

Markets and Reliability Committee
The Chase Center on the Riverfront, Wilmington, DE
June 30, 2016
9:00 a.m. – 12:00 p.m. EPT

Administration (9:00-9:05)

Mr. Mike Bryson welcomed participants, and Mr. Dave Anders provided the antitrust and code of conduct announcements.

Mr. Adam Keech discussed the planned responses to recent FERC orders related to settlement intervals and shortage pricing (Order 825), as well as related to hourly offers. He noted that Order 825 had been published in the Federal Register, and therefore the deadline for the required compliance filing is January 11, 2017. He also noted that the FERC had approved an extension to the deadline for the required compliance filing related to hourly offers until August 16, 2016.

Endorsements/Approvals (9:05-10:30)

1. Draft Minutes (9:05-9:10)

Minutes of the June 17, 2016 special meeting of the Markets and Reliability Committee (MRC) were approved by acclamation with no objections or abstentions.

2. PJM Manuals (9:10-10:00)

- A. Mr. Mark Kuras presented proposed revisions to PJM Manual 7: PJM Protection Standards recommended as part of the PJM Relay Subcommittee's biennial review of the Manual.
- B. Mr. David Schweizer reviewed proposed changes to Manual 10: Pre-Scheduling Operations to clarify that outage reporting rules for planned, maintenance and forced outages are applicable to both capacity and energy resources.
- C. Mr. Tong Zhao reviewed proposed revisions to Manual 11: Energy & Ancillary Services Market Operations. These changes are being presented as conforming changes to align with Manual 12: Balancing Operations revision 34 (addition of Attachment F) which was recently endorsed by the Markets and Reliability Committee.
- D. Mr. Mark Kuras discussed a replacement for the CEII section of the Introduction in PJM Manual 14B: PJM Region Transmission Planning Process.
- E. Mr. Michael Herman presented proposed revisions to PJM Manual 14B: PJM Region Transmission Planning Process including updates to Light Load and Winter Peak Reliability analyses to align with current practices, references to TPL-001-4 and updates to Appendix to M14B Attachment G.
- F. Mr. Jason Shoemaker presented proposed revisions to Manual 14C: Generation and Transmission Interconnection Facility Construction to support the inclusion of Order 1000 processes.
- G. Mr. Chantal Hendrzak discussed proposed revisions to Manual 15: Cost Development Guidelines as part of the periodic review process. She noted that additional discussion will occur at the Market Implementation Committee regarding the development fuel cost policy guidelines and the

response to the FERC compliance directive regarding hourly offers.

- H. Ms. Terri Esterly presented proposed revisions to Manual 18: PJM Capacity Market related to the manual's periodic review, conforming changes related to Capacity Performance and the Deploy All Resource Action.
- I. Mr. Ray Fernandez presented proposed revisions to Manual 28: Operating Agreement Accounting as part of the periodic review process.

Following discussion, the committee **endorsed** the proposed revisions in items 2.A through 2.F and items 2.H and 2.I by acclamation with no objections or abstentions. The committee will be asked to endorse items 2.F and 2.G at a future meeting.

3. PLS Exception Process (10:00-10:30)

Mr. Tong Zhao presented proposed Operating Agreement (OA) and Tariff revisions associated with a PLS Exception process proposal. Following discussion, the committee **endorsed** the proposed OA and Tariff revisions by acclamation with no objections or abstentions.

First Readings (10:30-11:45)

4. Underperformance Risk Management Sr. Task Force (URMSTF) Charter (10:30-10:45)

Ms. Rebecca Carroll presented the proposed draft charter for the URMSTF. The Committee will be asked to endorse the proposed draft charter at its next meeting.

5. Auction Specific Bilateral Transactions (10:45-11:05)

Ms. Jen Tribulski presented PJM's proposed solution on Auction Specific Bilateral Transactions. She noted that the Market Implementation Committee was still vetting the proposals and may identify additional proposed revisions. The Committee will be asked to endorse the proposed solution at a future meeting.

6. Transmission Owner Upgrades (11:05-11:20)

Mr. Mark Sims presented proposed Operating Agreement revisions and Regional Transmission Expansion Process enhancements related to transmission substation equipment. He noted that the Planning Committee was still vetting the proposals and may identify additional proposed revisions. The committee will be asked to endorse the proposed revisions at a future meeting.

7. PJM Manuals (11:20-11:45)

- A. Mr. Tong Zhao reviewed proposed revisions to Manual 11: Energy & Ancillary Services Market Operations for the Day-Ahead Scheduling Reserve (DASR). The Committee will be asked to endorse these proposed revisions at its next meeting.
- B. Mr. Tom Falin presented proposed revisions to Manual 20: PJM Resource Adequacy Analysis resulting of the periodic review of the manual. The Committee will be asked to endorse these proposed revisions at its next meeting.

- C. Ms. Cheryl Cloud reviewed proposed revisions to Manual 29: Billing as part of the periodic review process. The Committee will be asked to endorse these proposed revisions at its next meeting.

Informational Updates (11:45-12:00)

8. Clover SPS Modification (11:45-12:00)

Mr. Craig Crider, Dominion Virginia Power, provided an update on the modification to the Clover Special Protection Scheme.

Future Agenda Items (12:00)

No new future agenda items were identified.

Future Meeting Dates

July 28, 2016	9:00 a.m.	Wilmington, DE
August 25, 2016	9:00 a.m.	Wilmington, DE
September 29, 2016	9:00 a.m.	Wilmington, DE
October 27, 2016	9:00 a.m.	Wilmington, DE
November 17, 2016	9:00 a.m.	Wilmington, DE
December 22, 2016	9:00 a.m.	Wilmington, DE

Author: D. A. Anders

In Person Participants

Last Name	First Name	Company	Sector
Anders	David	PJM Interconnection, LLC	Not Applicable
Barker	Jason	Exelon Business Services Company, LLC	Transmission Owner
Bastian	Jeff	PJM Interconnection	Not Applicable
Batta	Michael	Virginia Electric & Power Company	Transmission Owner
Benckek	Jim	FirstEnergy Solutions Corp.	Transmission Owner
Bleiweis	Bruce	DC Energy LLC	Other Supplier
Borgatti	Michael	Gabel and Associates	Not Applicable
Bruce	Susan	McNees Wallace & Nurick LLC	Not Applicable
Bryson	Mike	PJM Interconnection, LLC	Not Applicable
Carroll	Rebecca	PJM Interconnection	Not Applicable
Cocco	Michael	Old Dominion Electric Cooperative	Electric Distributor
Collins	Leonard	State of Delaware	Not Applicable
Crystle	Gil	UGI Development Company	Transmission Owner
Dillon	Matthew	UGI Development Company	Generation Owner
DiMartino	Denise	PJM Interconnection	Not Applicable
Duane	Vince	PJM Interconnection	Not Applicable
Egan	Amanda	PJM Interconnection, LLC	Not Applicable
Ellison	Alan	Grays Ferry Cogeneration Partnership	Generation Owner
Esterly	Theresa	PJM Interconnection, LLC	Not Applicable
Fabiano	Janell	PJM Interconnection, LLC	Not Applicable
Falin	Tom	PJM Interconnection	Not Applicable
Farber	John	DE Public Service Commission	Not Applicable
Filomena	Guy	Customized Energy Solutions, Ltd.*	Not Applicable
Fitch	Neal	NRG Power Marketing LLC	Generation Owner
Fondacci	Luis	North Carolina Electric Membership Corporation	Electric Distributor
Foster	Denise	PJM Interconnection	Not Applicable
Fuess	Jay	PBF Energy	Generation Owner
Greiner	Gary	PSEG Energy Resources and Trade LLC	Other Supplier
Guerry	Katie	EnerNOC, Inc.	Other Supplier
Haas	Howard	Monitoring Analytics	Not Applicable
Hagaman	Derek	GT Power Group	Not Applicable
Hamilton	Bryant	PJM Interconnection	Not Applicable
Hendrzak	Chantal	PJM Interconnection, LLC	Not Applicable
Herel	Suzanne	RTO Insider	Not Applicable
Herling	Steve	PJM Interconnection	Not Applicable
Herman	Michael	PJM Interconnection, LLC	Not Applicable

Horstmann	John	Dayton Power & Light Company (The)	Transmission Owner
Horton	Dana	Appalachian Power Company	Transmission Owner
Hugee	Jacquelyn	PJM Interconnection, LLC	Not Applicable
Hyzinski	Thomas	Talen Energy	Generation Owner
Jardot	Gina	Essential Power Rock Springs, LLC	Transmission Owner
Kauffman	Brian	NRG Curtailment Solutions	Other Supplier
Keech	Adam	PJM Interconnection	Not Applicable
Kelly	Stephen	Brookfield Energy Marketing LP	Other Supplier
Kendall	Ross	PJM Interconnection	Not Applicable
Kilgallen	Kevin	Iberdrola	Generation Owner
Kogut	George	New York Power Authority	Other Supplier
Kuras	Mark	PJM Interconnection, LLC	Not Applicable
Lieberman	Steven	Old Dominion Electric Cooperative	Electric Distributor
Manion	Evelyn	PJM Interconnection, LLC	Not Applicable
McGlynn	Paul	PJM Interconnection	Not Applicable
McLavery	Megan	PJM Interconnection, LLC	Not Applicable
Melnyk	Markian	Atlantic Grid Operations A, LLC	Other Supplier
Midgley	Sharon	Exelon Business Services Company, LLC	Transmission Owner
Monzon	Stephanie	PJM Interconnection	Not Applicable
O'Brien	Tom	PJM Interconnection	Not Applicable
Ott	Andy	PJM Interconnection	Not Applicable
Pakela	Greg	DTE ET	Other Supplier
Pratzon	David	GT Power Group	Not Applicable
Price	Ruth	Division of the Public Advocate of the State of Delaware	End User Customer
Prokop	Brenda	ITC Mid-Atlantic Development LLC	Other Supplier
Quintavalla	Ginger	PJM Interconnection, LLC	Not Applicable
Rainey	Frank	PEI Power Corporation	Generation Owner
Richardson	Frank	PPL Electric Utilities Corp. dba PPL Utilities	Transmission Owner
Rogers	Sarah	PJM Interconnection	Not Applicable
Sasser	Jonathan	Customized Energy Solutions, Ltd.*	Not Applicable
Scarpignato	David	Calpine Energy Services, L.P.	Generation Owner
Schneider	Jon	First Energy	Transmission Owner
Schweizer	David	PJM Interconnection	Not Applicable
Scoglietti	Barbara	Tangent Energy Solutions, Inc.	Other Supplier
Shoemaker	Jason	PJM Interconnection	Not Applicable
Shparber	Steve	PJM Interconnection	Not Applicable
Simon	Mary	PJM Interconnection	Not Applicable
Sims	Mark	PJM Interconnection, LLC	Not Applicable
Slusser	Jeff	PJM Interconnection	Not Applicable
Snyder	Susan	PJM Interconnection	Not Applicable
Swimm	Nora	PJM Interconnection	Not Applicable

Trayers	Barry	Citigroup Energy, Inc.	Other Supplier
Tribulski	Jennifer	PJM Interconnection, LLC	Not Applicable
Whitehead	Jeffrey	Direct Energy Business Marketing, LLC	Other Supplier
Zhao	Tong	PJM Interconnection	Not Applicable

WebEx Participants

Last Name	First Name	Company	Sector
Ainspan	Malcolm	Energy Curtailment Specialists, Inc.	Other Supplier
Berner	Aaron	PJM Interconnection	Not Applicable
Bhavaraju	Murty	PJM Interconnection	Not Applicable
Bloom	David	Baltimore Gas and Electric Company	Transmission Owner
Bolan	Martin	FirstEnergy Solutions Corp.	Transmission Owner
Boyle	Glen	PJM Interconnection	Not Applicable
Brodbeck	John	EDP Renewables	Generation Owner
Bruno	Patrick	PJM Interconnection	Not Applicable
Campbell	Bruce	EnergyConnect, Inc.	Other Supplier
Chao	Hungpo	PJM Interconnection	Not Applicable
Chocarro Aguirrebengoa	Iker	E.ON Climate & Renewables North America, Inc.	Generation Owner
Cloud	Cheryl	PJM Interconnection, LLC	Not Applicable
Connell	Jason	PJM Interconnection	Not Applicable
Crider	Craig	Virginia Electric & Power Company	Transmission Owner
Croop	Danielle	PJM Interconnection	Not Applicable
Cummings	Bridgid	PJM Interconnection, LLC	Not Applicable
davis	connie	City of Cleveland, DPU, Div of Cleveland Public Pwr	Electric Distributor
DeLosa	Joseph	DE Public Service Commission	Not Applicable
Depillo	Ray	PSEG Energy Resources and Trade, LLC	Other Supplier
Dessenger	Harry	Customized Energy Solutions, Ltd.*	Not Applicable
Driscoll	Mary Ellen	PJM Interconnection, LLC	Not Applicable
Dugan	Chuck	East Kentucky Power Cooperative, Inc.	Transmission Owner
Fan	Zhenyu	PJM Interconnection	Not Applicable
Fernandez	Ray	PJM Interconnection, LLC	Not Applicable
Garnett	Bryan	Duke Energy Ohio, Inc.	Transmission Owner
Gebolys	Debbie	Public Utilities Commission of Ohio (The)	Not Applicable
Giles	Steve	Allegheny Electric Cooperative, Inc.	Electric Distributor
Glatz	Suzanne	PJM Interconnection	Not Applicable
Greening	Michele	Talen Energy Marketing, LLC	Generation Owner
Griffiths	Dan	Consumer Advocates of PJM States	Not Applicable
Hanser	Erik	Michigan Public Service Commission	Not Applicable
Harmon	Michael	Union Electric Company d/b/a Ameren Missouri	Other Supplier

Hastings	David	Market Interconnection Consulting Services	Not Applicable
Hauske	Thomas	PJM Interconnection	Not Applicable
Hayes	Patrick	Union Electric Company d/b/a Ameren Missouri	Other Supplier
Heidorn	Rich	RTO Insider	Media
Heise	Randi	Dominion Virginia Power	Not Applicable
Helmick	Douglas	Keystone Projects	Not Applicable
Helms	Joseph	Rainbow Energy Marketing Corporation	Other Supplier
Hoatson	Tom	Riverside Generating, LLC	Other Supplier
Holland	Risa	PJM Interconnection, LLC	Not Applicable
Horger	Tim	PJM Interconnection	Not Applicable
Hsia	Eric	PJM Interconnection, LLC	Not Applicable
Huntoon	Steve	NextEra Energy Power Marketing, LLC	Generation Owner
Janicki	Diane	Boston Energy Trading & Marketing, LLC	Generation Owner
Johnson	Carl	Customized Energy Solutions, Ltd.*	Not Applicable
Kaczanowski	Marek	Baltimore Gas and Electric Company	Transmission Owner
Karrasch	Kim	Interstate Gas Supply, Inc.	Other Supplier
Keech	Jason	PJM Interconnection, LLC	Not Applicable
Kenney	Susan	PJM Interconnection	Not Applicable
Kingston	Amber	North Carolina Electric Membership Corporation	Electric Distributor
Koza	Frank	PJM Interconnection	Not Applicable
Lacy	Catharine	Dominion Virginia Power	Not Applicable
LaRocque	Matthew	PJM Interconnection, LLC	Not Applicable
Long	Scott	Allegheny Electric Cooperative	Electric Distributor
Loudenburg	Zack	Pennsylvania Renewable Resources, Associates	Generation Owner
Manning	James	North Carolina Electric Membership Corporation	Electric Distributor
McAdams	Julius	Red Wolf Energy Trading, LLC	Other Supplier
McAlister	Lisa	American Municipal Power, Inc.	Electric Distributor
Merola	Becky	Noble Americas Energy Solutions LLC	Other Supplier
Metzler	Jakob	Castleton Commodities Merchant Trading L.P.	Other Supplier
Mok	Alan	Duke Energy Kentucky, Inc.	Transmission Owner
Ondayko	Brock	Appalachian Power Company	Transmission Owner
Patten	Kevin	Appalachian Power Company	Transmission Owner
Peoples	John	Duquesne Light Company	Transmission Owner
Phillips	Amanda	ACES Power	Not Applicable
Reid	Ryan	Buckeye Power, Inc.	Electric Distributor
Ritchie	Sandra	PJM Interconnection	Not Applicable
Robson	Matt	SESCO Enterprises LLC	Other Supplier
Rohrbach	John	Southern Maryland Electric Cooperative	Electric Distributor
Rugh	Chris	EverPower Commercial Services, LLC	Generation Owner
Rutigliano	Tom	EMC Development Company, Inc.	Other Supplier

Schmitt	Jeff	PJM Interconnection	Not Applicable
Shanker	Roy	Hydro Quebec	Not Applicable
Singer	Chad	Fellon McCord	Not Applicable
Slagel	Ronald	Other	Not Applicable
Souder	Michelle	PJM Interconnection	Not Applicable
Spencer	Doug	Southeastern Power Administration	Other Supplier
Stadlmeyer	Rebecca	PJM Interconnection, LLC	Not Applicable
Stotesbury	Christina	PJM Interconnection	Not Applicable
Strella	Lauren	PJM Interconnection, LLC	Not Applicable
Stubbe	Judy	Duke Energy Ohio, Inc.	Transmission Owner
Stuchell	Jeff	First Energy	Transmission Owner
Sweeney	Rory	RTO Insider	Not Applicable
Tacka	Natalie	PJM Interconnection	Not Applicable
Tatum	Edward	American Municipal Power	Electric Distributor
Thompson	Matthew	XO Energy	Other Supplier
Thomson	Heather	Mid-Atlantic Renewable Energy	Not Applicable
Tripoli	Matthew	IMG Midstream LLC	Generation Owner
Vargo	Daniel	Allegheny Electric Cooperative, Inc.	Electric Distributor
Vogel	Anne	AEP Appalachian Transmission Company, Inc.	Transmission Owner
Walker	Jennifer	Exelon Business Services Company, LLC	Transmission Owner
Ward	Michael	PJM Interconnection	Not Applicable
Weiss	Glenn	PJM Interconnection	Not Applicable
Wilhite	Chad	FirstEnergy Solutions Corp.	Transmission Owner
Williams	Amber	New York State Electric & Gas Corporation	Other Supplier
York	Katherine	Tennessee Valley Authority	Other Supplier
Yu	Joel	Rockland Electric Company	Transmission Owner
Zilliox	Skylar	RES America Developments Inc	Generation Owner