Q2 2021 Net Energy Injections Quarterly Report

Materials are posted as informational only.

## ARR FTR Market Task Force (AFMTF)

Meeting materials are posted to the AFMTF website.

#### Cost Development Subcommittee (CDS)

Meeting materials are posted to the <u>CDS website</u>.



## Demand Response Subcommittee (DRS)

Meeting materials are posted to the DRS website.

## DER & Inverter-based Resources Subcommittee (DIRS)

Meeting materials are posted to the **DIRS website**.

## Market Settlements Subcommittee (MSS)

Meeting materials are posted to the MSS website.

### **Report on Market Operations**

The Report on Market Operations will be reviewed during the MC Webinar.

Future Meeting Dates and Materials		Materials Due et a Secretary	Materials Published	
Date	Time	Location	5 p.m.	4 p.m.
August 11	9 a.m.	WebEx	July 30	August 4
September 9	9 a.m.	WebEx	August 30	September 2
October 6	9 a.m.	WebEx	September 24	September 29
November 3	9 a.m.	WebEx	October 22	October 27
December 1	9 a.m.	WebEx	November 19	November 24

Author: Nicholas DiSciullo

### WebEx Meeting Attendees

Names Morelli, Lisa (Chair) DiSciullo, Nicholas (Secretary) Afelumo, Foluso Aguilar, Fabiano Silveira Anders, David Baizman, Aaron Baker, Scott Barker, Jason Bastian, Jeff Benchek, Jim Bloczynski, Nigeria Bloom, David Borgatti, Michael Bowring, Joseph Boyle, Glen Bresler, Stu	Company Name PJM Interconnection, LLC PJM Interconnection, LLC PJM Interconnection, LLC Strom Power, LLC PJM Interconnection, LLC PJM Interconnection, LLC PJM Interconnection, LLC Exelon Business Services Company, LLC PJM Interconnection, LLC American Transmission Systems, Inc. PJM Interconnection, LLC Baltimore Gas and Electric Company Gabel and Associates Monitoring Analytics, LLC PJM Interconnection, LLC PJM Interconnection, LLC PJM Interconnection, LLC PJM Interconnection, LLC PJM Interconnection, LLC PJM Interconnection, LLC	Sector Not Applicable Not Applicable None Other Supplier None None Transmission Owner None Transmission Owner None Transmission Owner None None None None None None None None
Bresler, Stu	PJM Interconnection, LLC	None
Bruno, Joshua Bruno, Patrick	PJM Interconnection, LLC PJM Interconnection, LLC	None None



Bryson, Michael (Mike) Callen, Zachary (Zac) Canter, David Cao, Roger Carmean, Gregory Carroll, Rebecca Chang, Sean Chen, Hong Chmielewski, Brian Christopher, Mahila Chu, George Ciabattoni, Joseph Coyle, Billy Coyne, Suzanne Cremeans, Ron Croop, Danielle D'Alessandris, Lou D'Antonio, Phil Davis, James (Jim) DeVita, Thomas Domian, Christin Douglass, Robert Drom, Richard Duensing, Allison Dugan, Chuck Dumitriu, Nicolae Egan, Amanda Elkins, Rachel Esterly, Theresa Farhat, Michelle Fereshetian, Damon Fernandez, Ray Filomena, Guy Fink, Regan Fishback, Luke Fitzpatrick, Brian Foladare, Kenneth Ford, Adrien Frogg, Darrell Fuess. Christian Gahimer, Michael Garnett, Bryan Gates, Terry Gilani, Rehan Graf, Walter Graham, Sophie Granstrand, Luke Greening, Michele Greiner, Gary Guntle, Vince Harris, Makenna

PJM Interconnection, LLC Illinios Commerce Commission AEP Appalachian Transmission Company, Inc. PJM Interconnection, LLC OPSI PJM Interconnection, LLC Shell Energy North America (US), L.P. PJM Interconnection, LLC PJM Interconnection, LLC Public Utilities Commission of Ohio (The) PJM Interconnection, LLC PJM Interconnection, LLC **Dominion Virginia Power** PJM Interconnection, LLC Dynegy Marketing and Trade, LLC PJM Interconnection, LLC FirstEnergy Corporation PJM Interconnection, LLC Dominion Energy Generation Marketing, Inc. PJM Interconnection, LLC Duquesne Light Company Exelon Generation Co., LLC Eckert Seamans Saracen Energy East LP East Kentucky Power Cooperative, Inc. PJM Interconnection, LLC PJM Interconnection, LLC FirstEnergy Corporation PJM Interconnection, LLC PJM Interconnection, LLC PJM Interconnection, LLC PJM Interconnection, LLC Customized Energy Solutions, Ltd.\* Pine Gate Mid-Atlantic, LLC Affirmed Energy LLC PJM Interconnection, LLC Geenex Solar LLC Old Dominion Electric Cooperative PJM Interconnection, LLC PBF Power Marketing, LLC IN Office of Utility Consumer Counselor Duke Energy Ohio, Inc. AEP Appalachian Transmission Company, Inc. ConEdison Energy, Inc. PJM Interconnection, LLC Adapt2 Solutions, Inc. **Dominion Virginia Power** PJM Interconnection, LLC PSEG Energy Resources & Trade LLC American PowerNet Management Adapt2 Solutions, Inc.

None None Transmission Owner None None None Other Supplier None None None None None None None Generation Owner None Transmission Owner None Generation Owner None Transmission Owner Generation Owner None Other Supplier Transmission Owner None None Transmission Owner None None None None None Other Supplier Other Supplier None Generation Owner **Electric Distributor** None Generation Owner End-Use Customer Transmission Owner Transmission Owner Other Supplier None None None None Other Supplier End-Use Customer None



Hastings, David Hauske, Thomas Heinle, Frederick Heisey, Bradley Herel, Suzanne Hoatson, Tom Hohenshilt, Jennifer Horger, Tim Horning, Lynn Marie Horstmann. John Hsia, Eric Hudis, Gabriella Hugee, Jacqulynn (Jacqui) Hyzinski, Tom Iler, Arthur (Art) Janicki, Diane Jardot, Gina Jens, Thomas Jett, William Johnson, Carl Johnston, David Kauffman. Brian Kayne, Samuel Keech, Adam Keenan, Matthew Kelly, Stephen Kenney, Susan Kettler, Kolby Khan, Bakhtawar Kimmel, David Kogut, George Kothakapu, Rakesh Kozhuharov, Dimitar LaRocque, Matthew Lejcar, Jamie Levitt, Andrew Li, Kanning Liang-Nicol, Cecilia Libbos, Robin Lieberman. Steven Lowenthal-Savy, Danielle Lu, Chenchao Lynch, Vicki Mabry, David Marcino, Angelo Markiewicz, Cindy Matuszak, Alex McArdle, Brian McCormick, Katharine McGlynn, Paul Messina, Emmy

Market Interconnection Consulting Services (MICS) PJM Interconnection, LLC Office of the Peoples Counsel for the District of Columbia Wolf Hills Energy, LLC PJM Interconnection, LLC Riverside Generating, LLC Talen Energy Marketing, LLC PJM Interconnection, LLC Customized Energy Solutions, Ltd.\* Dayton Power & Light Company (The) PJM Interconnection, LLC Jersey Green Energy LLC Dominion Energy Generation Marketing, Inc. GT Power Group Indiana Office of Utility Consumer Counsel Boston Energy Trading & Marketing, LLC Essential Power Rock Springs, LLC Black Oak Energy, LLC Duke Energy Business Services LLC Customized Energy Solutions, Ltd.\* Indiana Utility Regulatory Commission Enel X North America. Inc. State of Delaware PJM Interconnection, LLC Jpower USA Brookfield Energy Marketing LP PJM Interconnection, LLC Vitol Inc. Jersey Green Energy LLC PJM Interconnection, LLC New York Power Authority Fellon McCord Delaware Municipal Electric Corporation, Inc. PJM Interconnection. LLC Allegheny Electric Cooperative, Inc. PJM Interconnection, LLC PJM Interconnection, LLC Monongahela Power Company d/b/a Allegheny Power FirstEnergy Corporation American Municipal Power, Inc. Monitoring Analytics, LLC PJM Interconnection, LLC Dynegy Marketing and Trade, LLC McNees Wallace & Nurick LLC PJM Interconnection, LLC FirstEnergy Corporation UGI Energy Services, LLC NextEra Energy Power Marketing, LLC Illinois Commerce Commission PJM Interconnection, LLC PJM Interconnection, LLC

None None End-Use Customer Generation Owner None Generation Owner Generation Owner None None Transmission Owner None Other Supplier Generation Owner None End-Use Customer Other Supplier Generation Owner Other Supplier Transmission Owner None None Other Supplier None None None Other Supplier None Other Supplier Other Supplier None Other Supplier None Electric Distributor None Electric Distributor None None Transmission Owner Transmission Owner Electric Distributor None None Generation Owner None None Transmission Owner Other Supplier Other Supplier None None None



Midgley, Sharon Monzon, Stephanie Mooney, Jeff Nix, Emma Okenfuss, James Olaleye, Michael Ondayko, Brock Pakela, Greg Patel, Keyur Pelletier, Eveline Peoples, John Pilong, Christopher Pilong, Melissa Poulos, Greg Powers, Sean Pratt, Nicholas (Nick) Procuniar, Jason Pungaliya, Rajat Purdie, Michael Rahimi, Farrokh Rainey, John Redwine, Arlo Robinson, Becky Robinson, Paul Rodriguez, Tomas Rohrbach, John Salaneck, Alexandra Sasser, Jonathan Scarpignato, David Scheidecker, Paul Schuyler, Ken Schweizer, David Shah, Vijay Shanker. Rov Smith, Kara Sotkiewicz, Paul Souder, Michelle Squibb, Bill Stadelmeyer, Rebecca Stefanowicz, Vincent Stern, Alexander (Alex) Stone, Andy Strella, Lauren Sturgeon, John Suh, Jung Sun. Haibin Swalwell, Brad Sweeney, Rory Tangirala, Subha Terranova, Chris Thomas, Sharon

Exelon Business Services Company, LLC PJM Interconnection, LLC FirstEnergy Corporation Gable and Associates Savion, LLC PJM Interconnection, LLC AEP Appalachian Transmission Company, Inc. DTE Energy Trading, Inc. PJM Interconnection, LLC Hydro-Quebec **Duquesne Light Company** PJM Interconnection, LLC PJM Interconnection, LLC CAPS Linde Energy Services, Inc. PPL Electric Utilities Corp. dba PPL Utilities Dayton Power & Light Company (The) Pine Gate Renewables, LLC **Dominion Virginia Power** Open Access Technology International, Inc. Northern Virginia Electric Cooperative The Federal Energy Regulatory Commission Vista Energy Marketing, L.P. The Federal Energy Regulatory Commission OPSI Southern Maryland Electric Cooperative, Inc. Monitoring Analytics, LLC Customized Energy Solutions, Ltd.\* Calpine Energy Services, L.P. PJM Interconnection, LLC PJM Interconnection, LLC PJM Interconnection, LLC PJM Interconnection, LLC H.Q. Energy Services (U.S.), Inc. Buckeye Power, Inc. E-Cubed Policy Associates PJM Interconnection, LLC Ohio Valley Electric Corp PJM Interconnection, LLC PJM Interconnection. LLC Public Service Electric & Gas Company PJM Interconnection, LLC PJM Interconnection, LLC Duke Energy Carolinas, LLC Calpine Energy Services, L.P. Constellation Energy Services, Inc. Tangent Energy Solutions, Inc. GT Power Group ABB Enterprise Software Inc. PJM Interconnection, LLC **Energy Storage Association** 

Transmission Owner None Transmission Owner None None None Transmission Owner Other Supplier None None Transmission Owner None None None None Transmission Owner Transmission Owner None None None Electric Distributor None Other Supplier None None Electric Distributor None None Generation Owner None None None None Other Supplier Electric Distributor None None Transmission Owner None None Transmission Owner None None Other Supplier Generation Owner Other Supplier Other Supplier None None None None



Tibbetts, Maeve Tribulski, Jennifer Tutino, Joseph Tyler, Catherine Wadsworth, Joseph Warshel, Kim Whitehead, Jeffrey Widom, Stuart Wilson, James Wisersky, Megan Yoder, Michael Zemanek, Kevin Zhang, Michael (Mike) Zhao, Tong

#### K & L Gates

PJM Interconnection, LLC PJM Interconnection, LLC Monitoring Analytics, LLC Vitol Inc. PJM Interconnection, LLC GT Power Group PJM Interconnection, LLC Wilson Energy Economics Madison Gas & Electric Company RTO Insider Buckeye Power, Inc. PJM Interconnection, LLC PJM Interconnection, LLC None None None Other Supplier None None Other Supplier None Electric Distributor None None