



Markets & Reliability Committees
PJM Conference and Training Center, Audubon, PA / WebEx
October 25, 2023
9:00 a.m. – 12:35 p.m. EPT

### Administration

Stu Bresler and David Anders welcomed stakeholders and provided the Anti-trust, Code of Conduct, and Meeting Participation announcements.

### **Consent Agenda**

Items A through C were **approved/endorsed** by acclamation with no objections or abstentions:

- A. Minutes of the September 20, 2023 meeting of the Markets and Reliability Committee.
- B. Proposed revisions to Manual 03A: Energy Management System (EMS) Model Updates and Quality Assurance (QA) resulting from its periodic review.
- C. Proposed revisions to Manual 19: Load Forecasting and Analysis to align with Attachment B: Load Forecast Adjustment Guidelines.

### **Endorsements**

1. Capacity Offer Opportunities for Generation with Co-Located Load

Jeff Bastian reviewed a proposed solution addressing capacity opportunities for generation with colocated load and corresponding Tariff revisions.

Tim Horger proposed an amendment to remove an obsolete passage no longer valid due to the ability to include in market-based offers as follows:

"Cost-based offers for energy from generating resources shall not exceed the variable cost of producing such energy as determined in accordance with Schedule 2 to this Agreement and applicable regulatory standards, requirements and determinations; provided that, a Market Seller may offer to the PJM Interchange Energy Market the right to call on energy from a resource the output of which has been sold on a bilateral basis, with the rate for such energy if called equal to the curtailment rate specified in the bilateral contract."

There were no objections, and therefore the proposed amendment was incorporated into the main motion.

Following discussion, the main motion <u>failed</u> in a sector-weighted vote with 0.975 in favor. Issue Tracking: Capacity Offer Opportunities for Generation with Co-Located Load

### 2. 2023 Reserve Requirement Study





Patricio Rocha Garrido reviewed the 2023 Reserve Requirement Study (RRS) results (Forecast Pool Requirement (FPR) and Installed Reserve Margin (IRM)). Following discussion, the committee **endorsed** the 2023 RRS results by acclamation with no objections and eight abstentions.

### 3. Outage Coordination

Paul Dajewski reviewed a proposed solution and corresponding revisions to Manual 38: Operations Planning to address outage coordination. Following discussion, the committee **endorsed** the proposed manual revisions by acclamation with no objections or abstentions.

Issue Tracking: Outage Coordination

### 4. Local Considerations in Net Cost of New Entry

Gary Helm reviewed a proposed solution and corresponding Tariff revisions addressing local considerations in Net Cost of New Entry. He noted that Members Committee endorsement would be sought on the same day.

Clara Summers, IL Citizen Utility Board, moved to defer voting on the proposed Tariff revisions until the committee's next meeting. Greg Poulos, on behalf of the DE Division of the Public Advocate, seconded the motion to defer. The motion to defer **failed** in a sector-weighted vote with 2.334 in favor.

Following discussion, the committee **endorsed** the proposed solution and corresponding Tariff revisions in a sector-weighted vote with 4.162 in favor.

Issue Tracking: Local Considerations in New Cost of New Entry

### First Readings

## 5. Clean Attribute Procurement Senior Task Force (CAPSTF)

Scott Baker provided a final report on CAPSTF activities and proposed to sunset the group. The committee will be asked to approve the CAPSTF sunset at a future meeting.

### 6. Performance Impact of the Multi-schedule Model on the Market Clearing Engine

- A. Keyur Patel reviewed proposed solutions endorsed by the Market Implementation Committee and addressing the performance impact of the multi-schedule model on the market clearing engine. The committee will be asked to endorse a proposed solution and corresponding Tariff and Operating Agreement revisions at its next meeting.
- B. Catherine Tyler, Monitoring Analytics, discussed perspectives related to the performance impact of the multi-schedule model on the market clearing engine.

Issue Tracking: Performance Impact of the Multi-Schedule Model on the Market Clearing Engine

#### 7. Manuals





- A. Dean Manno reviewed proposed revisions to Manual 03: Transmission Operations resulting from its periodic review. The committee will be asked to endorse the proposed Manual revisions at its next meeting.
- B. Dean Manno reviewed proposed revisions to Manual 03: Transmission Operations addressing the New Transmission Facility "Cut-In" Process Update. The committee will be asked to endorse the proposed Manual revisions at its next meeting.
- C. Vince Stefanowicz reviewed proposed revisions to Manual 10: Pre-Scheduling Operations resulting from its periodic review. The committee will be asked to endorse the proposed Manual revisions at its next meeting.
- D. Vince Stefanowicz reviewed proposed revisions to Manual 14D: Generator Operational Requirements resulting from its periodic review. The committee will be asked to endorse the proposed Manual revisions at its next meeting.
- E. Joseph Tutino reviewed proposed revisions to Manual 11: Energy & Ancillary Services Market Operations for offer verification technical enhancements and obsolete sections for Attachment C resulting from approved Intraday Offers and Start Cost Calculation changes. The committee will be asked to endorse the proposed Manual revisions at its next meeting.
- F. Darrell Frogg reviewed conforming revisions to Manual 11: Energy & Ancillary Services Market Operations for the approved Renewable Dispatch solution package. The committee will be asked to endorse the proposed Manual revisions at its next meeting.

  <u>Issue Tracking: Renewable Dispatch</u>
- G. Zhenyu Fan reviewed proposed revisions to Manual 11: Energy & Ancillary Services Market Operations to update a missing term in the Reserve section and an outdated reference in the Regulation section. The committee will be asked to endorse the proposed Manual revisions at its next meeting.
- H. Zhenyu Fan reviewed conforming revisions to Manual 11: Energy & Ancillary Services Market Operations, Manual 27: Open Access Transmission Tariff Accounting and Manual 28: Operating Agreement Accounting for the Hybrids Phase II solution package. The committee will be asked to endorse the proposed Manual revisions at its next meeting. <u>Issue Tracking: Solar-Battery Hybrid Resources</u>
- I. Melissa Pilong presented an overview of the Performance Assessment Triggers topic and reviewed proposed revisions to Manual 11: Energy & Ancillary Services Market Operations and Manual 18: PJM Capacity Market conforming to FERC Order Docket No. ER23-1996-000 addressing PAI trigger Tariff changes. The committee will be asked to endorse the proposed Manual revisions at its next meeting.
- J. Frank Hartman reviewed proposed revisions to Manual 13: Emergency Operations conforming to FERC Order Docket No. ER23-19960-000 addressing PAI trigger Tariff changes and an additional





set of changes addressing public notification statements clarification. The committee will be asked to endorse the proposed Manual revisions at its next meeting.

- K. Pete Langbein reviewed conforming revisions to Manual 18: PJM Capacity Market for the Quadrennial Review, the default Gross Cost of New Entry/Avoidable Cost Rates for the Minimum Offer Pricing Rule, Performance Assessment Intervals, Hybrids, and Interconnection Process Reform. The committee will be asked to endorse the proposed Manual revisions at its next meeting.
- L. Molly Mooney reviewed proposed revisions to Manual 19: Load Forecasting and Analysis resulting from its periodic review. The committee will be asked to endorse the proposed Manual revisions at its next meeting.

## **Future Agenda Items**

No new future agenda items were identified.

|                   | ı         | Future Meeting Dates and Materials         | Materials Due<br>to Secretary | Materials<br>Published |
|-------------------|-----------|--|-------------------------------|------------------------|
| Date              | Time      | Location                                   |                               |                        |
| November 15, 2023 | 9:00 a.m. | PJM Conference & Training Center and WebEx | November 3, 2023              | November 8, 2023       |
| December 20, 2023 | 9:00 a.m. | PJM Conference & Training Center and WebEx | December 8, 2023              | December 13, 2023      |

# Author: D. Anders Chair/Secretary

| Last Name | First Name | Company                 | Sector         |
|-----------|------------|-------------------------|----------------|
| Bresler   | Stu        | PJM Interconnection LLC | Not Applicable |
| Anders    | Dave       | PJM Interconnection LLC | Not Applicable |

#### **Voting Attendees**

| Last Name | First Name | Company                                      | Sector               |
|-----------|------------|--|----------------------|
| Anderson  | Juliet     | Constellation Energy Generation, LLC         | Generation Owner     |
| Barker    | Jason      | Vitol Inc.                                   | Generation Owner     |
| Bleiweis  | Bruce      | DC Energy, LLC                               | Other Supplier       |
| Borgatti  | Michael    | Jersey Green Energy, LLC                     | Other Supplier       |
| Borgatti  | Michael    | Lincoln Generating Facility, LLC             | Generation Owner     |
| Borgatti  | Michael    | Recurrent Energy, LLC                        | Other Supplier       |
| Borgatti  | Michael    | Energy Harbor LLC                            | Generation Owner     |
| Borgatti  | Michael    | NextEra Energy Marketing, LLC                | Other Supplier       |
| Borgatti  | Michael    | Moxie Freedom LLC                            | Generation Owner     |
| Borgatti  | Michael    | Hill Top Energy Center, LLC                  | Generation Owner     |
| Borgatti  | Michael    | Hazleton Generation LLC                      | Generation Owner     |
| Borgatti  | Michael    | York County Solid Waste and Refuse Authority | Generation Owner     |
| Borgatti  | Michael    | Longview Power, LLC                          | Generation Owner     |
| Brodbeck  | John       | EDP Renewables North America LLC             | Generation Owner     |
| Bruce     | Susan      | Kimberly-Clark Corporation                   | Generation Owner     |
| Bruce     | Susan      | Messer LLC                                   | End-Use Customer     |
| Bruce     | Susan      | Wellsboro Electric Company                   | Electric Distributor |





| Bruce      | Susan     | Procter & Gamble Paper Products Company (The)          | End-Use Customer     |
|------------|-----------|--|----------------------|
| Bruce      | Susan     | Lehigh Portland Cement Company                         | End-Use Customer     |
| Bruce      | Susan     | Trustees of the University of Pennsylvania             | End-Use Customer     |
| Bruce      | Susan     | Gerdau Ameristeel Energy, Inc.                         | End-Use Customer     |
| Bruce      | Susan     | Letterkenny Industrial Development Authority - PA      | Electric Distributor |
| Bruce      | Susan     | Linde Inc.   | End-Use Customer     |
| Bruce      | Susan     | Cleveland-Cliffs Steel LLC                             | End-Use Customer     |
| Bruce      | Susan     | Air Products & Chemicals, Inc.                         | End-Use Customer     |
| Campbell   | Bruce     | MidAtlantic Power Partners, LLC                        | Other Supplier       |
| Campbell   | Bruce     | GridBeyond, LLC  | Other Supplier       |
| Canter     | David     | Appalachian Power Company                              | Transmission Owner   |
| Davis      | James     | Virginia Electric & Power Company                      | Transmission Owner   |
| Domian     | Christin  | Duquesne Light Company                                 | Transmission Owner   |
| Dugan      | Chuck     | East Kentucky Power Cooperative, Inc.                  | Transmission Owner   |
| Esquivel   | Manuel    | Enel X North America, Inc.                             | Other Supplier       |
| Foladare   | Kenneth   | Geenex Solar LLC                                       | Other Supplier       |
| Fuess      | Christian | NextPower III US Holdco Inc.                           | Generation Owner     |
| Fuess      | Christian | Diamond State Generation Partners, LLC                 | Generation Owner     |
| Fuess      | Christian | PBF Power Marketing, LLC                               | End-Use Customer     |
| Fuess      | Christian | Icetec.com, Inc.                                       | Other Supplier       |
| Fuess      | Christian | Kuehne Chemical Company, Inc.                          | End-Use Customer     |
| Fultz      | McClain   | PPL Electric Utilities Corporation d/b/a PPL Utilities | Transmission Owner   |
| Garnett    | Bryan     | Duke Energy Business Services LLC                      | Transmission Owner   |
| Hoatson    | Tom       | Rolling Hills Generating, LLC                          | Generation Owner     |
| Hoatson    | Tom       | Riverside Generating Company, L.L.C.                   | Generation Owner     |
| Hohenshilt | Jennifer  | Talen Energy Marketing, LLC                            | Generation Owner     |
| Horning    | Lynn      | American Municipal Power, Inc.                         | Electric Distributor |
| Horstmann  | John      | Dayton Power & Light Company (The)                     | Transmission Owner   |
| Hurwich    | Mark      | Elliott Bay Energy Trading, LLC                        | Other Supplier       |
| Hyzinski   | Thomas    | GenOn Energy Management, LLC                           | Generation Owner     |
| Hyzinski   | Thomas    | Dynegy Marketing and Trade, LLC                        | Generation Owner     |
| Hyzinski   | Thomas    | Carroll County Energy LLC                              | Generation Owner     |
| Janicki    | Diane     | Boston Energy Trading and Marketing LLC                | Other Supplier       |
| Jardot     | Gina      | NRG Business Marketing LLC                             | Other Supplier       |
| Johnson    | Carl      | Easton Utilities Commission                            | Electric Distributor |
| Johnson    | Carl      | Old Dominion Electric Cooperative                      | Electric Distributor |
| Johnson    | Carl      | Indiana Municipal Power Agency                         | Electric Distributor |
| Johnson    | Carl      | North Carolina Electric Membership Corporation         | Electric Distributor |
| Johnson    | Carl      | Michigan Public Power Agency                           | Electric Distributor |
| Johnson    | Carl      | Delaware Municipal Electric Corporation, 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      | Blue Ridge Power Agency, Inc.                          | Electric Distributor |
| Johnson    | Carl      | Borough of Chambersburg                                | Electric Distributor |
| Johnson    | Carl      | Energy Cooperative Association of Pennsylvania (The)   | Other Supplier       |
| Johnson    | Carl      | Northern Virginia Electric Cooperative (NOVEC)         | 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 |
| Mason      | Gary      | Monongahela Power Company d/b/a Allegheny Power        | Transmission Owner   |
| Poulos     | Greg      | Public Staff - North Carolina Utilities Commission     | End-Use Customer     |





| Poulos      | Greg      | West Virginia Consumer Advocate Division               | End-Use Customer     |
|-------------|-----------|--|----------------------|
| Poulos      | Greg      | Indiana Office of Utility Consumer Counselor (IN OUCC) | End-Use Customer     |
| Poulos      | Greg      | Maryland Office of People's Counsel                    | End-Use Customer     |
| Poulos      | Greg      | Pennsylvania Office of Consumer Advocate               | End-Use Customer     |
| Poulos      | Greg      | Delaware Division of the Public Advocate               | End-Use Customer     |
| Poulos      | Greg      | New Jersey Division of Rate Counsel                    | End-Use Customer     |
| Rettig      | Kacie     | Rockland Electric Company                              | Transmission Owner   |
| Rohrbach    | John      | Wabash Valley Power Association, Inc.                  | Electric Distributor |
| Rohrbach    | John      | Kentucky Municipal Energy Agency                       | Electric Distributor |
| Rohrbach    | John      | Southern Maryland Electric Cooperative, Inc.           | Electric Distributor |
| Scarpignato | David     | Calpine Energy Services, L.P.                          | Generation Owner     |
| Stern       | Alexander | Exelon Business Services Company, LLC                  | Transmission Owner   |
| Summers     | Clara     | Illinois Citizen Utility Board                         | End-Use Customer     |
| Svenson     | Heather   | Public Service Electric and Gas Company                | Transmission Owner   |
| Swalwell    | Bradley   | Tangent Energy Solutions, Inc.                         | Other Supplier       |
| Tubridy     | Meg       | Rockland Electric Company                              | Transmission Owner   |
| Ushijima    | Hiroaki   | Elwood Energy, LLC                                     | Generation Owner     |
| Vayda       | Brian     | Borough of Pemberton, New Jersey                       | Electric Distributor |
| Vayda       | Brian     | Borough of Butler, Butler Electric Division            | Electric Distributor |
| Vayda       | Brian     | Borough of Madison, 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 South River, New Jersey                     | Electric Distributor |
| Vayda       | Brian     | Borough of Milltown, New Jersey                        | Electric Distributor |
| Vayda       | Brian     | Borough of Park Ridge, New Jersey                      | Electric Distributor |
| Walcavich   | Colin     | Green River Holdings, LLC                              | Generation Owner     |
| Whitehead   | Jeffrey   | Wheelabrator Falls Inc.                                | Generation Owner     |
| Whitehead   | Jeffrey   | Parkway Generation Operating LLC                       | Generation Owner     |
| Whitehead   | Jeffrey   | Essential Power Rock Springs, LLC                      | Generation Owner     |
| Wynder      | Michael   | Altrock LLC  | Other Supplier       |

### **Non-Voting Attendees**

| Last Name    | First Name | Company                                    | Sector               |
|--------------|------------|--|----------------------|
| Abdur-Rahman | Muhsin     | Dynegy Marketing & Trade, LLC (DECAM)      | Generation Owner     |
| Abramowitz   | Jeremy     | Monitoring Analytics                       | None                 |
| Ament        | Todd       | Cube Hydro Partners, LLC                   | Generation Owner     |
| Anderson     | Jared      | S&P Global                                 | None                 |
| Bainbridge   | Thomas     | American Transmission Systems, Inc.        | Transmission Owner   |
| Baker        | Jeff       | Duke Energy Ohio, Inc.                     | Transmission Owner   |
| Barnett      | Paul       | Silver Run Electric, LLC                   | Transmission Owner   |
| Bowring      | Joe        | Monitoring Analytics                       | None                 |
| Boyle        | Sean       | Constellation Energy Generation, LLC       | Generation Owner     |
| breidenbaugh | aaron      | Stones DR, LLC                             | Other Supplier       |
| Brodbeck     | John       | EDP Renewables North America LLC           | Generation Owner     |
| Bruce        | Susan      | McNees Wallace & Nurick LLC                | None                 |
| Callen       | Zachary    | Illinios Commerce Commission               | None                 |
| Campbell     | Bruce      | Enerwise Global Technologies, LLC          | Other Supplier       |
| Canter       | David      | Appalachian Power Company (AEP Generation) | Transmission Owner   |
| Carmean      | Gregory    | Organization of PJM States, Inc.           | None                 |
| Carrier      | Ronald     | Big Lake Consulting Group, LLC             | None                 |
| Cham         | Edrissa    | Savion, LLC                                | None                 |
| Christopher  | Mahila     | Public Utilities Commission of Ohio        | None                 |
| Cocco        | Michael    | Old Dominion Electric Cooperative          | Electric Distributor |
| Concina      | Wendell    | Commonwealth Edison Company                | Transmission Owner   |
| Corash       | Richard    | PSEG Energy Resources and Trade LLC        | Other Supplier       |





| Cox            | Jason     | EQ Energy Advisors, LLC                                     | None                   |
|----------------|-----------|---|------------------------|
| Curtis         | Kenneth   | Enverus, Inc.   | None                   |
| Daugherty-Bell | Derrik    | BW Solar  | None                   |
| Davis          | David     | Apex Clean Energy Holdings, LLC                             | None                   |
| Denby          | Brett     | Northern Virginia Electric Cooperative (NOVEC)              | Electric Distributor   |
| Dorko          | Keri      | Monitoring Analytics  | None                   |
| Douglass       | Robert    | Constellation Energy Generation, LLC                        | Generation Owner       |
| Drom           | Rick      | Non-member  | None                   |
| Edmonds        | Brian     | DC Public Service Commission                                | None                   |
| Ericson        | Christine | Illinois Commerce Commission                                | None                   |
| Fazio          | Danielle  | Engelhart CTP (US) LLC                                      | Other Supplier         |
| Fink           | Sari      |   |                        |
| Fitch          |           | MAREC Action  | None Over lier         |
|                | Neal      | NRG Business Marketing LLC (NRGPM)                          | Other Supplier         |
| Ford           | Adrien    | Constellation Energy Generation, LLC                        | Generation Owner       |
| Gates          | Terry     | Appalachian Power Company (AEP Generation)                  | Transmission Owner     |
| Gilani         | Rehan     | RWE CLEAN ENERGY WHOLESALE SERVICES, INC.                   | Other Supplier         |
| Glazener       | Patrick   | Energy Authority, Inc. (The)                                | Other Supplier         |
| Gordon         | Jonathan  | Advanced Energy Ecomomy                                     | None                   |
| Granstrand     | Luke      | Dominion Virginia Power                                     | Transmission Owner     |
| Grey           | Bruce     | Samsung C&T America, Inc.                                   | None                   |
| Grigorjeva     | Jelena    | Atlantic Shores Wind  | None                   |
| Guo            | Hubert    | Constellation Energy Generation, LLC                        | Generation Owner       |
| Hastings       | David     | Long Island Lighting Company dba LIPA                       | Other Supplier         |
| Heinle         | Frederick | Dynegy Marketing and Trade, LLC                             | Generation Owner       |
| Himmelspach    | Treasa    | Appalachian Power Company (APCO Dedicated)                  | Transmission Owner     |
| Hudis          | Gabriella | Jersey Green Energy LLC                                     | Other Supplier         |
| Hugee          | Jacqulynn | Dominion Virginia Power                                     | Transmission Owner     |
| Hurd           | Shawn     | Monongahela Power Company d/b/a Allegheny Power             | Transmission Owner     |
| Hyatt          | Earl      | Monitoring Analytics  | None                   |
| ller           | Art       | Indiana Office of Utility Consumer Counselor (IN OUCC)      | End-use Customer       |
| Ingraham       | Deborah   | Acciona Energy North America Corporation                    | Generation Owner       |
| Isaac          | Carlos    | Exelon Business Services Company, LLC                       | Transmission Owner     |
| Jacobs         | Mike      | Union of Concerned Scientists                               | None                   |
| Janas          | Kim       | Illinois Attorney General's Office                          | None                   |
| Johnson        | Ryan      | Appalachian Power Company (AEP Generation)                  | Transmission Owner     |
| Jones          | Scott     | Indiana Office of Utility Consumer Counselor (IN OUCC)      | End-use Customer       |
| Kelly          | Stephen   | Brookfield Renewable Trading and Marketing LP (BSMH)        | Other Supplier         |
| Kent           | Janessa   | Duquesne Light Company                                      | Transmission Owner     |
| Kent           | Janessa   | Duquesne Light Company                                      | Transmission Owner     |
| Kim            | Caleb     | Dayton Power & Light Company (The)                          | Transmission Owner     |
| Kroh           | Judson    | Seward Generation, LLC                                      | Generation Owner       |
| Laios          | Takis     | Appalachian Power Company (AEP Transmission)                | Transmission Owner     |
| LaVista        | William   | RWE Clean Energy, LLC                                       | Generation Owner       |
|                |           | New Jersey Board of Public Utilities                        |                        |
| Lescano        | Amanda    |   | None End use Customer  |
| Mariam         | Yohannes  | Office of the People's Counsel for the District of Columbia | End-use Customer       |
| Matheson       | Eric      | Non-member  | None<br>Other Cupplier |
| Matuszak       | Alex      | UGI Energy Services, LLC                                    | Other Supplier         |
| Maucher        | Andrea    | Delaware Division of the Public Advocate                    | End-use Customer       |
| Mayers         | Sharon    | Clean Energy Future - Lordstown, LLC                        | Generation Owner       |
| McNicholas     | Daniel    | Nautilus Power, LLC   | Generation Owner       |
| Midgley        | Sharon    | Exelon Business Services Company, LLC                       | Transmission Owner     |
| Murawski       | Jim       | PSEG Energy Resources & Trade LLC                           | Other Supplier         |
| Nadel          | Steven    | PPL Electric Utilities Corp. dba PPL Utilities (TO)         | Transmission Owner     |
| Nix            | Emma      | Leeward Asset Management, LLC                               | Generation Owner       |
| O'Hara         | Bernie    | Sargent & Lundy   | None                   |
| Ondayko        | Brock     | AEP Energy Partners, Inc. (AEP Gen Resources)               | Transmission Owner     |





| Osborn              | Eric      | EDF Trading North America, LLC                                 | Other Supplier       |
|---------------------|-----------|--|----------------------|
| Palla               | Sunil     | NextEra Energy Marketing, LLC                                  | Other Supplier       |
| Patel               | Shodhan   | Constellation Energy Generation, LLC                           | Generation Owner     |
| Peoples             | John      | Duquesne Light Company   | Transmission Owner   |
| Philiips            | Amanda    | Wabash Valley Power Association, Inc.                          | Electric Distributor |
| pierson             | brad      | Walden Renewables Development LLC                              | Other Supplier       |
| Procuniar           | Jason     | Buckeye Power, Inc.  | Electric Distributor |
| Pungaliya           | Rajat     | NedPower Mount Storm, LLC                                      | Generation Owner     |
| Rasmussen           | Jay       | Duke Energy Business Services LLC                              | Transmission Owner   |
| Reagan              | Ryann     | New Jersey Board of Public Utilities                           | None                 |
| Richards            | Wade      | Apex Clean Energy Holdings, LLC                                | None                 |
| Richards Jr         | Cleveland | PPL Electric Utilities Corp. dba PPL Utilities (TO)            | Transmission Owner   |
| Rutigliano          | Tom       | Natural Resources Defense Council                              | None                 |
| Sasser              | Jonathan  | Customized Energy Solutions, Ltd.                              | None                 |
| Satter              | Susan     | Office of the Illinois Attorney General                        | None                 |
| Scheidecker         | Paul      | Monitoring Analytics   | None                 |
| Schreim             | Morris    | Maryland Public Service Commission                             | None                 |
| Selick              | Sam       | Customized Energy Solutions, Ltd.                              | None                 |
| Shah                | Pulin     | PECO Energy Company  | Transmission Owner   |
| Shanker             | Roy       | East Coast Power Linden Holding, L.L.C.                        | Generation Owner     |
| Skucas              | Ruta      | K&L Gates  | None                 |
| Skumanich           | Bill      | RTR Energy Solutions LLC                                       | None                 |
| Sloan               | Ben       | Organization of PJM States, Inc.                               | None                 |
| Sorrels             | Jim       | AEP Appalachian Transmission Company, Inc.                     | Transmission Owner   |
| Sotkiewicz          | Paul      | E-Cubed Policy Associates                                      | None                 |
| Sparks              | Bridget   | sPower Development Company, LLC                                | None                 |
| Sprinkle            | Dan       | Louisville Gas and Electric Company/Kentucky Utilities Company | Transmission Owner   |
| Stadelmeyer         | Rebecca   | Jersey Green Energy LLC  | Other Supplier       |
| Stone               | Andy      | Non-member   | None                 |
| Storino             | Laura     | New Jersey Board of Public Utilities                           | None                 |
| Stupar              | Rob       | Invenergy Energy Management LLC                                | Generation Owner     |
| Sussier             | Philip    | Maryland Public Service Commission                             | None                 |
| Sweeney             | Rory      | Northern Virginia Electric Cooperative (NOVEC)                 | Electric Distributor |
| Tay                 | Sing      | AES Laurel Mountain, LLC                                       | Generation Owner     |
| Theaker             | Brian     | Big Sandy Peaker Plant, LLC                                    | Generation Owner     |
| Tian                | Xueqi     | White Peak Energy LLC  | Other Supplier       |
| VanBlargan          | Bryna     | Sabinsville SunPower, LLC                                      | None                 |
| VanderLaan          | Bill      | Illinois Commerce Commission                                   | None                 |
| Walker              | Jennifer  | Exelon Business Services Company, LLC                          | Transmission Owner   |
| Wang                | Daisy     | Enel X North America, Inc.                                     | Other Supplier       |
| Wehnes              | Kathleen  | Non-member   | None                 |
| Whitson             | Warren    | Viridon  | None                 |
| Willson             | Jonathan  | Walden Renewables Development LLC                              | Other Supplier       |
| Wilson              |           | Wilson Economics   | None                 |
| Wylie-              | James     | VVIISUTE ECOTIONICS  | INOTIC               |
| vvyiie-<br>Chambers | Ericka    | Exelon Business Services Company, LLC                          | Transmission Owner   |
| Yasutake            | Sarah     | Jersey Green Energy LLC  | Other Supplier       |
| York                | Denver    | East Kentucky Power Cooperative, Inc.                          | Transmission Owner   |
| IUIK                | Delivel   | PPL Electric Utilities Corp. dba PPL Utilities (TO)            | Transmission Owner   |

### **PJM Attendees**

| Last Name | First Name | Company             | Sector |
|-----------|------------|---------------------|--------|
| Afelumo   | Foluso     | PJM Interconnection | None   |
| Anders    | David      | PJM Interconnection | None   |
| Arkatin   | Tyler      | PJM Interconnection | None   |
| Asthana   | Manu       | PJM Interconnection | None   |





| Baizman     | Aaron     | PJM Interconnection | None |
|-------------|-----------|---------------------|------|
| Baker       | Scott     | PJM Interconnection | None |
| Barker      | Christina | PJM Interconnection | None |
| Barrett     | Emily     | PJM Interconnection | None |
| Bastian     | Jeff      | PJM Interconnection | None |
| Belenky     | Maria     | PJM Interconnection | None |
| Bernstein   | Matthew   | PJM Interconnection | None |
| Bielak      | Donnie    | PJM Interconnection | None |
| Boyle       | Glen      | PJM Interconnection | None |
| Bresler     | Stu       | PJM Interconnection | None |
| Bruno       | Joshua    | PJM Interconnection | None |
| Bruno       | Pat       | PJM Interconnection | None |
| Bryson      | Michael   | PJM Interconnection | None |
| Burdis      | Tim       | PJM Interconnection | None |
| Carrasco    | Eliseo    | PJM Interconnection | None |
| Carroll     | Rebecca   | PJM Interconnection | None |
| Carron      |           | PJM Interconnection | None |
|             | Augustine | 1 11 11 1111        |      |
| Chmielewski | Brian     | PJM Interconnection | None |
| Chu         | George    | PJM Interconnection | None |
| Ciabattoni  | Joe       | PJM Interconnection | None |
| Cobb        | Patrick   | PJM Interconnection | None |
| Connell     | Jason     | PJM Interconnection | None |
| Connolly    | Matthew   | PJM Interconnection | None |
| Coyne       | Suzanne   | PJM Interconnection | None |
| Croop       | Danielle  | PJM Interconnection | None |
| D'Antonio   | Phil      | PJM Interconnection | None |
| Dajewski    | Paul      | PJM Interconnection | None |
| Dent        | D'ondre   | PJM Interconnection | None |
| Dettrey     | Mark      | PJM Interconnection | None |
| DiMartino   | Denise    | PJM Interconnection | None |
| Downs       | Jere      | PJM Interconnection | None |
| Drauschak   | Lisa      | PJM Interconnection | None |
| Dropkin     | Robert    | PJM Interconnection | None |
| Egan        | Amanda    | PJM Interconnection | None |
| Esterly     | Theresa   | PJM Interconnection | None |
| Falin       | Tom       | PJM Interconnection | None |
| Fan         | Zhenyu    | PJM Interconnection | None |
| Fitzpatrick | Brian     | PJM Interconnection | None |
| Frogg       | Darrell   | PJM Interconnection | None |
| Gledhill    | Andrew    | PJM Interconnection | None |
| Greening    | Michele   | PJM Interconnection | None |
| Guignet     | Douglas   | PJM Interconnection | None |
| Guignet     | Doug      | PJM Interconnection | None |
| Hall        | Mary      | PJM Interconnection | None |
| Handlin     | Mike      | PJM Interconnection | None |
| Haque       | Asim      | PJM Interconnection | None |
| Hartman     | Frank     | PJM Interconnection | None |
|             | _         |                     |      |
| Hatch       | Kevin     | PJM Interconnection | None |
| Hauske      | David     | PJM Interconnection | None |
| Hauske      | Thomas    | PJM Interconnection | None |
| Hedayati    | Mojgan    | PJM Interconnection | None |
| Helm        | Gary      | PJM Interconnection | None |
| Herel       | Suzanne   | PJM Interconnection | None |
| Herman      | Michael   | PJM Interconnection | None |
| Hislop      | David     | PJM Interconnection | None |
| Horger      | Tim       | PJM Interconnection | None |





| Hsia          | Eric      | PJM Interconnection                     | None |
|---------------|-----------|---|------|
| Johnson       | Jeanine   | PJM Board                               | None |
| Kenney        | Susan     | PJM Interconnection                     | None |
| Keshavamurthy | Bhavana   | PJM Interconnection                     | None |
| Kshatriya     | Niraj     | PJM Interconnection                     | None |
| Langbein      | Pete      | PJM Interconnection                     | None |
| Lee           | Ray       | PJM Interconnection                     | None |
| Lockwood      | Dan       | PJM Interconnection                     | None |
| Lu            | Chen      | PJM Interconnection                     | None |
| Lynch         | Jessica   | PJM Interconnection                     | None |
| Mali          | Gizella   | PJM Interconnection                     | None |
| Manno         | Dean      | PJM Interconnection                     | None |
| Marcino       | Angelo    | PJM Interconnection                     | None |
| Marzewski     | Skyler    | PJM Interconnection                     | None |
| McElwaine     | Kathy     | PJM Interconnection                     | None |
| McGill        | Susan     | PJM Interconnection                     | None |
| McGlynn       | Paul      | PJM Interconnection                     | None |
| McGovern      | Jason     | PJM Interconnection                     | None |
| McLaverty     | Megan     | PJM Interconnection                     | None |
| Mooney        | Molly     | PJM Interconnection                     | None |
| Morelli       | Lisa      | PJM Interconnection                     | None |
|               | David     |   | None |
| Mroz<br>Muhl  |           | PJM Interconnection PJM Interconnection | None |
|               | Nancy     |   |      |
| Noonan        | Casey     | PJM Interconnection                     | None |
| Oakes         | Brian     | PJM Interconnection                     | None |
| O'Hara        | Chris     | PJM Interconnection                     | None |
| Olaleye       | Michael   | PJM Interconnection                     | None |
| Oskvig        | Dean      | PJM Board                               | None |
| Patel         | Anita     | PJM Interconnection                     | None |
| Patel         | Harshil   | PJM Interconnection                     | None |
| Patel         | Keyur     | PJM Interconnection                     | None |
| Pilong        | Melissa   | PJM Interconnection                     | None |
| Pincus        | Steven    | PJM Interconnection                     | None |
| Ramsay        | Eli       | PJM Interconnection                     | None |
| Reffner       | Brent     | PJM Interconnection                     | None |
| Rocha Garrido | Patricio  | PJM Interconnection                     | None |
| Salmon        | Lisa      | PJm Interconnection                     | None |
| Schuyler      | Ken       | PJM Interconnection                     | None |
| Scott         | Nicole    | PJM Interconnection                     | None |
| Seiler        | Ken       | PJM Interconnection                     | None |
| Shah          | Vijay     | PJM Interconnection                     | None |
| Shields       | Jeff      | PJM Interconnection                     | None |
| Souder        | Michelle  | PJM Interconnection                     | None |
| Souder        | Dave      | PJM Interconnection                     | None |
| Staevska      | Asya      | PJM Interconnection                     | None |
| Stanisz       | Mark      | PJM Interconneciton                     | None |
| Stefanowicz   | Vince     | PJM Interconnection                     | None |
| Stemetzki     | Mike      | PJM Interconnection                     | None |
| Swimm         | Nora      | PJM Interconnection                     | None |
| Taylor        | Daniel    | PJM Interconnection                     | None |
| Terranova     | Chris     | PJM Interconnection                     | None |
| Tribulski     | Jennifer  | PJM Interconnection                     | None |
| Tutino        | Joseph    | PJM Interconnection                     | None |
| Vinnik        | Dan       | PJM Interconnection                     | None |
|               | James     | PJM Interconnection                     | None |
| Waweru        | I Jailles |   |      |





| Xu     | Xu      | PJM Interconnection | None |
|--------|---------|---------------------|------|
| Yeaton | Andrea  | PJM Interconnection | None |
| Zhang  | Michael | PJM Interconnection | None |