

Markets and Reliability Committee

Webex Only

January 27, 2021

9:00 a.m. – 1:15 p.m.

Administration

Stu Bresler and Dave Anders welcomed stakeholders and provided the Anti-trust, Code of Conduct, and Meeting Participation announcements. Stu Bresler noted that item E was removed from the Consent Agenda, and would be combined with item 10, Recent FERC Order Regarding the Capacity Market, to be addressed immediately after the Consent Agenda, as the first item under Endorsements/Approvals.

Consent Agenda

Items A through D and F were **approved/endorsed** by acclamation with one objection (item A) and no abstentions.

- A. Draft minutes of the December 17, 2020 meeting of the Markets and Reliability Committee (MRC).
- B. Proposed revisions to Manual 6: Financial Transmission Rights addressing the enforcement of FTR Bid Limits at the corporate entity level.
- C. Proposed revisions to Manual 12: Balancing Operations resulting from the periodic review.
- D. Proposed revisions to Manual 13: Emergency Operations resulting from the periodic review.
- E. Removed from the Consent Agenda and combined with item 10.
- F. Proposed revisions to Manual 38: Operations Planning resulting from the periodic review.

Endorsements/Approvals

10. Recent FERC Order Regarding the Capacity Market

Chen Lu provided an update on the recent FERC Order regarding the Capacity Market. Jeff Bastion reviewed proposed revisions to Manual 18: PJM Capacity Market conforming to the FERC-ordered rule changes in the Minimum Offer Price Rule and Forward Energy & Ancillary Services Offset dockets (Docket Nos. EL16-49-003, EL18-178-003, ER18-1314-006 and EL19-58). Jason Barker proposed a friendly amendment to change “may” to “must” in the redlined sentence below:

Seller’s financial accounting (e.g., independently audited financial statements), ~~or~~ **To the extent the seller has not executed project financing for the resource, the Capacity Market Seller may submit project financing documents for the resource** ~~or~~ evidence of actual costs or financing assumptions of recent comparable projects ~~to the extent the seller has not executed project financing for the resource (e.g., independent project engineer opinion or manufacturer’s performance guarantee)~~ ~~, or~~ opinions of third-party experts regarding the

There were no objections to this being considered friendly, and therefore it was incorporated into the proposed revisions. Following discussion, the committee **endorsed** the proposed revisions by acclamation with no objections or abstentions.

[Issue Tracking: Capacity Market Minimum Offer Price Rule \(MOPR\) Order](#)

1. Manual 14C Revisions

Mark Sims reviewed proposed revisions to Manual 14C: Generation and Transmission Interconnection Facility Construction as part of the biennial cover-to-cover review. Greg Poulos, on behalf of the Delaware Division of the Public Advocate, proposed a friendly amendment to modify Manual 14C sections 6.1.2 and 6.2.1 as shown below:

<p>6.1.2 Tracking: PJM may request additional information regarding projects consistent with PJM Manual 14B, section 1.4.2.3, including status of permits and state approvals that impact the project schedule. Any permit or certificate delays that are anticipated to impact the projected in-service date should be timely communicated to PJM. Regular updates need to include the following:</p> <ul style="list-style-type: none"> • General status of engineering and construction (including any relevant regulatory siting authority approval necessary for the project and the status of such approval) • Percent complete (Transmission Owners should follow 'percent complete' guidance given the 'Schedule and Milestone Tracking' section) • Current target in-service date or actual completion date
<p>6.2.1 Tracking: PJM may request additional information regarding projects consistent with PJM Manual 14B, section 1.4.2.3, including status of permits and state approvals that impact the project schedule. Any permit or certificate delays that are anticipated to impact the projected in-service date should be timely communicated to PJM. Regular updates from the Transmission Owners need to include the following:</p> <ul style="list-style-type: none"> • General status of engineering and construction (including any relevant regulatory siting authority approval necessary for the project and the status of such approval) • Percent complete (Transmission Owners should follow 'percent complete' guidance given the 'Schedule and Milestone Tracking' section) • Current target in-service date or actual completion date <p style="text-align: right;">Greg Poulos, CAPS PJM MRC, January 27, 2021</p>

There were no objections to this being friendly, and therefore it was incorporated into the main motion. Following discussion, the committee **endorsed** the proposed revisions by acclamation with one objection and one abstention.

2. Real Time Values Market Rules

Laura Walter reviewed a proposed solution package addressing Real Time Values Market Rules and corresponding revisions to Manual 11: Energy & Ancillary Services Market Operations, Tariff Attachment K and Operating Agreement (OA) Schedule 1. Following discussion, the committee **endorsed** the proposed revisions in a sector-weighted vote with 4.9 in favor.

[Issue Tracking: Real Time Market Values](#)

3. PRD Credits Disposition

Pete Langbein reviewed a proposed solution package addressing the disposition of PRD credits and corresponding revisions to Manual 11: Energy & Ancillary Services Market Operations, Manual 18: PJM Capacity Market, OA, Tariff, and Reliability Assurance Agreement (RAA). Following discussion, the committee **endorsed** the proposed revisions by acclamation with no objections or abstentions.

[Issue Tracking: Price Responsive Demand \(PRD\) Credits Disposition](#)

4. Stability Limits in Markets and Operations

- A. Lisa Morelli provided an overview of the MIC’s work activities and related procedural history for the Stability Limits in Markets and Operations issue.
- B. Joe Ciabattoni reviewed the proposed Capacity Constraint solution package (the main motion) and corresponding Operating Agreement (OA) and Tariff revisions.
- C. Paul Sotkiewicz, on behalf of JPower, reviewed the proposed Opportunity Cost solution package (the first alternate proposal).

Following discussion, the committee **endorsed** the proposed OA and Tariff revisions associated with the Capacity Constraint solution package (the main motion) in a sector-weighted vote with 4.05 in favor.

[Issue Tracking: Stability Limits in Markets and Operations](#)

5. Black Start Unit Testing, CRF, Involuntary Termination, MTSL and Substitution Rules

Becky Davis reviewed proposed solution packages addressing Black Start Unit Involuntary Termination, Substitution Rules, Capital Recovery Factor (CRF) and Minimum Tank Suction Level (MTSL) and corresponding revisions to the Tariff, Manual 12: Balancing Operations, Manual 14D: Generator Operational Requirements, and Manual 15: Cost Development Guidelines. Following discussion, the Main motion **failed** in a sector-weighted vote with 2.48 in favor. The alternate motion also **failed** in a sector-weighted vote with 2.47 in favor.

[Black Start Unit Involuntary Termination & Substitution Rules](#)

First Readings

6. Black Start Unit Testing, CRF, Involuntary Termination, MTSL and Substitution Rules including Existing Resources

Greg Poulos, on behalf of Delaware Division of the Public Advocate, reviewed a proposed solution package addressing Black Start Unit Involuntary Termination, Substitution Rules, Capital Recovery Factor (CRF) and Minimum Tank Suction Level (MTSL) that includes existing resources.

Alex Stern, PSEG, moved and David Scarpignato, Calpine, seconded that the OC be directed to discuss and act on the Proposal of the DE Public Advocate; additional proposals may be considered as well. Following discussion, the motion **failed** in a sector-weighted vote with 2.2 in favor.

The committee may be asked to vote on the proposal of the Delaware Division of the Public Advocate at a future meeting.

7. Storage as a Transmission Asset (SATA)

- A. Michele Greening provided an overview of the SATA work activities and timeline.
- B. Jeffrey Goldberg reviewed the proposed solution package addressing storage as a transmission asset.

- C. Pauline Foley was available to review Tariff and OA revisions supporting the solution package.
- D. Sharon Segner, LS Power, intends to propose a friendly amendment to this agenda item. Related materials have been posted with this agenda item in addition to under agenda item 8.

The committee will be asked to endorse the proposed solution and revisions at its next meeting.

[Issue Tracking: Storage As a Transmission Asset](#)

8. Competitive Exemption OA Revisions for SATA Resources

Sharon Segner, LS Power, reviewed proposed OA revisions regarding the competitive procurement exemption – in particular, the immediate need reliability exemption process related to SATA resources. The committee may be asked to endorse the revisions at a future meeting.

9. PJM Manuals

- A. Maureen Curley reviewed proposed revisions to Manual 40: Training and Certification Requirements resulting from the periodic review. The committee will be asked to endorse the revisions at its next meeting.

Informational Reports

Item 10 was combined with Consent Agenda item E and moved to Endorsements/Approvals.

Informational Posting Only

None

Future Agenda Items

No new future agenda items were identified.

Future Meeting Dates

February 24, 2021	9:00 a.m.	WebEx
March 24, 2021	9:00 a.m.	WebEx
April 21, 2021	9:00 a.m.	WebEx
May 26, 2021	9:00 a.m.	WebEx
June 23, 2021	9:00 a.m.	WebEx
July 28, 2021	9:00 a.m.	TBD
August 25, 2021	9:00 a.m.	TBD
September 29, 2021	9:00 a.m.	TBD
October 20, 2021	9:00 a.m.	TBD
November 17, 2021	9:00 a.m.	TBD
December 15, 2021	9:00 a.m.	TBD

Author: D. Anders

Meeting Attendance

Facilitator/Secretary

Last Name	First Name	Company	Sector
Bresler	Stu	PJM Interconnection, LLC	Not Applicable
Anders	David	PJM Interconnection, LLC	Not Applicable

Voting Attendees

Last Name	First Name	Company	Sector
Barker	Jason	Exelon Business Services Company, LLC	Transmission Owner
Benckek	Jim	American Transmission Systems, Inc.	Transmission Owner
Bleiweis	Bruce	DC Energy, LLC	Other Supplier
Brodbeck	John	EDP Renewables North America LLC	Generation Owner
Bruce	Susan	Rep'g. Air Products & Chemicals, Inc.	End-Use Customer
Bruce	Susan	Rep'g. Cleveland-Cliffs Steel LLC	End-Use Customer
Bruce	Susan	Rep'g. Gerdau Ameristeel Energy, Inc.	End-Use Customer
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-Use Customer
Bruce	Susan	Rep'g. Letterkenny Industrial Development Authority - PA	Electric Distributor
Bruce	Susan	Rep'g. MeadWestvaco Corporation	End-Use Customer
Bruce	Susan	Rep'g. Messer LLC	End-Use Customer
Bruce	Susan	Rep'g. Praxair, Inc.	End-Use Customer
Bruce	Susan	Rep'g. Procter & Gamble Paper Products Company (The)	End-Use Customer
Bruce	Susan	Rep'g. Trustees of the University of Pennsylvania	End-Use Customer
Bruce	Susan	Rep'g. Wellsboro Electric Company	Electric Distributor
Canter	David	Appalachian Power Company	Transmission Owner
Chang	Sean	Shell Energy North America (US), L.P.	Other Supplier
Davis	James	Virginia Electric & Power Company	Transmission Owner
Domian	Christin	Duquesne Light Company	Transmission Owner
Dugan	Chuck	East Kentucky Power Cooperative, Inc.	Transmission Owner
Fitch	Neal	NRG Power Marketing, LLC	Generation Owner
Foladare	Kenneth	Geenex Solar LLC	Generation Owner
Ford	Adrien	Old Dominion Electric Cooperative	Electric Distributor
Garnett	Bryan	Duke Energy Business Services LLC	Transmission Owner
Hoatson	Tom	Riverside Generating Company, L.L.C.	Generation Owner
Hohenshilt	Jennifer	Talen Energy Marketing, LLC	Generation Owner
Horstmann	John	Dayton Power & Light Company (The)	Transmission Owner
Hyzinski	Thomas	Rep'g. Carroll County Energy LLC	Generation Owner
Hyzinski	Thomas	Rep'g. Dynegy Marketing and Trade, LLC	Generation Owner
Hyzinski	Thomas	Rep'g. GenOn Energy Management, LLC	Generation Owner
Islam	Lubaba	Rockland Electric Company	Transmission Owner
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 Pennsylvania (The)	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	Electric Distributor
Johnson	Carl	Rep'g. Madison Gas & Electric Co.	Other Supplier
Johnson	Carl	Rep'g. Michigan Public Power Agency	Generation Owner
Johnson	Carl	Rep'g. North Carolina Electric Membership Corporation	Electric Distributor
Johnson	Carl	Rep'g. North Carolina Municipal Power Agency Number 1	Other Supplier
Johnson	Carl	Rep'g. Northern Illinois Municipal Power Agency	Electric Distributor
Johnson	Carl	Rep'g. Northern Virginia Electric Cooperative (NOVEC)	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
Kauffman	Brian	Enel X North America, Inc.	Other Supplier
Keenan	Matthew	Elwood Energy, LLC	Generation Owner
Kelly	Stephen	Brookfield Renewable Trading and Marketing LP	Other Supplier
Kilgallen	Kevin	Avangrid Renewables, LLC	Generation Owner
Kogut	George	New York Power Authority	Other Supplier
Lieberman	Steven	American Municipal Power, Inc.	Electric Distributor
Long	Scott	Allegheny Electric Cooperative, Inc.	Electric Distributor
Pakela	Greg	DTE Energy Trading, Inc.	Other Supplier
Poulos	Greg	Rep'g. Consumer Protection and Advocate Division of the Tennessee Attorney General	End-Use Customer
Poulos	Greg	Rep'g. Delaware Division of the Public Advocate	End-Use Customer
Poulos	Greg	Rep'g. Illinois Citizen Utility Board	End-Use Customer
Poulos	Greg	Rep'g. Indiana Office of Utility Consumer Counselor (IN OUCC)	End-Use Customer
Poulos	Greg	Rep'g. Maryland Office of People's Counsel	End-Use Customer
Poulos	Greg	Rep'g. Michigan Department of Attorney General, Environment, Natural Resources, & Agriculture Division	End-Use Customer
Poulos	Greg	Rep'g. New Jersey Division of Rate Counsel	End-Use Customer
Poulos	Greg	Rep'g. Office of the Attorney General, Kentucky	End-Use Customer
Poulos	Greg	Rep'g. Office of the People's Counsel for the District of Columbia	End-Use Customer
Poulos	Greg	Rep'g. Ohio Consumers' Counsel	End-Use Customer
Poulos	Greg	Rep'g. Pennsylvania Office of Consumer Advocate	End-Use Customer
Poulos	Greg	Rep'g. Public Staff - North Carolina Utilities Commission	End-Use Customer
Poulos	Greg	Rep'g. Virginia Division of Consumer Counsel	End-Use Customer
Poulos	Greg	Rep'g. West Virginia Consumer Advocate Division	End-Use Customer
Rohrbach	John	Big Savage, LLC	Generation Owner
Rohrbach	John	Rep'g. Kentucky Municipal Energy Agency	Electric Distributor
Rohrbach	John	Rep'g. Southern Maryland Electric Cooperative, Inc.	Electric Distributor
Rohrbach	John	Rep'g. Wabash Valley Power Association, Inc.	Electric Distributor
Rumsey	Amanda	PPL Electric Utilities Corporation d/b/a PPL Utilities	Transmission Owner
Scarpignato	David	Calpine Energy Services, L.P.	Generation Owner
Skucas	Ruta	Rep'g. Alphataraxia Palladium LLC	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. Boston Energy Group, Inc.	Other Supplier
Skucas	Ruta	Rep'g. Dufossat Capital I, LLC	Other Supplier
Skucas	Ruta	Rep'g. Greene Energy NE LLC	Other Supplier
Skucas	Ruta	Rep'g. Hexis Energy Trading, LLC	Other Supplier
Skucas	Ruta	Rep'g. MAG Energy Solutions, Inc.	Other Supplier
Skucas	Ruta	Rep'g. Monterey MA LLC	Other Supplier
Skucas	Ruta	Rep'g. Precept Power LLC	Other Supplier

Skucas	Ruta	Rep'g. Pure Energy, Inc.	Other Supplier
Skucas	Ruta	Rep'g. Red Wolf PT, LLC	Other Supplier
Skucas	Ruta	Rep'g. Taller Cube, LLC	Other Supplier
Skucas	Ruta	Rep'g. Velocity American Energy Master I, L.P.	Other Supplier
Skucas	Ruta	Rep'g. XO Energy MA, L.P.	Other Supplier
Stern	Alex	Public Service Electric & Gas Company	Transmission Owner
Stewart	Travis	Rep'g. Covanta Energy Group, LLC	Generation Owner
Stewart	Travis	Rep'g. Energy Harbor LLC	Generation Owner
Stewart	Travis	Rep'g. Jersey Green Energy, LLC	Other Supplier
Stewart	Travis	Rep'g. Longview Power, LLC	Generation Owner
Stewart	Travis	Rep'g. York County Solid Waste and Refuse Authority	Generation Owner
Swalwell	Bradley	Tangent Energy Solutions, Inc.	Other Supplier
Vayda	Brian	Rep'g. Borough of Butler, Butler Electric Division	Electric Distributor
Vayda	Brian	Rep'g. Borough of Lavallette, New Jersey	Electric Distributor
Vayda	Brian	Rep'g. Borough of Madison, New Jersey	Electric Distributor
Vayda	Brian	Rep'g. Borough of Milltown, New Jersey	Electric Distributor
Vayda	Brian	Rep'g. Borough of Park Ridge, New Jersey	Electric Distributor
Vayda	Brian	Rep'g. Borough of Pemberton, New Jersey	Electric Distributor
Vayda	Brian	Rep'g. Borough of Seaside Heights, New Jersey	Electric Distributor
Vayda	Brian	Rep'g. Borough of South River, New Jersey	Electric Distributor
Vayda	Brian	Rep'g. Vineland Municipal Electric Utility	Electric Distributor
Whitehead	Jeffrey	Rep'g. Eastern Generation, LLC	Generation Owner
Whitehead	Jeffrey	Rep'g. Essential Power Rock Springs, LLC	Generation Owner
Whitehead	Jeffrey	Rep'g. Neptune Regional Transmission System, LLC	Transmission Owner
Whitehead	Jeffrey	Rep'g. Wheelabrator Falls Inc.	Generation Owner

Non-Voting Attendees

Last Name	First Name	Company	Sector
Abend	Erik	EA Consulting	Not Applicable
Anderson	Jared	Platts	Not Applicable
Bainbridge	Tom	Energy Harbor LLC	Generation Owner
Berton	Tyler	AEP Appalachian Transmission Company, Inc	Transmission Owner
Bleiweis	Bruce	DC Energy, LLC	Other Supplier
Bloom	David	Baltimore Gas And Electric LLC	Transmission Owner
Bowring	Joseph	Monitoring Analytics	Not Applicable
Breidenbaugh	Aaron	Rodan Energy Solutions (USA) Inc.	Other Supplier
Brodbeck	John	EDP Renewables North Aeric LLC	Generation Owner
Campbell	Bruce	Enerwise Global Technologies, LLC	Other Supplier
Carmean	Gregory	OPSI	Not Applicable
Carrado	Regina	Exelon Business Services Company, LLC	Transmission Owner
Carrier	Ronald	Direct Energy Business, LLC	Other Supplier
Cerchio	Jerry	Monitoring Analytics	Not Applicable
Chang	Sean	Shell Energy North America (US), L.P.	Other Supplier
Christopher	Mahila	The Public Utilities Commission Of Ohio	Not Applicable
Cocco	Michael	Old Dominion Electric Cooperative	Electric Distributor
Cronin	Denise	East Kentucky Power Cooperative, Inc.	Transmission Owner
Crystle	Gil	Ugi Energy Services, LLC	Other Supplier
D' Alessandris	Lou	American Transmission Systes, Inc.	Transmission Owner
Dailey	Mike	Northern Virginia Electric Cooperative (NOVEC)	Electric Distributor
Delosa	Joe	New Jersey Board Of Public Utilities	Not Applicable
Denby	Brett	Northern Virginia Electric Cooperative (NOVEC)	Electric Distributor
Depillo	Ray	Public Service Electric & Gas Company	Transmission Owner
Dillon	Matt	Ugi Development Company	Generation Owner

Duensing	Allison	Saracen Energy East LP	Other Supplier
Elkins	Rachel	American Transmission Sysytes, Inc.	Transmission Owner
Engleman	Michael	LS Power	Not Applicable
Ericson	Christine	Illinois Commerce Commission	Not Applicable
Everngam	Scott	Blue Horseshoe Energy	Not Applicable
Fazio	Danielle	Engelhart CTP (US) LLC	Other Supplier
Feller	John	PPL Electric Utilities Corporation d/b/a PPL Utilities	Transmission Owner
Filomena	Guy	Customized Energy Solutions, Ltd.	Not Applicable
Foster	Denise	East Kentucky Power Cooperative, Inc.	Transmission Owner
Fuerst	Gary	American Transmission Sysytes, Inc.	Transmission Owner
Fuess	Christian	PBF Power Marketing, LLC	Generation Owner
Gahimer	Mike	Indiana Office of Utility Consumer Counselor (IN OUCC)	End-Use Customer
Gates	Terry	Appalachian Power Company	Transmission Owner
Gebolys	Debbie	Public Utilites Commission Of Ohio	Not Applicable
Gilani	Rehan	Consolidated Edison Energy, Inc.	Other Supplier
Greiner	Gary	Public Service Electric & Gas Company	Transmission Owner
Grieve	Andrew	Pine Gate Renewables, LLC	Not Applicable
Guerry	Katie	Enel X North America, Inc.	Other Supplier
Guntle	Vince	American Powernet Management, L.P.	End-Use Custoer
Guy	Gary	Exelon Business Services Company, LLC	Transmission Owner
Hanser	Erik	Michigan Public Service Commission	Not Applicable
Heinle	Erik	Office of the People's Counsel for the District of Columbia	End-Use Customer
Heitmeyer	Chad	Appalachian Power Company	Transmission Owner
Herrera	Steve	Duke Energy Business Services LLC	Transmission Owner
Hollis	Gabriel	Nextera Energy Resources, LLC	Not Applicable
Horning	Lynn	Customized Energy Solutions, Ltd.	Not Applicable
Horstmann	John	Dayton Power And Light Company (The)	Transmission Owner
Hudis	Gabriella	Gabel Associates	Not Applicable
Hull	Gerit	American Municipal Power, Inc.	Electric Distributor
Hyzinski	Tom	Gt Power Group, LLC	Not Applicable
Iler	Art	Indiana Office of Utility Consumer Counselor (IN OUCC)	End-Use Customer
Islam	Lubaba	Rockland Electric Company	Transmission Owner
Jens	Tom	Black Oak Capital, LLC	Other Supplier
Jett	William	Duke Energy Business Services LLC	Transmission Owner
Johnson	David	Indiana Utilty Reglatory Commission	Not Applicable
Johnson	Ryan	Appalachian Power Company	Transmission Owner
Josyula	Siva	Monitoring Analytics	Not Applicable
Kozuharov	Dimitar	The Delaware Public Service Commission	Not Applicable
Laios	Takis	Appalachian Power Company	Transmission Owner
Lawson	David	Josaka	Not Applicable
Lawson	Ryen	Dominion Energy Generation Marketing, Inc.	Generation Owner
Liang-Nicol	Cecilia	American Transmission Sysytes, Inc.	Transmission Owner
Lieberman	Steven	American Municipal Power, Inc.	Electric Distributor
Mabry	David	McNees, Wallace & Nurick, LLC	Not Applicable
Mariam	Yohannes	Office of the People's Counsel for the District of Columbia	End-Use Customer
Markiewicz	Cynthia	American Transmission Sysytes, Inc.	Transmission Owner
Martin	Valerie	Federal Energy Regulatory Commission	Not Applicable
Mcalister	Lisa	American Municipal Power, Inc.	Electric Distributor
Meeks	Laurel	Duke Energy Business Services LLC	Transmission Owner
Michael	Cocco	Old Dominion Electric Cooperative	Electric Distributor
Midgley	Sharon	Exelon Business Services Company, LLC	Transmission Owner
Monn	Alex	MISO	Not Applicable
Nadel	Steven	PPL Electric Utilities Corporation d/b/a PPL Utilities	Transmission Owner

Newman	Jonathan	Fluence Energy, LLC	Generation Owner
Nix	Emma	Gabel Associates	Not Applicable
Okenfuss	James	Savion	Not Applicable
Ondayko	Brock	Appalachian Power Company	Transmission Owner
Peoples	John	Duquesne Light Company	Transmission Owner
Philips	Marji	Riverside Generating Company, L.L.C.	Generation Owner
Price	Ruth	Delaware Division of the Public Advocate	End-Use Customer
Quinn	Arnie	Vistra	Not Applicable
Rainey	Frank	PEI Power LLC	Generation Owner
Rainey	John	Northern Virginia Electric Cooperative (NOVEC)	Electric Distributor
Robinson	Becky	Vistra	Not Applicable
Rodriguez	Tomas	OPSI	Not Applicable
Rooney	Alexa	PPL Electric Utilities Corporation d/b/a PPL Utilities	Transmission Owner
Rutigliano	Tom	National Resource Defense Council	Not Applicable
Sasser	Jonathan	Customized Energy Solutions, Ltd.	Not Applicable
Schisler	Kenneth	Cpower Corp.	Not Applicable
Schmidt	Tom	Buckeye Power, Inc.	Electric Distributor
Schreim	Morris	Maryland Public Service Commission	Not Applicable
Segner	Sharon	LS Power	Not Applicable
Shah	Pulin	Exelon Business Services Company, LLC	Transmission Owner
Shanker	Roy	H.Q. Energy Services (U.S.), Inc.	Other Supplier
Singer	Chad	Trane Grid Services, LLC	Other Supplier
Skumanich	Bill	RTR Energy Solutions LLC	Not Applicable
Sorrels	James	Appalachian Power Company	Transmission Owner
Sotkiewicz	Paul	Elwood Energy, LLC	Generation Owner
Squibb	Bill	Ohio Valley Electric Corporation	Transmission Owner
Stone	Andy	Gabel Associates	Not Applicable
Stuchell	Jeff	American Transmission Sysytes, Inc.	Transmission Owner
Stupar	Rob	Invenergy, LLC	Generation Owner
Sturgeon	John	Duke Energy Business Services LLC	Transmission Owner
Svenson	Heather	Public Service Electric & Gas Company	Transmission Owner
Sweeney	Rory	Gt Power Group, LLC	Not Applicable
Switzer	Christina	LS Power	Not Applicable
Tangirala	Subha	Hitachi Power Grids	Not Applicable
Tatum	Ed	American Municipal Power, Inc.	Electric Distributor
Taylor	Robert	Exelon Business Services Company, LLC	Transmission Owner
Thomas	Amber	Exelon Business Services Company, LLC	Transmission Owner
Thomas	Sharon	Energy Storage Association	Not Applicable
Thundiyil	Kevin	Exelon Business Services Company, LLC	Transmission Owner
Tidbettf	Maeve	Pierce Atwood	Not Applicable
Tyler	Catherine	Monitoring Analytics	Not Applicable
Walker	Jennifer	Exelon Business Services Company, LLC	Transmission Owner
Wehnes	Kathleen	Maryland Department of the Environment	Not Applicable
Whitehead	Jeff	Gt Power Group, LLC	Not Applicable
Wicks	Tonja	Duquesne Light Company	Transmission Owner
Xenopoulos	Damon	Smxb	Not Applicable
Yoder	Michael	RTO Insider	Not Applicable

PJM Attendees

Last Name	First Name	Company	Sector
Asthana	Manu	PJM Interconnection, LLC	Not Applicable
Babp	Alan	PJM Interconnection, LLC	Not Applicable
Bastian	Jeff	PJM Interconnection, LLC	Not Applicable

Bautista	Alejandro	PJM Interconnection, LLC	Not Applicable
Bennett	Daniel	PJM Interconnection, LLC	Not Applicable
Berner	Aaron	PJM Interconnection, LLC	Not Applicable
Bernstein	Matthew	PJM Interconnection, LLC	Not Applicable
Boyle	Glen	PJM Interconnection, LLC	Not Applicable
Bruno	Patrick	PJM Interconnection, LLC	Not Applicable
Bryson	Michael	PJM Interconnection, LLC	Not Applicable
Cao	Roger	PJM Interconnection, LLC	Not Applicable
Chen	Wang	PJM Interconnection, LLC	Not Applicable
Chmielewski	Brian	PJM Interconnection, LLC	Not Applicable
Ciabattoni	Joseph	PJM Interconnection, LLC	Not Applicable
Connell	Jason	PJM Interconnection, LLC	Not Applicable
Coyne	Suzanne	PJM Interconnection, LLC	Not Applicable
Curley	Maureen	PJM Interconnection, LLC	Not Applicable
Davis	Becky	PJM Interconnection, LLC	Not Applicable
Devita	Thomas	PJM Interconnection, LLC	Not Applicable
Drauschak	Lisa	PJM Interconnection, LLC	Not Applicable
Egan	Amanda	PJM Interconnection, LLC	Not Applicable
Fabiano	Janell	PJM Interconnection, LLC	Not Applicable
Fitzpatrick	Brian	PJM Interconnection, LLC	Not Applicable
Foley	Pauline	PJM Interconnection, LLC	Not Applicable
Foley	Sheila	PJM Interconnection, LLC	Not Applicable
Glatz	Suzanne	PJM Interconnection, LLC	Not Applicable
Glazer	Craig	PJM Interconnection, LLC	Not Applicable
Goldberg	Jeffrey	PJM Interconnection, LLC	Not Applicable
Greening	Michele	PJM Interconnection, LLC	Not Applicable
Haque	Asim	PJM Interconnection, LLC	Not Applicable
Hatch	Kevin	PJM Interconnection, LLC	Not Applicable
Hauske	Thomas	PJM Interconnection, LLC	Not Applicable
Hislop	David	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	Jacquelyn	PJM Interconnection, LLC	Not Applicable
Keech	Adam	PJM Interconnection, LLC	Not Applicable
Langbein	Pete	PJM Interconnection, LLC	Not Applicable
Loebl	Margo	PJM Interconnection, LLC	Not Applicable
Lu	Chen	PJM Interconnection, LLC	Not Applicable
Lynch	Jessica	PJM Interconnection, LLC	Not Applicable
Mcglynn	Paul	PJM Interconnection, LLC	Not Applicable
McLavery	Megan	PJM Interconnection, LLC	Not Applicable
Morelli	Lisa	PJM Interconnection, LLC	Not Applicable
Muhl	Nancy	PJM Interconnection, LLC	Not Applicable
O'Hara	Chris	PJM Interconnection, LLC	Not Applicable
Patel	Anita	PJM Interconnection, LLC	Not Applicable
Phillips	Darlene	PJM Interconnection, LLC	Not Applicable
Pilong	Chris	PJM Interconnection, LLC	Not Applicable
Pincus	Steven	PJM Interconnection, LLC	Not Applicable
Schweizer	David	PJM Interconnection, LLC	Not Applicable
Seiler	Ken	PJM Interconnection, LLC	Not Applicable
Sims	Mark	PJM Interconnection, LLC	Not Applicable
Smith	Neil	PJM Interconnection, LLC	Not Applicable
Souder	Dave	PJM Interconnection, LLC	Not Applicable

Souder	Michelle	PJM Interconnection, LLC	Not Applicable
Stanisz	Mark	PJM Interconnection, LLC	Not Applicable
Terranova	Chris	PJM Interconnection, LLC	Not Applicable
Tribulski	Jennifer	PJM Interconnection, LLC	Not Applicable
Walter	Laura	PJM Interconnection, LLC	Not Applicable
Widom	Stuart	PJM Interconnection, LLC	Not Applicable
Yeaton	Andrea	PJM Interconnection, LLC	Not Applicable