

ISSUE CREATION

<u>Problem Statement</u> and <u>Issue Charge</u> brought forward by Jim Davis, Dominion Energy Generation Marketing, Inc and approved at the March 10, 2021 MIC.

PJM - Reactive Power Compensation Task Force

ISSUE SUMMARY

The reactive power compensation process for VAR capability within PJM is time consuming and onerous for generation owners, developers, and transmission customers as it exposes generators, developers, and customers to significant litigation costs, either defending or contesting the requested rates.

CONSENSUS-BASED ISSUE RESOLUTION PROCESS

Number of Meetings and date range covering this topic: 16 meetings were held from November 5, 2021 through June 9, 2023

Non-Binding Poll Results

Final Matrix

1. RECOMMENDED PROPOSAL

Four packages (Clean Energy Coalition, PJM Full Capability, IMM, and IMM-Flat Rate) were discussed at the RPCTF. PJM's package, the recommended package, differed from the others since it focused on PJM operational needs which deemed that Reactive Power is an essential reliability service. PJM's package also provided updates to Manual 3 Section 3.12, included MVAR rates based on the PJM average rate as of 1/1/2022, used eDART reportable data, did not include FERC approved capability for performance incentives/penalties, allowed an implementation time for performance assessment and a re-rate process and the power compensation mechanism did not affect generators with existing and effective rates on file with the FERC.

The package provided incentives for full, usable reactive capability and encouraged and rewarded resource performance for real time transmission voltage control. This package reduced the administrative and legal burden of the existing process.

The PJM package received a 3.66 member and 3.85 Non-member <u>poll</u> ranking. The poll was ranked in order of support but did not indicate support of all packages and was submitted by mostly Non-Members that were not able to vote on the PJM package at the MIC. Several packages were withdrawn, prior to going to the MIC, including a second PJM package.

2. ALTERNATE PROPOSAL 1

An alternative <u>package</u> was presented by the Clean Energy Coalition (CEC) and received a 3.93 Member and 5.0 Non-Member <u>poll</u> result ranking. The CEC package focused on the current AEP methodology with an enhancement



to include the AEP-derived stated flat rate based on generation type, that the basis for compensation would include the capability used by FERC's approved AEP formula with testing for verification, requested that PJM adopt a means to allow generators to test to confirm manufacturer's reactive capability (instead of event-based demonstration), found delivery points for compensation not needed, eligibility for compensation under Schedule 2, current Manual 3 Section 3.12 rules, and a stated rate per generation type using AEP formula with the tariff describing process and explicitly stating the rates for each technology class with updates every five years. The CEC package included a three-strike rule for performance incentives/penalties, no voltage schedule and that the implementation should not impact generators that have a filing pending with FERC or projects that have a facilities study agreement signed by the interconnection customer.

3. ALTERNATE PROPOSALS 2 & 3

Two alternative packages, IMM and IMM-Flat Rate, were verbally presented by the Independent Market Monitor (IMM) as part of the <u>matrix</u> without a formal presentation. The IMM package focused on compensation solely through existing markets and EAS offset was eliminated in capacity market. The IMM-Flat Rate package set the EAS offset in capacity market equal to flat rate. Additional details can be referenced in the matrix.

4. STANDING COMMITTEE RESULTS

The following packages were considered at the 8/9/2023 MIC meeting and did not receive endorsement:

- The Clean Energy Caucus Package with 179 (62%) in favor, 109 (38%) opposed, and 23 abstentions. A second vote showed stakeholders did not prefer the Clean Energy Caucus Package over status quo with 125 (44%) in favor, 157 (56%) opposed, and 17 abstentions.
- The PJM Package with 91 (33%) in favor, 185 (67%) opposed, and 14 abstentions. A second vote showed stakeholders did not prefer the PJM Package over status quo with 76 (30%) in favor, 173 (70%) opposed, and 29 abstentions.
- The IMM Package with 28 (10%) in favor, 247 (90%) opposed, and 12 abstentions. A second vote showed stakeholders did not prefer the IMM Package over status quo with 35 (12%) in favor, 251 (88%) opposed, and 5 abstentions.
- The IMM Flat Rate Package with 26 (9%) in favor, 251 (91%) opposed, and 12 abstentions. A second vote showed stakeholders did not prefer the IMM Flat Rate Package over status quo with 33 (11%) in favor, 260 (89) opposed, and 8 abstentions.

APPENDIX I: SUPPLEMENTAL DOCUMENTS

PJM - Reactive Power Compensation Task Force Issue Tracking: Reactive Supply and Voltage Control Compensation



APPENDIX II: PJM PARTICIPATION

- Facilitator: Danielle Croop Secretary: Risa Holland Advocate: Glen Boyle
- Subject Matter Expert: Roger Cao
- Subject Matter: Daniel Moscovitz
- Subject Matter: Darrell Frogg
- PJM Legal: Thomas DeVita; Erin Lai

Name	Company Name	Sector
Akeel, Roddy	Enel Trading North America, LLC	Other Supplier
Anthony, Tyler	MN8 Energy Operating Company LLC	
Benchek, Jim	American Transmission Systems, Inc.	Transmission Owner
Blair, Tom	Monitoring Analytics	None
Bowring, Joe	Monitoring Analytics	None
Boyle, Glen	PJM Interconnection	None
Boyle, Sean	Constellation Energy Generation, LLC	Generation Owner
Brodbeck, John	EDP Renewables North America LLC	Generation Owner
Bryson, Mike	PJM Interconnection	None
Callen, Zachary	Illinios Commerce Commission	None
Cao, Roger	PJM Interconnection	None
Carmean, Gregory	Organization of PJM States, Inc.	None
Carrier, Ron	Big Lake Consultant	None
Carson, Donna	East Kentucky Power Cooperative, Inc.	Transmission Owner
Christopher, Mahila	Public Utilities Commission of Ohio	End-Use Customer
Cocco, Michael	Old Dominion Electric Cooperative	Electric Distributor
Corash, Rich	PSEG Energy Resources and Trade LLC	Other Supplier
Croop, Danielle	PJM Interconnection	None
Crystle, Gil	UGI Development Company	Generation Owner
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Dadourian, John	Monitoring Analytics	None
Dailey, Mike	Northern Virginia Electric Cooperative (NOVEC)	Electric Distributor
Daley, Faith	PJM Interconnection	None
D'Antonio, Phil	PJM Interconnection	None
Davis, David	Apex Clean Energy Holdings, LLC	
Davis, Jim	Dominion Energy Generation Marketing, Inc.	Generation Owner
Dillon, Matthew	UGI Development Company	Generation Owner
Drivas, Cristina	Whitetail Solar 1, LLC	Generation Owner
Dollens, Aldin		
Dugan, Chuck	East Kentucky Power Cooperative, Inc.	Transmission Owner
Fabiano, Janell	PJM Interconnection	None
Fejka, Brian	Federal Energy Regulatory Commission	None
Filomena, Guy	Customized Energy Solutions, Ltd.	None
Fink, Sari	American Wind Energy Association	None
Foladare, Kenneth	Geenex Solar LLC	Other Supplier
Ford, Adrien	Old Dominion Electric Cooperative	Electric Distributor
Franks, Edmund	PJM Interconnection	None
Frogg, Darrell	PJM Interconnection	None
Fuess, Christian	PBF Power Marketing, LLC	End-Use Customer
Gaddes, Caleb	Whitetail Solar 1, LLC	Generation Owner
Gajdowski, Denise	PJM Interconnection	None
Gates, Terry	Appalachian Power Company (AEP Generation)	Transmission Owner
Glatz, Suzanne	PJM Interconnection	None
Gordon, Jonathan	Advanced Energy Ecomomy	
Gorman, Bradley	American Transmission Systems, Inc.	Transmission Owner
Grabow, Bruce	Locke Lord LLP	None
Greco, Steven	NextEra Energy Marketing, LLC	Other Supplier
Guntle, Vince	American PowerNet Management, L.P.	End-Use Customer
Hauske, David	PJM Interconnection	None
He, Ray	Federal Energy Regulatory Commission	None
Heinle, Frederick	Office of the Peoples Counsel	End-Use Customer
Hislop, Dave	PJM Interconnection	None
Hoatson, Tom	West Deptford Energy, LLC	Generation Owner
Holland, Risa	PJM Interconnection	None
Holter, Natasha	PJM Interconnection	None
Horger, Tim	PJM Interconnection	None
Horigan, Wade	Tangibl Group, Inc.	None



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Horning, Lynn Marie	American Municipal Power, Inc.	Electric Distributor
Horstmann, John	Dayton Power & Light Company (The)	Transmission Owner
Hsia, Eric	PJM Interconnection	None
Hugee, Jacqulynn	Dominion Virginia Power	Transmission Owner
Hull, Gerit	American Municipal Power, Inc.	Electric Distributor
Hyzinski, Tom	GT Power Group, LLC	None
Jardot, Gina		
Johnson, Carl	Customized Energy Solutions, Ltd.	None
Johnston, David	Other	None
Jones, Peter	Savion, LLC	None
Kalaskar, Rahul	AES Laurel Mountain, LLC	Generation Owner
Kelly, Ross	PJM Interconnection	None
Kelly, Stephen	Brookfield Renewable Trading and Marketing LP (BSMH)	Other Supplier
Kilgallen, Kevin	Avangrid Renewables, LLC	Generation Owner
Kimmel, David	PJM Interconnection	None
Kinney, Josh	Hexagon Energy, LLC	
Kroh, Judson	Seward Generation, LLC	Generation Owner
Lai, Erin	PJM Interconnection	None
LaVista, William	RWE Renewables Americas, LLC	Generation Owner
Liang-Nicol, Cecilia	Allegheny Power (MonPwr Gen)	
Lu, Chen	PJM Interconnection	None
Mabry, David	McNees Wallace & Nurick LLC	None
Macio, Antonio		
Mason, Gary	Monongahela Power Company d/b/a Allegheny Power	Transmission Owner
Matuszak, Alex	UGI Energy Services, LLC	Other Supplier
McGill, Susan	PJM Interconnection	None
McNeil, Justin	Kentucky Public Service Commission	End Use Customer
Mekala, Karthik	RWE Renewables Americas, LLC	Generation Owner
Midgley, Sharon	Exelon Business Services Company, LLC	Transmission Owner
Mohan, Chuck	Seward Generation, LLC	Generation Owner
Mooney, Jeff	Allegheny Power (MonPwr Gen)	Transmission Owner
Morelli, Lisa	PJM Interconnection	None
Morrow, Brian	East Kentucky Power Cooperative	Transmission Owner
Moscovitz, Daniel	PJM Interconnection	
Nix, Emma	Leeward Asset Management, LLC	Generation Owner



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Nye, Jacob		
Okenfuss, James	Savion, LLC	None
Ondayko, Brock	AEP Energy Partners, Inc. (AEP Gen Resources)	Transmission Owner
Patel, Shodhan	Constellation Energy Generation, LLC	Generation Owner
Pilong, Christopher	PJM Interconnection	None
Poulos, Greg	PJM Committee Voting Generic Account	None
Price, Robert	Sunenergy1	
Procuniar, Jason	Buckeye Power, Inc.	Electric Distributor
Pungaliya	Pine Gate Mid-Atlantic, LLC	Other Supplier
Purdie, Michael	National Hydropower Association	
Rasmussen, Jay	Duke Energy Business Services LLC	Transmission Owner
Roach, Temujin	EDF Renewable Development, Inc.	None
Rutledge, Craig	Appalachian Power Company (APCO Dedicated)	Transmission Owner
Sasser, Jonathan	Customized Energy Solutions, Ltd.	None
Schmitt, David	New Jersey Board Of Public Utilities	None
Schmitt, Jeff	PJM Interconnection	None
Schuyler, Ken	PJM Interconnection	None
Selick, Sam	Customized Energy Solutions, Ltd.	None
Shade, Johannes	Federal Energy Regulatory Commission	None
Shrestha, Sahara		
Sloan, Ben	Organization of PJM States, Inc.	None
Smith, Kara	Buckeye Power, Inc.	Electric Distributor
Sparks, Bridget	sPower Development Company, LLC	
Stern, Alexander	Public Service Electric and Gas Company	Transmission Owner
Sturgeon, John	Duke Energy Business Services LLC	Transmission Owner
Swalwell, Brad	Tangent Energy Solutions, Inc.	Other Supplier
Sweeney, Rory	Power Prose, Inc.	
Swigonski, Frank	Pine Gate Mid-Atlantic, LLC	Other Supplier
Tashakkori, Cyrus	Open Road Renewables, LLC	Other Supplier
Uddin, Shahab	Old Dominion Electric Cooperative	Electric Distributor
Unger, Matthew	State Corporation Commission (Commonwealth of Virginia)	
Valle, Alexander	Federal Energy Regulatory Commission	
Vivas, Luis	NextEra Energy Marketing, LLC	Other Supplier
Volpe, Mike	OPEN ROAD RENEWABLES, LLC	
Walcavich, Colin	Green River Holdings, LLC	Generation Owner
Whitehead, Jeff	GT Power Group	None



Wilches, Rafael	PSEG Energy Resources and Trade LLC	Other Supplier
Wynder, Michael	Altrock LLC	Other Supplier
Yasutake, Sarah	Jersey Green Energy LLC	Other Supplier
Yum, Phil	PJM Interconnection	None
Zugris, Donna		