

Markets & Reliability Committees

Hyatt Regency Chesapeake Bay Golf Resort, Spa and Marina in Cambridge, MD / WebEx

October 24, 2022

1:00 p.m. – 5:00 p.m. EPT

Administration

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

Opening Remarks

Manu Asthana provided opening remarks, noting achievements and challenges facing the PJM community.

Michael Coyle presented a Diversity, Equity, and Inclusion (DEI) moment, introducing the LEAD framework (Listening, Empathy, Allyship, Development), and the applicability to the behaviors in the stakeholder process..

Consent Agenda

Items A through E were **approved/endorsed** by acclamation with no objections and one abstention:

- A. Minutes of the September 21, 2022 meeting of the Markets and Reliability Committee (MRC).
- B. The 2022 Reserve Requirement Study results (IRM and FPR).
- C. Revisions to Manual 28: Operating Agreement Accounting to remove an Operating Reserve rule for Combustion Turbine (CT) units.
[Issue Tracking: Operating Reserve Clarification for Resources Operating as Requested by PJM](#)
- D. Revisions to Manual 39: Nuclear Plant Interface Coordination as a part of the periodic review.
- E. Tariff revisions addressing the Internal Network Integration Transmission Service (NITS) Process.
[Issue Tracking: Internal Network Integration Transmission \(NITS\) Process](#)

Endorsements

1. Fuel Requirements for Black Start Resources

Janell Fabiano provided background and Dan Bennett reviewed the proposed solution. Following discussion, the proposal was **endorsed** in a sector-weighted vote with 4.714 in favor.

[Issue Tracking: Fuel Requirements for Black Start Resources](#)

2. Residential Customer Measurement and Verification for Demand Response

Ken Schisler, CPower, reviewed a Problem Statement and Issue Charge addressing Residential Customer Measurement and Verification for Demand Response. Following discussion, the proposed Issue Charge was **failed** in a sector-weighted vote with 2.382 in favor.

First Readings

3. Transmission Constraint Penalty Factor

Susan Kenney provided an update regarding the Transmission Constraint Penalty Factor (TCPF) activities at the Energy Price Formation Senior Task Force (EPFSTF) and Vijay Shah reviewed a proposed TCPF solution package as endorsed by the EPFSTF. The committee will be asked to endorse the proposed solution package and corresponding Tariff and Operating Agreement (OA) revisions at its next meeting.

[Issue Tracking: Operating Reserve Demand Curve \(ORDC\) & Transmission Constraint Penalty Factors](#)

4. Energy and Reserve Market Circuit Breaker

A. Susan Kenney provided an update regarding the Energy and Reserve Market Circuit Breaker activities at EPFSTF.

B. Adrien Ford, ODEC, reviewed a proposed circuit breaker solution package on behalf Joint Stakeholder sponsors.

C. David Scarpignato, Calpine, reviewed a proposed alternative circuit breaker solution package.

The committee will be asked to endorse a proposed solution package at its next meeting.

[Issue Tracking: Operating Reserve Demand Curve \(ORDC\) & Transmission Constraint Penalty Factors](#)

5. Variable Operations & Maintenance Cost Development

A. Roger Cao reviewed the proposed Main Motion solution addressing the development of variable operations and maintenance costs. Adrien Ford, ODEC, noted her intention to offer a friendly amendment to Manual 15 section 2.6 to move the date for submission of default adder or operating costs from March 31 to June 15.

B. Jason Barker, Constellation, reviewed the proposed alternative solution.

The committee will be asked to endorse a proposed solution at its next meeting.

[Issue Tracking: Variable Operating and Maintenance Cost](#)

6. Maximum Emergency Changes for Resource Limitation Reporting

Chris Pilonig reviewed a proposed solution package and Manual 13: Emergency Operations revisions addressing the Max Emergency Changes for Resource Limitation Reporting. The committee will be asked to endorse the proposed solution and corresponding Manual revisions at its next meeting.

[Issue Tracking: Max Emergency Changes for Resource Limitation Reporting](#)

7. Critical Natural Gas Infrastructure – Demand Response Participation

Pete Langbein reviewed a proposed solution and corresponding revisions to Manual 11 Energy & Ancillary Services Market Operations, Manual 18 PJM Capacity Market, the Tariff, and Operating Agreement (OA), and Reliability Assurance Agreement (RAA). The solution and corresponding revisions address the prohibition of Critical Natural Gas Infrastructure load as a demand response resource pursuant to recommendations included in the FERC/NERC report on the severe cold weather event in Texas and South Central US in February 2021. The committee will be asked to endorse the proposed solution and corresponding Manual, Tariff, OA, and RAA revisions at its next meeting.

[Issue Tracking: Critical Gas Infrastructure – Demand Response Participation](#)

8. FTR Bilateral Review and Reporting Requirements

James Waweru reviewed a proposed solution to address the FTR Bilateral Review and Reporting issue. The committee will be asked to endorse the proposed solution and corresponding Tariff revisions at its next meeting.

[Issue Tracking: FTR Bilateral Review and Reporting Requirements](#)

9. Manuals

A. Dean Manno reviewed proposed revisions to Manual 3: Transmission Operations resulting from its periodic review. The committee will be asked to endorse the Manual revisions at its next meeting.

B. Jeff Schmitt reviewed proposed revisions to Manual 3A: Energy Management System (EMS) Model Updates and Quality Assurance (QA) resulting from its periodic review. The committee will be asked to endorse the Manual revisions at its next meeting.

Future Agenda Items

No new future agenda items were identified.

Future Meeting Dates and Materials			Materials Due to Secretary	Materials Published
Date	Time	Location		
November 16, 2022	9:00 a.m.	PJM Conference & Training Center and WebEx	November 4, 2022	November 9, 2022
December 21, 2022	9:00 a.m.	PJM Conference & Training Center and WebEx	December 9, 2022	December 14, 2022

Author: D. Anders

Attendance

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
Barker	Jason	Constellation Energy Generation, LLC	Generation Owner
Benchek	James	Monongahela Power Company d/b/a Allegheny Power	Transmission Owner
Bleiweis	Bruce	DC Energy, LLC	Other Supplier
Borgatti	Michael	Energy Harbor LLC	Generation Owner
Borgatti	Michael	Hazleton Generation LLC	Generation Owner
Borgatti	Michael	Jersey Green Energy, LLC	Other Supplier
Borgatti	Michael	Longview Power, LLC	Generation Owner
Borgatti	Michael	Moxie Freedom LLC	Generation Owner
Borgatti	Michael	Newark Energy Center, LLC	Generation Owner
Borgatti	Michael	NextEra Energy Marketing, LLC	Other Supplier
Borgatti	Michael	Recurrent Energy, LLC	Other Supplier
Borgatti	Michael	York County Solid Waste and Refuse Authority	Generation Owner
Brodbeck	John	EDP Renewables North America LLC	Generation Owner
Bruce	Susan	Air Products & Chemicals, Inc.	End-Use Customer
Bruce	Susan	Cleveland-Cliffs Steel LLC	End-Use Customer
Bruce	Susan	Gerdau Ameristeel Energy, Inc.	End-Use Customer
Bruce	Susan	Industrial Energy Users-Ohio	Other Supplier
Bruce	Susan	Kimberly-Clark Corporation	Generation Owner
Bruce	Susan	Lehigh Portland Cement Company	End-Use Customer
Bruce	Susan	Letterkenny Industrial Development Authority - PA	Electric Distributor
Bruce	Susan	Linde Inc.	End-Use Customer
Bruce	Susan	MeadWestvaco Corporation	End-Use Customer
Bruce	Susan	Messer LLC	End-Use Customer
Bruce	Susan	Procter & Gamble Paper Products Company (The)	End-Use Customer
Bruce	Susan	Trustees of the University of Pennsylvania	End-Use Customer
Bruce	Susan	Wellsboro Electric Company	Electric Distributor
Campbell	Bruce	MidAtlantic Power Partners, LLC	Other Supplier
Canter	David	Appalachian Power Company	Transmission Owner
Chang	Sean	Shell Energy North America (US), L.P.	Other Supplier
Davis	James	Virginia Electric & Power Company	Transmission Owner
Domian	Christin	Duquesne Light Company	Transmission Owner
Dugan	Chuck	East Kentucky Power Cooperative, Inc.	Transmission Owner
Esquivel	Manuel	Enel X North America, Inc.	Other Supplier
Evrard	David	Pennsylvania Office of Consumer Advocate	End-Use Customer
Fishback	Luke	Affirmed Energy LLC	Other Supplier
Foladare	Kenneth	Geenex Solar LLC	Other Supplier
Ford	Adrien	Old Dominion Electric Cooperative	Electric Distributor
Garnett	Bryan	Duke Energy Business Services LLC	Transmission Owner
Heinle	Frederick	Office of the People's Counsel for the District of Columbia	End-Use Customer
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	Carroll County Energy LLC	Generation Owner
Hyzinski	Thomas	Dynegy Marketing and Trade, LLC	Generation Owner
Hyzinski	Thomas	GenOn Energy Management, LLC	Generation Owner
Jardot	Gina	NRG Power Marketing LLC	Generation Owner
Johnson	Carl	Blue Ridge Power Agency, Inc.	Electric Distributor
Johnson	Carl	Borough of Chambersburg	Electric Distributor
Johnson	Carl	Borough of Mont Alto, Pennsylvania	Electric Distributor
Johnson	Carl	Buckeye Power, Inc.	Electric Distributor
Johnson	Carl	Central Virginia Electric Cooperative	Electric Distributor

Johnson	Carl	City of Dover, Delaware	Electric Distributor
Johnson	Carl	Delaware Municipal Electric Corporation, Inc.	Electric Distributor
Johnson	Carl	Easton Utilities Commission	Electric Distributor
Johnson	Carl	Energy Cooperative Association of Pennsylvania (The)	Other Supplier
Johnson	Carl	Hagerstown Light Department	Electric Distributor
Johnson	Carl	Illinois Municipal Electric Agency	Electric Distributor
Johnson	Carl	Indiana Municipal Power Agency	Electric Distributor
Johnson	Carl	Michigan Public Power Agency	Electric Distributor
Johnson	Carl	North Carolina Electric Membership Corporation	Electric Distributor
Johnson	Carl	Northern Virginia Electric Cooperative (NOVEC)	Electric Distributor
Johnson	Carl	Thurmont Municipal Light Company	Electric Distributor
Johnson	Carl	Town of Williamsport (The)	Electric Distributor
Johnson	Carl	WPPI Energy	Other Supplier
Keenan	Matthew	Elwood Energy, LLC	Generation Owner
Kelly	Stephen	Brookfield Renewable Trading and Marketing LP	Other Supplier
Kilgallen	Kevin	Avangrid Renewables, LLC	Generation Owner
Litchfield	Matt	CPV Power Holdings, LP	Generation Owner
Poulos	Greg	Delaware Division of the Public Advocate	End-Use Customer
Poulos	Greg	Illinois Citizen Utility Board	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	New Jersey Division of Rate Counsel	End-Use Customer
Poulos	Greg	Office of the Attorney General, Kentucky	End-Use Customer
Poulos	Greg	Public Staff - North Carolina Utilities Commission	End-Use Customer
Rohrbach	John	Big Savage, LLC	Generation Owner
Rohrbach	John	Kentucky Municipal Energy Agency	Electric Distributor
Rohrbach	John	Southern Maryland Electric Cooperative, Inc.	Electric Distributor
Rohrbach	John	Wabash Valley Power Association, Inc.	Electric Distributor
Scarpignato	David	Calpine Energy Services, L.P.	Generation Owner
Shah	Pulin	Exelon Business Services Company, LLC	Transmission Owner
Stern	Alex	Public Service Electric and Gas Company	Transmission Owner
Swalwell	Bradley	Tangent Energy Solutions, Inc.	Other Supplier
Swigonski	Frank	Pine Gate Mid-Atlantic, LLC	Other Supplier
Tubridy	Meg	Rockland Electric Company	Transmission Owner
Vayda	Brian	Borough of Butler, Butler Electric Division	Electric Distributor
Vayda	Brian	Borough of Lavallette, New Jersey	Electric Distributor
Vayda	Brian	Borough of Madison, New Jersey	Electric Distributor
Vayda	Brian	Borough of Milltown, New Jersey	Electric Distributor
Vayda	Brian	Borough of Park Ridge, New Jersey	Electric Distributor
Vayda	Brian	Borough of Pemberton, New Jersey	Electric Distributor
Vayda	Brian	Borough of Seaside Heights, New Jersey	Electric Distributor
Vayda	Brian	Borough of South River, New Jersey	Electric Distributor
Vayda	Brian	Vineland Municipal Electric Utility	Electric Distributor
Whitehead	Jeffrey	Eastern Generation, LLC	Generation Owner
Whitehead	Jeffrey	Essential Power Rock Springs, LLC	Generation Owner
Whitehead	Jeffrey	Wheelabrator Falls Inc.	Generation Owner
Yovanovich	Laura	PPL Electric Utilities Corporation d/b/a PPL Utilities	Transmission Owner

Non-Voting Attendees

Last Name	First Name	Company	Sector
Kingston	Amber	Aces	Not Applicable
Phillips	Amanda	Aces	Not Applicable
Ondayko	Brock	Appalachian Power Company	Transmission Owner
Sparks	Bridget	AES Energy Storage, LLC	Generation Owner
Moyo	Edwin	AI's Reversals	Not Applicable
Consina	Wendell	Amed	Not Applicable

Sink	Sari	American Clean Power	Not Applicable
Laios	Takis	Appalachian Power Company	Transmission Owner
Sorrels	Gene	Appalachian Power Company	Transmission Owner
Janicki	Diane	Boston Energy Trading and Marketing LLC	Other Supplier
Procutniar	Jason	Buckeye Power, Inc.	Electric Distributor
Breidenbaugh	Aaron	Stones DR, LLC	Other Supplier
Huntoon	Steve	Chesapeake Transmission LLC	Other Supplier
Concina	Wendell	Commonwealth Edison Company	Transmission Owner
Miller	John	Commonwealth Edison Company	Transmission Owner
Gilani	Rehan	Consolidated Edison Energy, Inc.	Other Supplier
Boyle	Sean	Constellation Energy Services, Inc.	Other Supplier
Price	Mark	DC Energy, LLC	Other Supplier
Matheson	Eric	Delaware Public Service Commission	Not Applicable
Hugee	Jacquelyn	Virginia Electric & Power Company	Transmission Owner
Schroder	Connie	Virginia Electric & Power Company	Transmission Owner
Jett	William	Duke Energy Business Services LLC	Transmission Owner
Sturgeon	John	Duke Energy Business Services LLC	Transmission Owner
Kent	Janessa	Duquesne Light Company	Transmission Owner
Peoples	John	Duquesne Light Company	Transmission Owner
Foster-Cronin	Denise	East Kentucky Power Cooperative	Transmission Owner
Sotkiewicz	Paul	E-Cubed Policy Associates	Not Applicable
Theodore	Sharon	Electric Power Supply Association	Not Applicable
Cambero	Edwin	Enel X North America, Inc.	Other Supplier
Glazener	Patrick	Energy Authority, Inc. (The)	Other Supplier
Curtis	Kenneth	Enverus, Inc.	Not Applicable
Louwahi	Soufiane	EPE Consulting	Not Applicable
Cox	Jason	EQ Energy Advisors	Not Applicable
Guy	Gary	Exelon Business Services Company, LLC	Transmission Owner
Midgley	Sharon	Exelon Business Services Company, LLC	Transmission Owner
Chambers	Ericka	Exelon Business Services Company, LLC	Transmission Owner
Walker	Jennifer	Exelon Business Services Company, LLC	Transmission Owner
Elkins	Rachel	Energy Harbor LLC	Generation Owner
Mason	Gary	Energy Harbor LLC	Generation Owner
Stone	Andy	Gabel Associates	Not Applicable
Thomas	Glen	GT Power Group, LLC	Not Applicable
Moyo	Edwin	House River Associates	Not
Shanker	Roy	H.Q. Energy Services (U.S.), Inc.	Other Supplier
Van Der Laan	William	ICC	Not Applicable
Sims	Ryan	Interstate Gas Supply, Inc.	Other Supplier
Patel	Alpana	Interstate Gas Supply, Inc.	Other Supplier
Callen	Zac	Illinois Commerce Commission	Not Applicable
Tyler	Catheirne	Monitoring Analytics, LLC	Not Applicable
Jones	Scott	Indiana Office of Utility Consumer Counselor (IN OUCC)	End-Use Customer
McNeil	Justin	Kentucky Public Service Commission	Not Applicable
Janapareddy	Anupama	MG Renewables	Not Applicable
Parrot	Keith	Michigan Public Power Agency	Electric Distributor
Bowering	Joe	Monitoring Analytics LLC	Not Applicable
Scheidecker	Paul	Monitoring Analytics LLC	Not Applicable
Mabry	David	MWN	Not Applicable
Aogud	George	New York Power Authority	Not Applicable
Boyd	Jamie	NJR Clean Energy Ventures Corporation	Generation Owner
Daily	Mike	Northern Virginia Electric Cooperative (NOVEC)	Electric Distributor
Cocco	Michael	Old Dominion Electric Cooperative	Electric Distributor
Brady	George	Ohio Valley Electric Coporation	Transmission Owner
Hicks	Dave	Perast Fund LP	Other Supplier
Carson	Donna	East Kentucky Power Cooperative, Inc.	Transmission Owner

Walker	Preston	PPL Electric Utilities Corporation d/b/a PPL Utilities	Transmission Owner
Corash	Richard	Public Service Electric and Gas Company	Transmission Owner
Diorio	Michelle	Public Service Electric and Gas Company	Transmission Owner
Greiner	Gary	Public Service Electric and Gas Company	Transmission Owner
Moraski	Jim	Public Service Electric and Gas Company	Transmission Owner
Diorio	Michelle	Public Service Electric and Gas Company	Transmission Owner
McClelland	Maura	PUCO	Not Applicable
Drom	Rick	RAD LLC	Not Applicable
Singer	Chad	Ravenbolt	Not Applicable
Duensing	Allison	Saracen Power LP	Other Supplier
Okenfuss	James	Savion, LLC	Not Applicable
Swallowell	Brad	Tangent Energy Solutions, Inc.	Other Supplier
Rush	Mason	Consumer Protection and Advocate Division of the Tennessee Attorney General	End-Use Customer
Glazener	Patrick	Energy Authority, Inc. (The)	Other Supplier
Dillon	Matt	UGI Development Company	Generation Owner
Murphy	Shaun	Urban Grid Solar Projects, LLC	Other Supplier
Wilson	James	Wilson Energy Economics	Not Applicable
Hepplewhite	Peter	Wrigley Capital LLC	Other Supplier

PJM Attendees

Last Name	First Name	Company	Sector
Boyle	Glen	PJM Interconnection, LLC	Not Applicable
Bruno	Patrick	PJM Interconnection, LLC	Not Applicable
Cao	Roger	PJM Interconnection, LLC	Not Applicable
Carrasco	Eliseo	PJM Interconnection, LLC	Not Applicable
Connell	Jason	PJM Interconnection, LLC	Not Applicable
Coscia	Carl	PJM Interconnection, LLC	Not Applicable
Croop	Danielle	PJM Interconnection, LLC	Not Applicable
Drauschak	Lisa	PJM Interconnection, LLC	Not Applicable
Egan	Amanda	PJM Interconnection, LLC	Not Applicable
Fitzpatrick	Brian	PJM Interconnection, LLC	Not Applicable
Frogg	Darrell	PJM Interconnection, LLC	Not Applicable
Hauske	Thomas	PJM Interconnection, LLC	Not Applicable
Herrera	Maria	PJM Interconnection, LLC	Not Applicable
Horger	Timothy	PJM Interconnection, LLC	Not Applicable
Hoshmand	Mojtaba	PJM Interconnection, LLC	Not Applicable
Hsieh	Eric	PJM Interconnection, LLC	Not Applicable
Johnson	Jeanine	PJM Interconnection, LLC	Not Applicable
Kelly	Gwen	PJM Interconnection, LLC	Not Applicable
Konowal	Richard	PJM Interconnection, LLC	Not Applicable
Label	Margot	PJM Interconnection, LLC	Not Applicable
Lai	Erin	PJM Interconnection, LLC	Not Applicable
Langbein	Pete	PJM Interconnection, LLC	Not Applicable
Loebl	Margo	PJM Interconnection, LLC	Not Applicable
Marcino	Angelo	PJM Interconnection, LLC	Not Applicable
McElwaine	Kathy	PJM Interconnection, LLC	Not Applicable
McLavery	Megan	PJM Interconnection, LLC	Not Applicable
Muhl	Nancy	PJM Interconnection, LLC	Not Applicable
Perera	Asanga	PJM Interconnection, LLC	Not Applicable
Pilong	Chris	PJM Interconnection, LLC	Not Applicable
Rocha	Patricio	PJM Interconnection, LLC	Not Applicable
Schweizer	David	PJM Interconnection, LLC	Not Applicable
Souder	Michelle	PJM Interconnection, LLC	Not Applicable
Souder	Richard	PJM Interconnection, LLC	Not Applicable
Stanisz	Mark	PJM Interconnection, LLC	Not Applicable



Minutes

Terranova	Chris	PJM Interconnection, LLC	Not Applicable
Tao	Roger	PJM Interconnection, LLC	Not Applicable
Waweru	James	PJM Interconnection, LLC	Not Applicable