



Markets and Reliability Committee
PJM Conference and Training Center, Valley Forge, PA
April 25, 2019
9:00 a.m. – 12:30 p.m. EPT

Administration

Ms. Denise Foster and Mr. Dave Anders welcomed stakeholders, reviewed the agenda, and provided the Anti-trust and Code of Conduct announcements.

Ms. Foster commented that she and the other PJM leaders have received stakeholder feedback regarding the volume and pace of stakeholder meetings. She noted that PJM leaders have considered opportunities to reduce the significant number of stakeholder issues and meetings. She also noted recent stakeholder questions about the process and timing regarding the new Fuel Security Senior Task Force, particularly in light of PJM initiating stakeholder discussions on another important topic – the GreenHat report recommendations. She recommended recalibrating the meeting frequency of the Fuel Security Senior Task Force (FSSTF) consistent with the phasing established by the group's Issue Charge. Ms. Foster suggested the following path forward for the FSSTF:

- Continue with the two scheduled Fuel Security Senior Task Force meetings on April 26, 2019 and May 17, 2019.
- Add an item to the May 17, 2019 agenda to discuss modifications to the future meeting schedule to identify where meetings can be canceled, shortened or rescheduled.

There was no objection to pursuing this path.

Ms. Tawnya Luna provided an informational update regarding browser support.

Consent Agenda

Mr. Sean Bauer, GlidePath Power Operations, LLC, requested that item D, proposed revisions to Manual 21: Rules & Procedures for Determination of Generating Capability, be removed for separate consideration, noting activity in FERC Docket # ER19-469. Following commitment from PJM to continue development of additional revisions to Manual 21 related to Effective Load Carrying Capability considering the content of the FERC Docket at the Planning Committee, the committee **endorsed** the proposed revisions by acclamation with no objections and four abstentions.

Items A, B, C and E were approved/endorsed by acclamation with no objections and one abstention.

- A. Minutes of the March 21, 2019 meeting of the Markets and Reliability Committee (MRC)
- B. Proposed updates to Manual 11: Energy & Ancillary Services Market Operations to reflect the addition of location fields in DR Hub
- C. Proposed updates to Manual 11: Energy & Ancillary Services Market Operations as part of the biennial review





Proposed revisions to the PJM Regional Business Practices document associated with the new OASIS application

Endorsements/Approvals

1. Must Offer Exception Process

- A. Mr. Pat Bruno presented the MRC main motion for the Must Offer Exception Process. Following discussion, the proposed main motion **failed** in a sector-weighted vote with 2.07 in favor.
- B. Ms. Sharon Midgley, Exelon, reviewed an alternate proposal endorsed by the MIC at its March meeting. Following discussion, the proposed alternate motion <u>failed</u> in a sector-weighted vote with 1.82 in favor.

Ms. Susan Bruce, PJM Industrial Customer Coalition, moved and Ms. Adrien Ford, ODEC, seconded the PJM/IMM proposal that was developed in the Market Implementation Committee. Following discussion, the proposed main motion **endorsed** in a sector-weighted vote with 3.74 in favor.

During consideration of the vote, stakeholders discussed the linkage of CIRs and the capacity market must offer requirement and requested that the Market Implementation Committee include on its next agenda an item to continue the discussion of equity issues associated with the linkage. It was left to the MIC to determine whether a revised problem statement and issue charge could be utilized or a new problem statement and issue charge need be developed.

Issue Tracking: Must Offer Exception Process

2. Market Efficiency Process Enhancement Task Force

Mr. Brian Chmielewski presented the Market Efficiency phase 2 proposal and associated revisions to Manual 14B: Regional Transmission Planning Process, Manual 14F: Competitive Planning Process, and Operating Agreement Schedule 6 language. Following discussion, the committee **endorsed** the proposal by acclamation with one objection and one abstention.

Issue Tracking: RTEP Market Efficiency Analysis

3. FTR Forfeiture Hourly Component

- A. Mr. Brian Chmielewski reviewed a package of FTR Forfeiture Rule changes previously deferred at the December 20, 2018 MRC. Following discussion, the proposed rule changes <u>failed</u> in a sectorweighted vote with 2.32 in favor.
- B. Mr. Brian Chmielewski presented proposed revisions to Manual 06: Financial Transmission Rights and Operating Agreement Schedule 1 revisions to address an issue identified in the FTR Forfeiture Rule hourly cost component calculations. Following discussion, the committee **endorsed** the proposed manual revisions by acclamation with no objections or abstentions.

Issue Tracking: FTR Forfeiture Rule Changes





4. Carbon Pricing Problem Statement / Issue Charge

Mr. Michael Borgatti, Gable Associates, presented a proposed problem statement and issue charge related to carbon pricing. Mr. Borgotti discussed a proposed friendly amendment to remove Key Work Activity 8. Mr. Borgatti noted that the amendment was considered friendly and incorporated it into the proposed issue charge. Following discussion, the committee **approved** the proposed problem statement and issue charge in a sector-weighted vote with 3.92 in favor.

5. Surety Bonds

Ms. Bridgid Cummings provided an update on the surety bond topic and present a proposal related to the use of surety bonds as an acceptable form of collateral. Mr. Steve Lieberman, AMP, moved and Ms. Susan Bruce seconded deferral of voting on this proposal until no later than two MRC meetings after the new PJM Chief Risk Officer and Chief Financial Officer start; PJM will provide a recommendation to the MRC as to the efficacy of the proposed surety bonds. Following discussion, the motion to defer was approved by acclamation with no objections or abstentions.

Issue Tracking: Surety Bonds Opportunity

6. Manual 14B Amendments

- A. Mr. Aaron Berner provided an update on Planning Committee activities related to the proposed revisions to Manual 14B: Regional Transmission Planning Process which were the subject of the related main motion. Voting on the main motion was deferred at the February 21, 2019 MRC meeting.
- B. Ms. Sharon Segner moved to further defer endorsement of the main motion regarding proposed Manual 14B Amendments and to direct the Planning Committee to address topics listed in the deferral motion, including potential OA revisions. The deferral motion was posted with the materials for the meeting. Ms. Denise Foster provided a decision of the Chair that this motion was improper due to the expansion of the main motion beyond the Manual 14 B changes, which were the subject of the January MRC agenda item where Ms. Segner's original motion to defer to the Planning Committee originated, to include OA changes. Ms. Foster suggested that Ms. Segner could revise her deferral motion to delete the scope expansion language to simply allow the Planning Committee more time for discussion, which may allow the committee to develop a proposal that may rise to the MRC as a new motion from the Planning Committee untethered to Ms. Segner's pending main motion. Alternatively, Ms. Foster suggested Ms. Segner consider developing a new problem statement and issue charge to ask the Planning Committee to take on this additional scope of work. Ms. Sharon Segner moved and Mr. Barry Trayers, CitiGroup, seconded to reverse the decision of the Chair. Following discussion, Ms. Segner withdrew the motion to reverse the decision of the Chair, and revised the deferral motion such that it addressed only the deferral of the vote on the main motion to the June 27, 2019 MRC meeting. Mr. Trayers seconded the motion to defer. Ms. Segner noted that in the event related OA revisions were proposed as a friendly amendment to her pending main motion at the June 27, 2019 MRC meeting, she may consider them to be friendly. Following discussion, the motion to defer was approved by acclamation with no objection or abstentions.





7. Financial Risk Mitigation Senior Task Force (FRMSTF) Charter

Mr. Vince Duane presented the proposed Financial Risk Mitigation Senior Task Force charter. Following discussion, the committee <u>approved</u> the proposed charter upon its first reading by acclamation with two objections and three abstentions.

First Readings

8. PJM Manuals

The following proposed manual revisions were posted for first reading. There were no questions posed by stakeholders, and the committee will be asked to endorse these revisions at its next meeting.

- A. Manual 01: Control Center and Data Exchange Requirements.
- B. Manual 03: Transmission Operations.
- C. Manual 07: PJM Protection Standards.
- D. Manual 10: Prescheduling Operations.
- E. Manual 13: Emergency Operations as part of a cover to cover review.
- F. Manual 11: Energy & Ancillary Services Market Operations and Manual 13: Emergency Operations to clarify the impact of operationalizing gas contingencies on reserve requirements and reserve market eligibility.
- G. Manual 36: System Restoration.

Informational Reports

9. Fast-Start Pricing Order

Mr. Adam Keech provided an update regarding the recently issued FERC Order addressing fast-start pricing.

Future Agenda Items

No additional future agenda items were identified.

Future Meeting Dates

| May 30, 2019 | 9:00 a.m. | Valley Forge, PA |
|--------------------|-----------|------------------|
| June 27, 2019 | 9:00 a.m. | Wilmington, DE |
| July 25, 2019 | 9:00 a.m. | Valley Forge, PA |
| August 22, 2019 | 9:00 a.m. | Valley Forge, PA |
| September 26, 2019 | 9:00 a.m. | Valley Forge, PA |
| October 31, 2019 | 9:00 a.m. | Valley Forge, PA |
| December 5, 2019 | 9:00 a.m. | Valley Forge, PA |
| December 19, 2019 | 9:00 a.m. | Valley Forge, PA |
| | | |





Author: D.A. Anders

Chair/ Vice Chair/ Secretary

| | | | Transmission |
|-----------|--------|---------------------------------------|----------------------|
| Dugan | Chuck | East Kentucky Power Cooperative, Inc. | Owner |
| Lieberman | Steven | American Municipal Power, Inc. | Electric Distributor |
| Anders | David | PJM Interconnection | N/A |

Voting Participants

| Last Name | First Name | Organization | Sector |
|-------------|------------|---------------------------------------|----------------------|
| | | | Transmission |
| Barker | Jason | Exelon Business Services Company, LLC | Owner |
| Baur | Sean | GlidePath Power Operations LLC | Generation Owner |
| | | North Carolina Electric Membership | |
| Bayless | Charlie | Corporation | Electric Distributor |
| | | | Transmission |
| Benchek | Jim | American Transmission Systems, Inc. | Owner |
| Bickerstaff | Dean | Hartree Partners, LP | Other Supplier |
| Bleiweis | Bruce | DC Energy, LLC | Other Supplier |
| Borgatti | Michael | Jersey Green Energy, LLC | Other Supplier |
| Borgatti | Michael | Covanta Energy Group, LLC | Generation Owner |
| Borgatti | Michael | Carolina Solar Energy III, LLC | Other Supplier |
| Borgatti | Michael | Eagle Point Power Generation, LLC | Generation Owner |
| Borgatti | Michael | Moxie Freedom LLC | Generation Owner |
| Borgatti | Michael | NextEra Energy Marketing, LLC | Other Supplier |
| Borgatti | Michael | Cypress Creek Renewables, LLC | Generation Owner |
| | | York County Solid Waste and Refuse | |
| Borgatti | Michael | Authority | Generation Owner |
| Borgatti | Michael | Newark Energy Center, LLC | Generation Owner |
| Borgatti | Michael | Hazleton Generation, LLC | Generation Owner |
| Borgatti | Michael | Longview Power, LLC | Generation Owner |
| Brodbeck | John | EDP Renewables North America, LLC | Generation Owner |
| Bruce | Susan | Gerdau Ameristeel Energy, Inc. | Other Supplier |
| Bruce | Susan | Kimberly-Clark Corporation | Generation Owner |
| Bruce | Susan | Messer LLC | End-Use Customer |
| | | Procter & Gamble Paper Products | |
| Bruce | Susan | Company (The) | Generation Owner |
| | | Letterkenny Industrial Development | |
| Bruce | Susan | Authority - PA | Electric Distributor |
| Bruce | Susan | Industrial Energy Users-Ohio | Other Supplier |





| Bruce | Susan | ArcelorMittal USA LLC | End-Use Customer |
|---------------|-----------|--|-----------------------|
| Bruce | Susan | MeadWestvaco Corporation | End-Use Customer |
| Bruce | Susan | Praxair, Inc. | End-Use Customer |
| Bruce | Susan | Lehigh Portland Cement Company | End-Use Customer |
| Bruce | Susan | Air Products & Chemicals, Inc. | End-Use Customer |
| Chandler | Kent | Office of the Attorney General, Kentucky | End-Use Customer |
| | | | Transmission |
| Davis | James | Virginia Electric & Power Company | Owner |
| Ellison | Alan | Grays Ferry Cogeneration Partnership | Generation Owner |
| | | | |
| Evrard | David | Pennsylvania Office of Consumer Advocate | End-Use Customer |
| Farnsworth Jr | Byron | Wellsboro Electric Company | Electric Distributor |
| Fitch | Neal | NRG Power Marketing, LLC | Generation Owner |
| Foladare | Kenneth | Geenex Solar LLC | Generation Owner |
| Fuess | Christian | Diamond State Generation Partners, LLC | Generation Owner |
| Fuess | Christian | Icetec.com, Inc. | Other Supplier |
| Fuess | Christian | PBF Power Marketing, LLC | Generation Owner |
| Fuess | Christian | Kuehne Chemical Company, Inc. | Other Supplier |
| | | | Transmission |
| Greiner | Gary | Public Service Electric & Gas Company | Owner |
| Guerry | Katie | Enel X North America, Inc. | Other Supplier |
| Hastings | David | Solios Power Mid-Atlantic Trading, LLC | Other Supplier |
| Hastings | David | SESCO Enterprises, LLC | Other Supplier |
| Hastings | David | Saracen Energy East, L.P. | Other Supplier |
| Hastings | David | Northstar Trading Ltd. | Other Supplier |
| Helms | Joseph | Rainbow Energy Marketing Corporation | Other Supplier |
| Hoatson | Tom | Riverside Generating, LLC | Generation Owner |
| Hoatson | Tom | West Deptford Energy, LLC | Generation Owner |
| Hoatson | Tom | Renaissance Power & Gas, Inc. | Other Supplier |
| Hohenshilt | Jennifer | Talen Energy Marketing, LLC | Generation Owner |
| | | | Transmission |
| Horstmann | John | Dayton Power & Light Company (The) | Owner |
| Horton | Dana | Appalachian Power Company | Transmission |
| 11011011 | Dana | Appaiacilian rower Company | Owner Transmission |
| Huang | James | Rockland Electric Company | Owner |
| Hurwich | Mark | Elliott Bay Energy Trading, LLC | Other Supplier |
| Hyzinski | Thomas | Dynegy Marketing and Trade, LLC | Generation Owner |
| Hyzinski | Thomas | GenOn Energy Management, LLC | Generation Owner |
| Janicki | Diane | Boston Energy Trading and Marketing LLC | Generation Owner |





| Johnson | Carl | Indiana Municipal Power Agency | Generation Owner |
|------------|---------|--|----------------------|
| | | North Carolina Electric Membership | |
| Johnson | Carl | Corporation | Electric Distributor |
| | | Delaware Municipal Electric Corporation, | |
| Johnson | Carl | Inc. | Electric Distributor |
| Johnson | Carl | Borough of Mont Alto, Pennsylvania | Electric Distributor |
| Johnson | Carl | Thurmont Municipal Light Company | Electric Distributor |
| Johnson | Carl | Town of Williamsport (The) | Electric Distributor |
| Johnson | Carl | WPPI Energy | Other Supplier |
| Johnson | Carl | Madison Gas & Electric Co. | Other Supplier |
| Johnson | Carl | Blue Ridge Power Agency, Inc. | Electric Distributor |
| Johnson | Carl | Borough of Chambersburg | Electric Distributor |
| Johnson | Carl | Galt Power, Inc. | Other Supplier |
| | | Energy Cooperative Association of | |
| Johnson | Carl | Pennsylvania (The) | Other Supplier |
| | | Northern Virginia Electric Cooperative | |
| Johnson | Carl | (NOVEC) | Electric Distributor |
| Johnson | Carl | Northern Illinois Municipal Power Agency | Electric Distributor |
| Johnson | Carl | Allegheny Electric Cooperative, Inc. | Electric Distributor |
| Johnson | Carl | Buckeye Power, Inc. | Electric Distributor |
| Johnson | Carl | American Municipal Power, Inc. | Electric Distributor |
| Johnson | Carl | Central Virginia Electric Cooperative | Electric Distributor |
| Johnson | Carl | City of Dover, Delaware | Electric Distributor |
| Johnson | Carl | Hagerstown Light Department | Electric Distributor |
| Johnson | Carl | Illinois Municipal Electric Agency | Electric Distributor |
| | | North Carolina Municipal Power Agency | |
| Johnson | Carl | Number 1 | Other Supplier |
| Johnson | Carl | Easton Utilities Commission | Electric Distributor |
| Johnson | Carl | Old Dominion Electric Cooperative | Electric Distributor |
| Keenan | Matthew | Elwood Energy, LLC | Generation Owner |
| Kelly | Stephen | Brookfield Energy Marketing LP | Other Supplier |
| Kilgallen | Kevin | Avangrid Renewables, LLC | Generation Owner |
| Kogut | George | New York Power Authority | Other Supplier |
| Litchfield | Matt | CPV Power Holdings, LP | Generation Owner |
| Long | Scott | Allegheny Electric Cooperative, Inc. | Electric Distributor |
| _ | | | Transmission |
| O'Boyle | Brian | Rockland Electric Company | Owner |
| Pakela | Greg | DTE Energy Trading, Inc. | Other Supplier |
| Pelletier | Eveline | H.Q. Energy Services (U.S.), Inc. | Other Supplier |





| Philips | Marji | Direct Energy Business, LLC | Other Supplier |
|--------------------|--------------|--|----------------------|
| | | Indiana Office of Utility Consumer | |
| Poulos | Greg | Counselor (IN OUCC) | End-Use Customer |
| | | Michigan Department of Attorney | |
| | | General, Environment, Natural Resources, | |
| Poulos | Greg | & Agriculture Division | End-Use Customer |
| | | Public Staff - North Carolina Utilities | |
| Poulos | Greg | Commission | End-Use Customer |
| | | Consumer Protection and Advocate | |
| | | Division of the Tennessee Attorney | |
| Poulos | Greg | General | End-Use Customer |
| Poulos | Greg | Ohio Consumers' Counsel | End-Use Customer |
| Poulos | Greg | New Jersey Division of Rate Counsel | End-Use Customer |
| | | | |
| Poulos | Greg | West Virginia Consumer Advocate Division | End-Use Customer |
| Poulos | Greg | Maryland Office of People's Counsel | End-Use Customer |
| Poulos | Greg | Virginia Division of Consumer Counsel | End-Use Customer |
| Poulos | Greg | Delaware Division of the Public Advocate | End-Use Customer |
| Poulos | Greg | Illinois Citizen Utility Board | End-Use Customer |
| | | Office of the People's Counsel for the | |
| Poulos | Greg | District of Columbia | End-Use Customer |
| Duelton | Duomdo | ITC Intercept action II C | Transmission |
| Prokop Rohrbach | Brenda | ITC Interconnection LLC | Owner Other Supplier |
| ROHIDACH | John | Kentucky Municipal Energy Agency | Other Supplier |
| Dobrbook | lahn | Southern Maryland Electric Cooperative, | Flactric Distributor |
| Rohrbach | John John | Inc. | Electric Distributor |
| Rohrbach | | Wabash Valley Power Association, Inc. | Electric Distributor |
| Scarpignato | David | Calpine Energy Services, L.P. | Generation Owner |
| Skucas | Ruta | BJ Energy, LLC | Other Supplier |
| Skucas | Ruta | Dufossat Capital I, LLC | Other Supplier |
| Skucas | Ruta | Endurance Energy Midwest LLC | Other Supplier |
| Skucas | Ruta | Greene Energy NE LLC | Other Supplier |
| Skucas | Ruta | Hexis Energy Trading, LLC | Other Supplier |
| Skucas | Ruta | MAG Energy Solutions, Inc. | Other Supplier |
| Skucas | Ruta | Monterey MA, LLC | Other Supplier |
| Skucas | Ruta | Precept Power LLC | Other Supplier |
| Skucas | Ruta | Pure Energy, Inc. | Other Supplier |
| Skucas | Ruta | Red Wolf PT, LLC | Other Supplier |
| Skucas | Ruta | Big Bend Trading, LLC | Other Supplier |





| Skucas | Ruta | Alphataraxia Palladium LLC | Other Supplier |
|-----------|---------|--|-----------------------|
| Skucas | Ruta | XO Energy MA, L.P. | Other Supplier |
| Skucas | Ruta | Velocity American Energy Master I, L.P. | Other Supplier |
| Skucas | Ruta | Taller Cube, LLC | Other Supplier |
| Skucas | Ruta | Ames Energy, LLC | Other Supplier |
| Sturgeon | John | Duke Energy Business Services LLC | Transmission Owner |
| Thomas | Amber | PPL Electric Utilities Corporation d/b/a PPL Utilities | Transmission Owner |
| Trayers | Barry | Citigroup Energy, Inc. | Other Supplier |
| Vayda | Brian | Borough of Madison, New Jersey | Electric Distributor |
| Vayda | Brian | Borough of Butler, Butler Electric Division | Electric Distributor |
| Vayda | Brian | Borough of Pemberton, New Jersey | Electric Distributor |
| Vayda | Brian | Borough of Lavallette, New Jersey | Electric Distributor |
| Vayda | Brian | Borough of Seaside Heights, New Jersey | Electric Distributor |
| Vayda | Brian | Vineland Municipal Electric Utility | Electric Distributor |
| Vayda | Brian | Borough of Milltown, New Jersey | Electric Distributor |
| Vayda | Brian | Borough of South River, New Jersey | Electric Distributor |
| Vayda | Brian | Borough of Park Ridge, New Jersey | Electric Distributor |
| Wadsworth | Joe | Vitol Inc. | Other Supplier |
| Whitehead | Jeffrey | Wheelabrator Frackville Energy Co., Inc. | Generation Owner |
| Whitehead | Jeffrey | Shell Energy North America (US), L.P. | Other Supplier |
| Whitehead | Jeffrey | Essential Power Rock Springs, LLC | Transmission Owner |
| Whitehead | Jeffrey | Eastern Generation, LLC | Generation Owner |
| Wicks | Tonja | Duquesne Light Company | Transmission Owner |

Non-Voting Participants

| Last Name | First Name | Organization | Sector |
|-----------|------------|---|------------------|
| Abend | Erik | Erik Abend Consulting | N/A |
| Boyle | Stephen | Merion Energy Solutions | N/A |
| Brophy | Richard | New York State Electric And Gas | Other Supplier |
| Buensing | Allison | Saracen Energy East, L.P. | Other Supplier |
| Campbell | Bruce | Enerwise Global Technologies, Inc. | Other Supplier |
| Canter | David | American Electric Power | N/A |
| Chandler | Kent | Kentucky Office Of The Attorney General | End-Use Customer |
| Chu | Michael | Forest Investment Group Llc | Other Supplier |
| Clarke | Linda | Power Partners Consulting | N/A |
| Clemence | Walter | Nextera | Other Supplier |





| Cocco | Michael | Old Dominion Electric Cooperative | Electric Distributor |
|---------------|-----------|--|----------------------|
| Colbert | Cathleen | NRG Power Marketing, LLC | Generation Owner |
| Crystle | Gil | Ugi Energy Services | Other Supplier |
| | | | Transmission |
| D'Alessandris | Lou | FirstEnergy Solutions Corp. | Owner |
| Davis | Jim | Dominion Energy | Generation Owner |
| Delosa | Joe | New Jersey Board Of Public Utilities | N/A |
| Dillon | Matt | Ugi Development | Generation Owner |
| | | | Transmission |
| Domian | Christin | Duquesne Light Company | Owner |
| Farnsworth | Byron | Wellsboro Electric Company | Electric Distributor |
| Filomena | Guy | Customized Energy Solutions, Ltd.* | None |
| Ford | Adrien | Old Dominion Electric Cooperative | Electric Distributor |
| | | Indiana Office Of Utility Consumer | |
| Gahimer | Mike | Counselor | End-Use Customer |
| | | | Transmission |
| Garnett | Bryan | Duke Energy Business Services LLC | Owner |
| Gebolys | Debbie | The Public Utility Commission Of Ohio | N/A |
| Gilani | Rehan | Conedison Energy | Other Supplier |
| Gorman | Kevin | The Highlands Energy Group | Other Supplier |
| Grau | Patrick | Apogee | Other Supplier |
| Heidorn | Rich | RTO Insider | N/A |
| | | Office of the People's Counsel for the | |
| Heinle | Erik | District of Columbia | End-Use Customer |
| Holdbrook | Ruth | Novec | Electric Distributor |
| Horning | Lynn | Customized Energy Solutions, Ltd.* | N/A |
| Hudis | Gabriella | Gabel & Associates | N/A |
| | | | Transmission |
| Jardot | Gina | Essential Power Rock Springs, LLC | Owner |
| Jens | Tom | Black Oak Capital | Other Supplier |
| | | | Transmission |
| Jett | William | Duke Energy | Owner |
| Johnston | David | Indiana Utility Regulatory Commission | N/A |
| Kauffman | Brian | Enel X North America, Inc. | Other Supplier |
| Kerecman | Joseph | Calpine Energy Services, L.P. | Generation Owner |
| Knernschield | Jenny | Old Dominion Electric Cooperative | Electric Distributor |
| Knies | Heather | Lm Power | Other Supplier |
| Laios | Takis | American Electric Power | N/A |
| Lejcar | Jamie | Allegheny Electric Cooperative | Electric Distributor |
| Libbos | Robin | FirstEnergy Solutions Corp. | Transmission |





| | | | Owner |
|----------|----------|--|----------------------|
| | | Dominion Energy Generation Marketing, | |
| Luu | Sam | Inc. | Generation Owner |
| Martin | Valerie | FERC | N/A |
| | | | Transmission |
| Midgley | Sharon | Exelon Business Services Company, LLC | Owner |
| | | | Transmission |
| Ondayko | Brock | Aep Energy | Owner |
| | | | Transmission |
| Peoples | John | Duquesne Light Company | Owner |
| Price | Mark | DC Energy | Other Supplier |
| Price | Ruth Ann | Delaware Division of the Public Advocate | End-Use Customer |
| Rothey | Kristin | American Municipal Power | Electric Distributor |
| Ruck | Andrew | Freepoint Energy Solutions, LLC | Other Supplier |
| Sasser | Jonathan | Customized Energy Solutions, Ltd.* | None |
| Segner | Sharon | LS Power | N/A |
| Singer | Chad | Traine Grid Services | Other Supplier |
| Smith | Christen | RTO Insider | N/A |
| Squibb | Bill | Ohio Valley Electric | Generation Owner |
| | | | Transmission |
| Stern | Alex | Public Service Electric & Gas Company | Owner |
| Stone | Andy | Gabel & Associates | N/A |
| Suh | Jung | Calpine Solutions | Generation Owner |
| Sweeney | Rory | GT Power Group | N/A |
| Taylor | Miles | Northern Indiana Public Service Company | Other Supplier |
| Thomas | Glen | GT Power Group | N/A |
| Tibbetts | Maeve | Pierce Atwood | N/A |
| Toomey | Megan | Talen Energy Marketing, LLC | Generation Owner |
| , | | <u> </u> | Transmission |
| Walker | Jennifer | Exelon Business Services Company, LLC | Owner |
| Wisersky | Megan | Madison Gas And Electric | Other Supplier |
| Withrow | David | Customized Energy Solutions | N/A |
| Wolfe | Alice | Blue Ridge Power Agency | Electric Distributor |
| Wynder | Michael | Nodal Exchange | N/A |

PJM Participants

| Last Name | First Name | Organization | Sector |
|-----------|------------|---------------------|--------|
| Anders | David | PJM Interconnection | N/A |
| Baker | Scott | PJM Interconnection | N/A |
| Barrett | Francis | PJM Interconnection | N/A |





| Bresler | Stu | PJM Interconnection | N/A |
|-------------|-----------|---------------------|-----|
| Bryson | Mike | PJM Interconnection | N/A |
| Buehler | Susan | PJM Interconnection | N/A |
| Burdis | Tim | PJM Interconnection | N/A |
| Cabezas | Angela | PJM Interconnection | N/A |
| Carroll | Rebecca | PJM Interconnection | N/A |
| Chao | Hungpo | PJM Interconnection | N/A |
| Chmielewski | Brian | PJM Interconnection | N/A |
| Corey | Patricia | PJM Interconnection | N/A |
| Coyne | Suzanne | PJM Interconnection | N/A |
| Cummings | Bridgid | PJM Interconnection | N/A |
| Drauschak | Lisa | PJM Interconnection | N/A |
| Egan | Amanda | PJM Interconnection | N/A |
| Fabiano | Janell | PJM Interconnection | N/A |
| Foster | Denise | PJM Interconnection | N/A |
| Frogg | Darrell | PJM Interconnection | N/A |
| Greening | Michele | PJM Interconnection | N/A |
| Hendrzak | Chantal | PJM Interconnection | N/A |
| Herel | Suzanne | PJM Interconnection | N/A |
| Holter | Natasha | PJM Interconnection | N/A |
| Horger | Tim | PJM Interconnection | N/A |
| Hsia | Eric | PJM Interconnection | N/A |
| Hugee | Jacqulynn | PJM Interconnection | N/A |
| Keech | Adam | PJM Interconnection | N/A |
| Larocque | Matthew | PJM Interconnection | N/A |
| Leon | Miguel | PJM Interconnection | N/A |
| Mcglynn | Paul | PJM Interconnection | N/A |
| McLaverty | Megan | PJM Interconnection | N/A |
| Mirhosseini | Niloufar | PJM Interconnection | N/A |
| Monzon | Stephanie | PJM Interconnection | N/A |
| O'Brien | Tom | PJM Interconnection | N/A |
| O'Hara | Chris | PJM Interconnection | N/A |
| O'neill | Jack | PJM Interconnection | N/A |
| Oskvig | O.H. Dean | PJM Interconnection | N/A |
| Ott | Andrew | PJM Interconnection | N/A |
| Patel | Keyur | PJM Interconnection | N/A |
| Perera | Asanga | PJM Interconnection | N/A |
| Phillips | Darlene | PJM Interconnection | N/A |
| Robinson | Charles | PJM Interconnection | N/A |





| Scheidecker | Paul | PJM Interconnection | N/A |
|-------------|----------|---------------------|-----|
| Schwenk | Melissa | PJM Interconnection | N/A |
| Seiler | Ken | PJM Interconnection | N/A |
| Shields | Jeffrey | PJM Interconnection | N/A |
| Sitarchyk | Mike | PJM Interconnection | N/A |
| Snyder | Susan | PJM Interconnection | N/A |
| Souder | Michelle | PJM Interconnection | N/A |
| Tribulski | Jen | PJM Interconnection | N/A |
| Ward | Michael | PJM Interconnection | N/A |
| Williams | Stanley | PJM Interconnection | N/A |
| Xu | Xu | PJM Interconnection | N/A |
| Zamojcin | Ann | PJM Interconnection | N/A |