

Markets and Reliability Committee
The Chase Center on the Riverfront, Wilmington, DE
December 22, 2016
9:30 a.m. – 3:00 p.m. EPT

Administration

Ms. Daugherty and Mr. Anders welcomed the participants, and provided the announcements and antitrust and code of conduct announcements. Mr. Chad Hutchinson discussed implementation of the new PJM Now mobile application.

Endorsements/Approvals

1. Draft Minutes

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

2. PJM Manuals

- A. Mr. Augustine Caven reviewed proposed revisions to Manual 10: Pre-Scheduling Operations regarding the periodic review of the manual, end of outage reporting and the 72-hour maintenance outage recall process.
- B. Mr. Chris Pilog reviewed proposed changes to Manual 13: Emergency Operations.
- C. Mr. Augustine Caven reviewed proposed revisions to Manual 14D: Generator Operational Requirements regarding fuel limitation reporting.

Following discussion, the committee **endorsed** the proposed revisions in items 2.A through 2.C by acclamation with no objections and one abstention to item 2.A.

3. Replacement of Capacity Obligations

Mr. Stu Bresler and Dr. Joe Bowring presented proposed revisions to Manual 18: Capacity Market regarding the immediate replacement of capacity obligations. Mr. Mike Cocco proposed a friendly amendment to add the following sentence at the end of the bullet immediately preceding the list of four acceptable reasons for replacement:

“PJM will approve or deny a request for early Replacement Capacity, based upon the below criteria, with input from the Market Monitor, within 15 days of receiving a completed early Replacement Capacity request.”

This proposed amendment was accepted as friendly by Mr. Bresler and Dr. Bowring. Following discussion, the committee **endorsed** the proposed revisions in a sector-weighted vote with 4.39 in favor.

4. Residual ARR Enhancements

Mr. Brian Chmielewski presented the proposed solution to the Residual ARR Enhancements issue. Following discussion, the committee **endorsed** the proposed revisions by acclamation with no objections or abstentions.

5. FTR Undiversified Credit Adder

Mr. Hal Loomis presented proposed revisions to the FTR undiversified credit adder. Following discussion, the proposed revisions **failed** in a sector-weighted vote with 1.25 in favor.

First Readings

6. PJM Capacity Problem Statement / Issue Charge

Mr. Ed Tatum, American Municipal Power, presented an updated problem statement / issue charge regarding PJM Capacity. The committee will be asked to approve the proposed problem statement / issue charge at its next meeting.

7. Underperformance Risk Management Sr. Task Force (URMSTF)

Ms. Rebecca Carroll presented a proposal regarding participation as Capacity Performance by resources external to PJM's footprint. The committee will be asked to endorse these proposed revisions at its next meeting. Ms. Carroll also noted that the Members Committee will be asked to endorse the proposal at its next meeting.

8. Energy Market Uplift Senior Task Force (EMUSTF)

Mr. Dave Anders discussed the activities of the EMUSTF, and presented two Phase 1 proposals endorsed by the EMUSTF and offered to the MRC as a main and alternate motion. The committee will be asked to endorse the Phase 1 proposal at its next meeting. Mr. Anders discussed the results of voting on Phase 2 proposals, indicating that no proposals received the required simple majority support required for automatic advancement to the MRC. Mr. John Horstmann moved and Mr. Jim Benchek seconded that:

- the EMUSTF be asked to take a second vote on the top five proposals in terms of the support received in the prior EMUSTF vote (i.e. packages Q, D, U, S and T),
- that the vote results be posted timely for the MRC's next meeting,
- that the MRC be asked to vote on proposals that receive the required support at the EMUSTF (i.e., rank ordered proposals that receive a minimum of simple majority support), and
- that PJM make "best efforts" to perform (and/or summarize previously performed) back-testing on the five proposals (packages Q, D, U, S and T) to support the voting schedule.

Following discussion the motion was **approved** by acclamation with three objections and no abstentions.

9. Market Operations Price Transparency

Mr. Rami Dirani presented a proposed problem statement / issue charge regarding Market Operations Price Transparency. The committee will be asked to approve the proposed problem statement / issue charge at its next meeting.

10. Operating Parameters

Mr. Tom Hauske reviewed proposed revisions to the PJM Tariff, and Manual 11: Energy & Ancillary Services Market Operations, Manual 12: Balancing Operations, and Manual 28: Operating Agreement Accounting regarding Operating Parameters. The committee will be asked to endorse these governing document revisions at its next meeting.

11. Governing Documents Enhancement & Clarification Subcommittee (GDECS)

Ms. Janell Fabiano presented proposed Tariff, Operating Agreement (OA) and Reliability Assurance Agreement revisions regarding clean-up of definitions. The Committee will be asked to endorse these proposed revisions at its next meeting.

12. PJM Manuals

- A. Mr. Eric Hsia presented revisions to Manual 11: Energy & Ancillary Services Market Operations and Manual 12: Balancing Operations to account for the updated Regulation Requirement developed by the Regulation Market Senior Issues Task Force. The committee will be asked to endorse the proposed revisions at its next meeting.
- B. Mr. Ray Fernandez presented revisions to Manual 27: Open Access Transmission Tariff Accounting as part of an annual review process. The committee will be asked to endorse the proposed revisions at its next meeting.
- C. Mr. Liem Hoang presented proposed revisions to Manual 38: Operations Planning. The committee will be asked to endorse the proposed revisions at its next meeting.
- D. Ms. Kim Sauerwine presented proposed revisions to Manual 40: Training and Certification Requirements. The committee will be asked to endorse the proposed revisions at its next meeting.

Informational Updates

13. Extended Winter Transmission Outage

Ms. Nancy Huang discussed extended transmission outages for the 2016/17 winter.

14. Joint Operating Agreement (JOA) Revisions

Mr. Phil D'Antonio provided a status update on JOA revisions related to the new operating protocols for the PJM/NYISO interface. PJM confirmed that these revisions are not intended to supersede or modify

any rights or responsibilities afforded to the Transmission Owners under the Consolidated Transmission Owners' Agreement.

15. Fuel Cost Policy

Mr. Tom Hauske provided an update on proposed revisions to Manual 15: Cost Development Guidelines regarding Fuel Cost Policies. The committee will be asked to endorse these proposed revisions upon FERC approval of the related compliance filing.

Future Agenda Items

No new future agenda items were identified.

Future Meeting Dates

January 26, 2017	9:00 a.m.	Wilmington, DE
February 23, 2017	9:00 a.m.	Wilmington, DE
March 23, 2017	9:00 a.m.	Wilmington, DE
April 27, 2017	9:00 a.m.	Wilmington, DE
May 25, 2017	9:30 a.m.	Chicago, IL
June 22, 2017	9:00 a.m.	Wilmington, DE
July 27, 2017	9:00 a.m.	Wilmington, DE
August 24, 2017	9:30 a.m.	Wilmington, DE
September 28, 2017	9:00 a.m.	Wilmington, DE
October 26, 2017	9:00 a.m.	Wilmington, DE
November 30, 2017	9:00 a.m.	Wilmington, DE
December 21, 2017	9:30 a.m.	Wilmington, DE

Author: D. A. Anders

Attendance

Chair/Secretary

Last Name	First Name	Company	Role
Anders	Dave	PJM Interconnection, LLC	Secretary
Daugherty	Suzanne	PJM Interconnection, LLC	Chair

Voters

Last Name	First Name	Company	Sector
Barker	Jason	Exelon Business Services Company, LLC	Transmission Owner
Benckek	Jim	FirstEnergy Solutions Corp.	Transmission Owner
Bleiweis	Bruce	DC Energy, LLC	Other Supplier
Bleiweis	Bruce	Rep.'g Vitrol Inc.	Other Supplier
Borgatti	Michael	Rep.'g Covanta Energy Group, LLC	Generation Owner
Borgatti	Michael	Rep.'g Elgin Energy Center, LLC	Generation Owner
Borgatti	Michael	Rep.'g Jersey Green Energy LLC	Other Supplier
Borgatti	Michael	Rep.'g Longview Power, LLC	Generation Owner

Borgatti	Michael	Rep.'g Moxie Freedom LLC	Generation Owner
Borgatti	Michael	Rep.'g Newark Energy Center, LLC	Generation Owner
Borgatti	Michael	Rep.'g NextEra Energy Power Marketing, LLC	Generation Owner
Borgatti	Michael	Rep.'g York County Solid Waste and Refuse Authority	Generation Owner
Brodbeck	John	EDP Renewables North America, LLC	Generation Owner
Bruce	Susan	Rep.'g Air Liquide Industrials U.S., L.P.	End User Customer
Bruce	Susan	Rep.'g Air Products & Chemicals, Inc.	End User Customer
Bruce	Susan	Rep.'g Gerdau Ameristeel Energy, Inc.	Other Supplier
Bruce	Susan	Rep.'g Industrial Energy Users-Ohio	Other Supplier
Bruce	Susan	Rep.'g Kimberly-Clark Corporation	Generation Owner
Bruce	Susan	Rep.'g Lehigh Portland Cement Company	End User Customer
Bruce	Susan	Rep.'g Letterkenny Industrial Development Authority	Electric Distributor
Bruce	Susan	Rep.'g Linde, LLC	End User Customer
Bruce	Susan	Rep.'g MeadWestvaco Corporation	End User Customer
Bruce	Susan	Rep.'g Praxair, Inc.	End User Customer
Bruce	Susan	Rep.'g Procter & Gamble Paper Products Company (The)	End User Customer
Bruce	Susan	Rep.'g Trustees of the University of Pennsylvania	End User Customer
Bruce	Susan	Rep.'g Wellsboro Electric Company	Electric Distributor
Campbell	Bruce	Enerwise Global Technologies, Inc.	Other Supplier
Campbell	Bruce	Rep.'g MidAtlantic Power Partners, LLC	Other Supplier
Cox	Jason	Dynegy Marketing and Trade, LLC	Generation Owner
Crystle	Gil	UGI Development Company	Generation Owner
Dugan	Chuck	East Kentucky Power Cooperative, Inc.	Transmission Owner
Ellison	Alan	Grays Ferry Cogeneration Partnership	Generation Owner
Esposito	Patricia	TransCanada Power Marketing Ltd.	Generation Owner
Evrard	David	Pennsylvania Office of Consumer Advocate	End User Customer
Fitch	Neal	NRG Power Marketing, LLC	Generation Owner
Fondacci	Luis	North Carolina Electric Membership Corporation	Electric Distributor
Fuess	Jay	Rep.'g Church Hill Solar Farm, LLC	Generation Owner
Fuess	Jay	Rep.'g Diamond State Generation Partners, LLC	Generation Owner
Fuess	Jay	Rep.'g Ictec.com, Inc.	Other Supplier
Fuess	Jay	Rep.'g Kuehne Chemical Company, Inc.	Other Supplier
Fuess	Jay	Rep.'g PBF Power Marketing, LLC	Generation Owner
Garnett	Bryan	Duke Energy Business Services LLC	Transmission Owner
Gorman	Kevin	The Highlands Energy Group, LLC	Other Supplier
Greening	Michele	PPL Electric Utilities Corp. dba PPL Utilities (LSE)	Transmission Owner
Greiner	Gary	Public Service Electric & Gas Company	Transmission Owner
Griffiths	Dan	Rep.'g Delaware Division of the Public Advocate	End User Customer
Griffiths	Dan	Rep.'g Illinois Citizens Utility Board	End User Customer

Griffiths	Dan	Rep.'g Indiana Office of Utility Consumer Counselor (IN OUCC)	End User Customer
Griffiths	Dan	Rep.'g Maryland Office of People's Counsel	End User Customer
Griffiths	Dan	Rep.'g New Jersey Division of Rate Counsel	End User Customer
Griffiths	Dan	Rep.'g Office of the Attorney General, Kentucky	End User Customer
Griffiths	Dan	Rep.'g Office of the People's Counsel for the District of Columbia	End User Customer
Griffiths	Dan	Rep.'g Ohio Consumers' Counsel	End User Customer
Griffiths	Dan	Rep.'g Pennsylvania Office of Consumer Advocate	End User Customer
Griffiths	Dan	Rep.'g West Virginia Consumer Advocate Division	End User Customer
Guerry	Katie	EnerNOC, Inc.	Other Supplier
Hastings	David	Rep.'g BioUrja Power, LLC	Other Supplier
Hastings	David	Rep.'g Chesapeake Trading Group, LLC	Other Supplier
Hastings	David	Rep.'g Mercuria Energy America, Inc.	Other Supplier
Hastings	David	Rep.'g Northstar Trading Ltd.	Other Supplier
Hastings	David	Rep.'g Saracen Energy East LP	Other Supplier
Hastings	David	Rep.'g SESCO Enterprises, LLC	Other Supplier
Hastings	David	Rep.'g Solios Power Mid-Atlantic Trading LLC	Other Supplier
Hastings	David	Rep.'g Tenaska Power Services Co.	Generation Owner
Helms	Joseph	Rainbow Energy Marketing Corporation	Other Supplier
Hoatson	Tom	West Deptford Energy, LLC	Generation Owner
Horstmann	John	Dayton Power & Light Company (The)	Transmission Owner
Horton	Dana	Appalachian Power Company (AEP Generation)	Transmission Owner
Hurwich	Mark	Elliott Bay Energy Trading, LLC	Other Supplier
Hyzinski	Thomas	Talen Energy Marketing, LLC	Generation Owner
Johnson	Carl	Rep.'g Allegheny Electric Cooperative, Inc.	Electric Distributor
Johnson	Carl	Rep.'g American Municipal Power, Inc.	Electric Distributor
Johnson	Carl	Rep.'g Blue Ridge Power Agency, Inc.	Electric Distributor
Johnson	Carl	Rep.'g Borough of Chambersburg	Electric Distributor
Johnson	Carl	Rep.'g Borough of Mont Alto, Pennsylvania	Electric Distributor
Johnson	Carl	Rep.'g Buckeye Power, Inc.	Electric Distributor
Johnson	Carl	Rep.'g Central Virginia Electric Cooperative	Electric Distributor
Johnson	Carl	Rep.'g City of Dover, Delaware	Electric Distributor
Johnson	Carl	Rep.'g Delaware Municipal Electric Corporation, Inc.	Electric Distributor
Johnson	Carl	Rep.'g Easton Utilities Commission	Electric Distributor
Johnson	Carl	Rep.'g Energy Cooperative Association of PA	Other Supplier
Johnson	Carl	Rep.'g Galt Power, Inc.	Other Supplier
Johnson	Carl	Rep.'g Hagerstown Light Department	Electric Distributor
Johnson	Carl	Rep.'g Illinois Municipal Electric Agency	Electric Distributor
Johnson	Carl	Rep.'g Indiana Municipal Power Agency	Generation Owner
Johnson	Carl	Rep.'g Madison Gas & Electric Co.	Other Supplier

Johnson	Carl	Rep.'g North Carolina Electric Membership Corporation	Electric Distributor
Johnson	Carl	Rep.'g North Carolina Municipal Power Agency # 1	Other Supplier
Johnson	Carl	Rep.'g Northern Virginia Electric Cooperative (NOVEC)	Electric Distributor
Johnson	Carl	Rep.'g Old Dominion Electric Cooperative	Electric Distributor
Johnson	Carl	Rep.'g Thurmont Municipal Light Company	Electric Distributor
Johnson	Carl	Rep.'g Town of Williamsport (The)	Electric Distributor
Johnson	Carl	Rep.'g WPPI Energy	Other Supplier
Kelly	Stephen	Brookfield Energy Marketing LP	Other Supplier
Kilgallen	Kevin	Avangrid Renewables, LLC	Generation Owner
Kogut	George	New York Power Authority	Other Supplier
Lacy	Catharine	Virginia Electric & Power Company	Transmission Owner
Landis	Daniel	Hemsworth Capital LP	Other Supplier
Lieberman	Steven	Old Dominion Electric Cooperative	Electric Distributor
Long	Scott	Allegheny Electric Cooperative, Inc.	Electric Distributor
Melnik	Markian	Atlantic Grid Operations A, LLC	Other Supplier
Norton	Chris	American Municipal Power, Inc.	Electric Distributor
Pakela	Greg	DTE Energy Trading, Inc.	Other Supplier
Pratzon	David	Rep.'g Eastern Generation, LLC	Generation Owner
Pratzon	David	Rep.'g Essential Power Rock Springs, LLC	Transmission Owner
Pratzon	David	Rep.'g Wheelabrator Frackville Energy Co., Inc.	Generation Owner
Pratzon	David	Rep.'g WM Renewable Energy, L.L.C.	Generation Owner
Price	Ruth Ann	Delaware Division of the Public Advocate	End Use Customer
Prokop	Brenda	ITC Interconnection LLC	Transmission Owner
Rutigliano	Tom	Rep.'g Achieving Equilibrium LLC	Other Supplier
Rutigliano	Tom	Rep.'g Demansys Energy, LLC	Other Supplier
Rutigliano	Tom	Rep.'g Earth Networks, Inc.	Other Supplier
Rutigliano	Tom	Rep.'g EMC Development Company, Inc.	Other Supplier
Scarpignato	David	Calpine Energy Services, L.P.	Generation Owner
Scoglietti	Barbara	Tangent Energy Solutions, Inc.	Other Supplier
Skucas	Ruta	Rep.'g Ames Energy, LLC	Other Supplier
Skucas	Ruta	Rep.'g Big Bend Trading, LLC	Other Supplier
Skucas	Ruta	Rep.'g BJ Energy, LLC	Other Supplier
Skucas	Ruta	Rep.'g Dufossat Capital I, LLC	Other Supplier
Skucas	Ruta	Rep.'g Falcon Energy, LLC	Other Supplier
Skucas	Ruta	Rep.'g Greene Energy, LLC	Other Supplier
Skucas	Ruta	Rep.'g Hexis Energy Trading, LLC	Other Supplier
Skucas	Ruta	Rep.'g Liberty Hill Power LLC	Other Supplier
Skucas	Ruta	Rep.'g Mac Trading, Inc	Other Supplier
Skucas	Ruta	Rep.'g MET MA, LLC	Other Supplier

Skucas	Ruta	Rep.'g Monterey MA, LLC	Other Supplier
Skucas	Ruta	Rep.'g Property Endeavors, LLC	End User Customer
Skucas	Ruta	Rep.'g Pure Energy, Inc.	Other Supplier
Skucas	Ruta	Rep.'g Red Wolf Energy Trading, LLC	Other Supplier
Skucas	Ruta	Rep.'g RJUMR Energy Partners Corp.	Other Supplier
Skucas	Ruta	Rep.'g Solea Energy, LLC	Other Supplier
Skucas	Ruta	Rep.'g Southard Energy Partners LLC	Other Supplier
Skucas	Ruta	Rep.'g Velocity American Energy Master I, LP	Other Supplier
Skucas	Ruta	Rep.'g Yasmin Partners LLC	Other Supplier
Spencer	Doug	Southeastern Power Administration	Other Supplier
Trayers	Barry	Citigroup Energy, Inc.	Other Supplier
Whitehead	Jeffrey	Direct Energy Business, LLC	Other Supplier
Wicks	Tonja	Duquesne Light Company	Transmission Owner
Yu	Joel	Rockland Electric Company	Transmission Owner

Non-Voters

Last Name	First Name	Company	Sector
Ainspan	Malcolm	Energy Curtailment Specialists, Inc.	Other Supplier
Allen	Wesley	Red Wolf Energy Trading, LLC	Other Supplier
Bayless	Charlie	North Carolina Electric Membership Corporation	Electric Distributor
Bloom	David	Baltimore Gas and Electric Company	Transmission Owner
Bolan	Martin	FirstEnergy Solutions Corporation	Transmission Owner
Carro	Dan	Dominion Virginia Power	Not Applicable
Choccaro	Iker	E.ON Climate & Renewables North America Inc.	Generation Owner
Cocco	Michael	Old Dominion Electric Cooperative	Electric Distributor
Crystle	Gil	UGI Development Company	Transmission Owner
Dadourian	John	Monitoring Analytics, LLC	Not Applicable
Dalessandris	Lou	FirstEnergy Solutions Corporation	Transmission Owner
Delosa	Joe	Delaware Public Service Commission	Not Applicable
Dickson	Douglas	New Jersey Board of Public Utilities	Not Applicable
Dillon	Matt	UGI Development Company	Transmission Owner
Domian	Christin	Duquesne Light Company	Transmission Owner
Drangula	Carey	XO Energy MA, LP	Other Supplier
Farber	John	Delaware Public Service Commission	Not Applicable
Filomena	Guy	Customized Energy Solutions, Ltd.	Not Applicable
Foxen	Timothy	Osaka Gas USA	Not Applicable
Furnish	Jeanna	MISO	Not Applicable
Gebolys	Debbie	Public Utilities Commission of Ohio	Not Applicable
Gilani	Rehan	ConEdison Energy, Inc.	Other Supplier
Giles	Steven	Allegheny Electric Cooperative, Inc.	Transmission Owner

Godson	Gloria	Exelon Business Services Company, LLC	Transmission Owner
Gorman	Kevin	Highlands Energy Group LLC (The)	Other Supplier
Hanser	Erik	Michigan Public Service Commission	Not Applicable
Harmon	Mike	Ameren Energy Marketing Company	Generation Owner
Hartigan	Matthew	Delaware Public Service Commission	Not Applicable
Heidom	Richard	RTO Insider	Not Applicable
Heise	Randi	Dominion Resources	Not Applicable
Hitch	George	Virginia Electric and Power Company	Transmission Owner
Hudis	Gabriella	Gabel Associates	Not Applicable
Huntoon	Stephen	NextEra Energy Power Marketing, LLC	Generation Owner
Hyatt	John	Monitoring Analytics	Not Applicable
Janicki	Diane	Boston Energy Trading and Marketing LLC	Generation Owner
Karrasch	Kim	IGS Energy	Not Applicable
Katayama	Tommy	Osaka Gas USA	Not Applicable
Kauffman	Brian	NRG Power Marketing, LLC	Generation Owner
Kerecman	Joseph	Calpine Energy Services, L.P.	Generation Owner
Kolo	Elta	Greentech Media	Not Applicable
Kormos	Mike	Exelon Business Services Company, LLC	Generation Owner
Kothakpu	Rakesh	Fellon McCord	Not Applicable
Leasure	Jill	Keystone Conemaugh Project	Not Applicable
Long	Scott	Allegheny Electric Cooperative, Inc.	Transmission Owner
Marinelli	Richard	PSEG Energy Resources and Trade LLC	Transmission Owner
Martin	Valerie	The Federal Energy Regulatory Commission	Not Applicable
McAdams	Julius	Red Wolf Energy Trading, LLC	Other Supplier
Metzler	Jakob	Castleton Commodities International	Not Applicable
Midgley	Sharon	Exelon Business Services Company, LLC	Transmission Owner
Noewer	Sharon	FirstEnergy Solutions Corporation	Transmission Owner
Ondayko	Brock	AEP	Transmission Owner
Patterson	Paul	Glenrock Associates	Not Applicable
Peoples	John	Duquesne Light Company	Transmission Owner
Price	Ruth Ann	Delaware Division of the Public Advocate	End User Customer
Racine-Johnson	Evan	Golden Spread Electric Cooperative	Not Applicable
Reeping	Bob	FirstEnergy Solutions Corporation	Transmission Owner
Rothey	Kristin	American Municipal Power, Inc.	Generation Owner
Rutigliano	Tom	Constellation New Energy	Transmission Owner
Saini	Ishwar	Macquarie Energy LLC	Other Supplier
Salaneck	Alexandra	Monitoring Analytics, LLC	Not Applicable
Sasser	Jonathan	Customized Energy Solutions, Ltd.	Not Applicable
Schneider	Jonathan	FirstEnergy Solutions Corporation	Transmission Owner

Schreim	Morris	Maryland Public Service Commission	Not Applicable
Schum	Alice	Illinois Municipal Electric Agency	Electric Distributor
Schuster	Brad	XO Energy MA, LP	Other Supplier
Seelaus	Tim	EMC Development Company, Inc.	Other Supplier
Shanker	Roy	H.Q. Energy Services (U.S.), Inc.	Other Supplier
Sheehan	Shawn	XO Energy MA, LP	Other Supplier
Slifer	Diane	The P3 Group	Not Applicable
Sock	Bryan	PSEG Energy Resources and Trade LLC	Transmission Owner
Staska	Stephanie	Twin Cities Power, LLC	Other Supplier
Stewart	Travis	Gabel Associates	Not Applicable
Stubbe	Judy	Duke Energy Business Services, Inc.	Generation Owner
Tatum	Ed	American Municipal Power, Inc.	Electric Distributor
Taylor	Rob	Exelon Business Services Company, LLC	Transmission Owner
Theodore	Sharon	Electric Power Supply Association	Not Applicable
Thomson	Heather	MAREC	Not Applicable
Tibbetts	Maeve	Pierce Atwood LLP	Not Applicable
Vargo	Daniel	Allegheny Electric Cooperative, Inc.	Transmission Owner
Watson	Mark	Platts	Not Applicable
Williams	Amber	New York State Electric & Gas Corporation	Other Supplier
Willmoth	Emily	Dominion Energy Marketing, Inc.	Generation Owner
Wilson	James	Wilson Energy Economics	Not Applicable
Wisersky	Megan	Madison Gas & Electric Company	Other Supplier
Xenopoulous	Damon	Brickfield, Burchette, Ritts & Stone, P.C.	Not Applicable
York	Katherine	Tennessee Valley Authority (The)	Other Supplier

PJM Attendees

Last Name	First Name	Company	Sector
Antonelli	Diane	PJM Interconnection, LLC	Not Applicable
Baker	Scott	PJM Interconnection, LLC	Not Applicable
Barrett	Francis	PJM Interconnection, LLC	Not Applicable
Bastian	Jeff	PJM Interconnection, LLC	Not Applicable
Bhavaraju	Murty	PJM Interconnection, LLC	Not Applicable
Boyle	Glen	PJM Interconnection, LLC	Not Applicable
Bresler	Stu	PJM Interconnection, LLC	Not Applicable
Bricklin	Brian	PJM Interconnection, LLC	Not Applicable
Brown	Rich	PJM Interconnection, LLC	Not Applicable
Bruno	Josh	PJM Interconnection, LLC	Not Applicable
Bruno	Patrick	PJM Interconnection, LLC	Not Applicable
Bryson	Mike	PJM Interconnection, LLC	Not Applicable

Budney	David	PJM Interconnection, LLC	Not Applicable
Carroll	Rebecca	PJM Interconnection, LLC	Not Applicable
Caven	Augustine	PJM Interconnection, LLC	Not Applicable
Chao	Hung-Po	PJM Interconnection, LLC	Not Applicable
Chmielewski	Brian	PJM Interconnection, LLC	Not Applicable
Connell	Jason	PJM Interconnection, LLC	Not Applicable
Coyne	Suzanne	PJM Interconnection, LLC	Not Applicable
Croop	Danielle	PJM Interconnection, LLC	Not Applicable
D'Antonio	Phil	PJM Interconnection, LLC	Not Applicable
Dirani	Rami	PJM Interconnection, LLC	Not Applicable
Dotter	Ray	PJM Interconnection, LLC	Not Applicable
Drauschak	Lisa	PJM Interconnection, LLC	Not Applicable
Egan	Amanda	PJM Interconnection, LLC	Not Applicable
Ellen	Mary Ellen	PJM Interconnection, LLC	Not Applicable
Endress	Eric	PJM Interconnection, LLC	Not Applicable
Fabiano	Janell	PJM Interconnection, LLC	Not Applicable
Falin	Thomas	PJM Interconnection, LLC	Not Applicable
Fernandez	Ray	PJM Interconnection, LLC	Not Applicable
Ford	Adrien	PJM Interconnection, LLC	Not Applicable
Foster	Denise	PJM Interconnection, LLC	Not Applicable
Glazer	Craig	PJM Interconnection, LLC	Not Applicable
Hauske	Tom	PJM Interconnection, LLC	Not Applicable
Hendrzak	Chantal	PJM Interconnection, LLC	Not Applicable
Herling	Steve	PJM Interconnection, LLC	Not Applicable
Hoang	Liem	PJM Interconnection, LLC	Not Applicable
Horger	Tim	PJM Interconnection, LLC	Not Applicable
Hsia	Eric	PJM Interconnection, LLC	Not Applicable
Hugee	Jacquelynn	PJM Interconnection, LLC	Not Applicable
Hutchinson	Chad	PJM Interconnection, LLC	Not Applicable
Keech	Adam	PJM Interconnection, LLC	Not Applicable
Kelley	Michael	PJM Interconnection, LLC	Not Applicable
Koza	Frank	PJM Interconnection, LLC	Not Applicable
Larocque	Matthew	PJM Interconnection, LLC	Not Applicable
Lauterbach	Victoria	PJM Interconnection, LLC	Not Applicable
Loomis	Hal	PJM Interconnection, LLC	Not Applicable
MacGibbon	Doug	PJM Interconnection, LLC	Not Applicable
Manion	Evelyn	PJM Interconnection, LLC	Not Applicable
McGlynn	Paul	PJM Interconnection, LLC	Not Applicable
McLavery	Megan	PJM Interconnection, LLC	Not Applicable

O'Neill	Jack	PJM Interconnection, LLC	Not Applicable
Pam	Simon	PJM Interconnection, LLC	Not Applicable
Perera	Asanga	PJM Interconnection, LLC	Not Applicable
Pilong	Chris	PJM Interconnection, LLC	Not Applicable
Schuyler	Ken	PJM Interconnection, LLC	Not Applicable
Schweizer	David	PJM Interconnection, LLC	Not Applicable
Seiler	Ken	PJM Interconnection, LLC	Not Applicable
Slusser	Jeff	PJM Interconnection, LLC	Not Applicable
Souder	Dave	PJM Interconnection, LLC	Not Applicable
Stotesbury	Christina	PJM Interconnection, LLC	Not Applicable
Stout	Joe	PJM Interconnection, LLC	Not Applicable
Swimm	Nora	PJM Interconnection, LLC	Not Applicable
Tribulski	Jen	PJM Interconnection, LLC	Not Applicable
Velasco	Cheryl	PJM Interconnection, LLC	Not Applicable
Walter	Laura	PJM Interconnection, LLC	Not Applicable
Watkin	Erik	PJM Interconnection, LLC	Not Applicable
Williams	Stan	PJM Interconnection, LLC	Not Applicable