

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 committee 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 |

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|-----------|----------|--|----------------------|
| 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 Icetec.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 |

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|-----------|--------|--|----------------------|
| 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 |

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| 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 |
| 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 |

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| 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 |

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| 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 |

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| 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 |
| Xenopoulos | 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 |

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|-------------|------------|--------------------------|----------------|
| 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 |
| McLaverty | Megan | PJM Interconnection, LLC | Not Applicable |
| O'Neill | Jack | PJM Interconnection, LLC | Not Applicable |

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| 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 |