



Summer-Only Demand Response Senior Task Force Final Proposal Report

February 27, 2020

Issue Creation

The Summer-Only Demand Response Senior Task Force [Problem Statement](#) and [Issue Charge](#) was brought forward by PJM Interconnection and approved by the Markets and Reliability Committee on August 24, 2017.

[Summer-Only Demand Response Senior Task Force Charter](#)

Issue Summary

The Summer-Only Demand Response Senior Task Force (SODRSTF) was tasked with investigating potential opportunities to value summer-only Demand Response resources through the load-forecasting process or other mechanisms that would serve as an alternative to supply-side participation in the capacity market. The SODRSTF reported to the Markets and Reliability Committee.

Consensus-Based Issue Resolution Process

The SODRSTF met 14 times between December 2017 and September 2018.

[Non-Binding Poll Results](#)

[Voting Results](#)

[Final Matrix](#)

1. Recommended Proposal

The PJM package, which received majority support (65.27%) in the Summer-Only Demand Response Senior Task Force discussions, intends to use the load forecast model to estimate the load reduction of eligible programs. PJM's goal is focused on improving the accuracy of the long-term zonal and RTO load forecasts. The proposal comprises of several parts:

Eligibility: Eligibility is restricted to load reduction programs (both direct control and behavioral) governed by a tariff or an order approved by the Relevant Electric Retail Regulatory Authority (RERRA). The entity subject to the tariff/order will be fully responsible for satisfying the load forecast adjustment requirements; however, that entity or its authorized agent may manage a portfolio of interruptible customers under the RERRA tariff. Customers that are included in the load forecast adjustment (LFA) may not also participate as DR (Emergency or Economic) or as PRD for the same delivery year. For a peak shaving program to be considered for an LFA, the entity subject to the tariff/order must file a Load Forecast Adjustment Plan with PJM no later than ten business days prior to September 30 for inclusion in the next PJM load forecast.



Forecast Adjustment Mechanism: Initially, the forecast adjustment for peak shaving programs will be based on a load forecast using modified load history that assumes the program's anticipated curtailment behavior occurred in all historical years used in the forecast model. This establishes the program's initial forecast adjustment MW value. Once incorporated into the PJM load forecast, the program's performance will be measured against its committed MW curtailment value (as dictated by the program specifications) and scored over a rolling three-year period. Results of this measurement may result in a revision of the program's forecast adjustment MW value.

Program Operation: Any program receiving a load forecast adjustment will be required to peak shave once its "trigger" is met or exceeded. The trigger will be based on the actual (not forecast) maximum daily temperature–humidity index (THI) for the relevant PJM zone as determined in advance by the EDC. If triggered, the peak shaving must comply with its pre-established parameters regarding number of hours of interruption, dispatch sequence, etc. Failure to operate to these parameters will lead to a reduction in the load forecast adjustment as described above.

Valuation of Load Forecast Impact: Peak shaving programs will receive no direct payment; instead their value will be recognized as avoided capacity cost based on a shift in the Variable Resource Requirement (VRR) curve used in the Base Residual Auction and in the Incremental Auctions. The VRR curve reflects the reliability requirement, which in turn depends on the load forecast and the monthly load profile.

Applicable Auction: Peak shaving programs will impact the reliability requirement used in the Base Residual Auction (BRA) and in Incremental Auctions (IAs) for a given delivery year. However, the MW curtailment value submitted to PJM for the BRA cannot be later reduced in the IAs. MW curtailment values submitted to PJM for IAs can only be in addition to those submitted for the BRA and must represent new peak shaving programs that were not in place the previous year.

2. Standing Committee Results

The [proposal](#) which received majority support in the SODRSTF was voted on at the October 25, 2018 Markets & Reliability Committee meeting. The proposal passed in a sector-weighted vote with 3.48 in favor. It was also voted at the October 25, 2018 Members Committee meeting. The proposal passed in a sector-weighted vote with 3.69 in favor.

3. The FERC Material

December 7, 2018 – Docket No. [ER19-511-000](#)

May 3, 2019 – Docket No. [ER19-511-001](#)

June 26, 2019 – Docket No. [ER19-511-002](#)

Appendix I: Supplemental Documents

[Summer-Only Demand Response Senior Task Force webpage](#)



Appendix II: PJM Participation

Facilitator – Rebecca Carroll
Secretary – Michael Borradaile
Advocate – Tom Falin
Subject Matter Expert – Pete Langbein
Subject Matter Expert – Andrew Gledhill
Subject Matter Expert – John Reynolds
Subject Matter Expert – Patricio Rocha Garrido
Subject Matter Expert – Jeff Bastian
Subject Matter Expert – Murty Bhavaraju
Subject Matter Expert – Paul Scheidecker
PJM Legal – Chenchao Lu

Appendix III: Stakeholder Participation

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|---------------------------------|---------------------------------------|----------------------|
| Abing, Ben | LCH.Clearnet | Not Applicable |
| Achaab, Edward | ITC Transco | Not Applicable |
| Adams, Darrin | East Kentucky Power Cooperative, Inc. | Transmission Owner |
| Ainspan, Malcolm | Energy Curtailment Specialists, Inc. | Other Supplier |
| Allen, William | Red Wolf Energy Trading, LLC | Other Supplier |
| Alston, Rick | Old Dominion Electric Cooperative | Electric Distributor |
| Anastasio, Elizabeth | PJM Interconnection, LLC | Not Applicable |
| Ander, David | PJM Interconnection, LLC | Not Applicable |
| Argoti, Julio | Other | Not Applicable |
| Baker, Scott | PJM Interconnection, LLC | Not Applicable |
| Barker, Jason | Exelon Business Services Company, LLC | Transmission Owner |
| Bastian, Jeff | PJM Interconnection, LLC | Not Applicable |
| Beban, Madalyn | PJM Interconnection, LLC | Not Applicable |
| Behr, Chris | Evergreen Community Power | Generation Owner |
| Benckek, Jim | FirstEnergy Solutions Corp. | Transmission Owner |
| Bennett, Stephen | PJM Interconnection, LLC | Not Applicable |
| Bhavaraju, Murty | PJM Interconnection, LLC | Not Applicable |
| Bolan, Martin | FirstEnergy Solutions Corp. | Transmission Owner |
| Borgatti, Michael | Gabel and Associates | Not Applicable |
| Borradaile, Michael (Secretary) | PJM Interconnection, LLC | Not Applicable |
| Brodbeck, John | EDP Renewables North America, LLC | Other Supplier |
| Brown, David | NJ Board of Public Utilities | Not Applicable |
| Bruce, Susan | McNees Wallace & Nurick LLC | Not Applicable |
| Bruno, Patrick | PJM Interconnection, LLC | Not Applicable |
| Bryson, Mike | PJM Interconnection, LLC | Not Applicable |



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| Burdis, Tim | PJM Interconnection, LLC | Not Applicable |
| Campbell, Bruce | EnergyConnect, Inc. | Other Supplier |
| Canter, David | Appalachian Power Company | Transmission Owner |
| Carmean, Gregory | OPSI | Not Applicable |
| Carroll, Rebecca (Facilitator) | PJM Interconnection, LLC | Not Applicable |
| Cavan, Peter | Direct Energy Business, LLC | Other Supplier |
| Chen, Jennifer | Natural Resources Defense Council | Not Applicable |
| Childs, Scott | Perigee Energy, LLC | Other Supplier |
| Ciabattoni, Joseph | PJM Interconnection, LLC | Not Applicable |
| Cornett, Stephanie | East Kentucky Power Cooperative, Inc. | Transmission Owner |
| Covino, Susan | PJM Interconnection, LLC | Not Applicable |
| Cox, Phil | Appalachian Power Company | Transmission Owner |
| Croop, Danielle | PJM Interconnection, LLC | Not Applicable |
| Currier ES, Jeff | Dominion Virginia Power | Not Applicable |
| D'Alessandris, Lou | FirstEnergy Solutions Corp. | Transmission Owner |
| Dadourian, John | Monitoring Analytics, LLC | Not Applicable |
| Davis, James | Dominion Energy Marketing, Inc. | Generation Owner |
| DeBellis, Eric | Environmental Law and Policy Center | Not Applicable |
| Delosa, Joseph | DE Public Service Commission | Not Applicable |
| Denby, Brett | NOVEC | Not Applicable |
| Dillon, Jesse | Talen Energy Marketing, LLC | Generation Owner |
| Dixon, Chad | Viridity Energy, Inc. | Other Supplier |
| Dolan, Ryan | American Municipal Power, Inc. | Electric Distributor |
| Doremus, Steven | EnerNOC, Inc. | Other Supplier |
| Driscoll, Mary Ellen | PJM Interconnection, LLC | Not Applicable |
| Drom, Rich | Eckert Seamans Cherin & Mellott, LLC | Not Applicable |
| Dugan, Chuck | East Kentucky Power Cooperative, Inc. | Transmission Owner |
| Eber, Jim | Commonwealth Edison Company | Transmission Owner |
| Egan, Amanda | PJM Interconnection, LLC | Not Applicable |
| Fabiano, Janell | PJM Interconnection, LLC | Not Applicable |
| Falin, Tom | PJM Interconnection, LLC | Not Applicable |
| Feldman, Brett | Navigant Consulting, Inc. | Not Applicable |
| Feliks, Kent | Appalachian Power Company | Transmission Owner |
| Fields, William | Maryland Office of Peoples Counsel | End User Customer |
| Filomena, Guy | Customized Energy Solutions, Ltd. | Not Applicable |
| Fitch, Neal | NRG Power Marketing, LLC | Generation Owner |
| Foladare, Kenneth | Tangibl | Not Applicable |
| Fondacci, Luis | North Carolina Electric Membership Corp. | Electric Distributor |
| Ford, Adrien | Old Dominion Electric Cooperative | Electric Distributor |



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| Fox, Angela | Wylan Energy, L.L.C. | Not Applicable |
| Freeh, Larissa | Appalachian Power Company (AEP Generation) | Generation Owner |
| Freifeld, Allen | Viridity Energy, Inc. | Other Supplier |
| Gahimer, Michael | IN Office of Utility Consumer Counselor | End User Customer |
| Gahimer, Mike | IN Office of Utility Consumer Counselor | End User Customer |
| Garofalo, Anthony | PSEG Energy Resources and Trade, LLC | Other Supplier |
| Gebolys, Debbie | Public Utilities Commission of Ohio (The) | Not Applicable |
| Gibelli, Steve | FirstEnergy Solutions Corp. | Transmission Owner |
| Gledhill, Andrew | PJM Interconnection, LLC | Not Applicable |
| Greening, Michele | PJM Interconnection, LLC | Not Applicable |
| Greiner, Gary | PSEG Energy Resources and Trade LLC | Other Supplier |
| Gresh, Leslie | PJM Interconnection, LLC | Not Applicable |
| Guerry, Katie | EnerNOC, Inc. | Other Supplier |
| Guy, Gary | Baltimore Gas and Electric Company | Transmission Owner |
| Hamilton, Brian | North American Electric Reliability Corporation | Not Applicable |
| Hanser, Erik | Michigan Public Service Commission | Not Applicable |
| Hastings, David | Market Interconnection LLC | Not Applicable |
| Haynes, Greg | Energy Authority, Inc. (The) | Other Supplier |
| Hedge, Sushma | PJM Interconnection, LLC | Not Applicable |
| Heinle, Erik | Old Dominion Electric Cooperative | Electric Distributor |
| Heinle, Frederick | Office of the People's Counsel | End User Customer |
| Hendrix, Chris | Texas Retail Energy, LLC | Other Supplier |
| Hendrzak, Chantal | PJM Interconnection, LLC | Not Applicable |
| Herel, Suzanne | PJM Interconnection, LLC | Not Applicable |
| Herman, Michael | PJM Interconnection, LLC | Not Applicable |
| Hewett, Christopher | Virginia Electric & Power Company | Transmission Owner |
| Hoatson, Tom | Riverside Generating, LLC | Other Supplier |
| Holland, Nia | PJM Interconnection, LLC | Not Applicable |
| Holland, Risa | PJM Interconnection, LLC | Not Applicable |
| Holliday, Randy | AEP Service Corp. | Not Applicable |
| Hollis, Gabriel | NextEra Energy Transmission, LLC | Other Supplier |
| Horstmann, John | Dayton Power & Light Company (The) | Transmission Owner |
| Horton, Dana | Appalachian Power Company | Transmission Owner |
| Hsia, Eric | PJM Interconnection, LLC | Not Applicable |
| Hu, Toby | ISO New England | Not Applicable |
| Huntoon, Stephen | NextEra Energy Power Marketing, LLC | Generation Owner |
| Hurley, Dan | Maryland Public Service Commission | Not Applicable |
| Hyzinski, Tom | GT Power Group | Not Applicable |
| Im, Brian | EnergyHub, Inc | Other Supplier |



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| Jardot, Gina | Essential Power Rock Springs, LLC | Transmission Owner |
| Jayachandran, Marilyn | PJM Interconnection, LLC | Not Applicable |
| Johnson, Carl | Customized Energy Solutions, Ltd. | Not Applicable |
| Johnston, Dave | Indiana URC | Not Applicable |
| Kaczanowski, Marek | Baltimore Gas and Electric Company | Transmission Owner |
| Kalle, Ibrahim | Tibiri Energies | Not Applicable |
| Kauffman, Brian | EnerNOC, Inc | Other Supplier |
| Keech, Adam | PJM Interconnection, LLC | Not Applicable |
| Kier, Laura | EnergyHub, Inc | Other Supplier |
| Kimmel, David | PJM Interconnection, LLC | Not Applicable |
| King, Robert | Whisker Labs | Not Applicable |
| Kinser, Cynthia | Tennessee Department of Agriculture | Not Applicable |
| Kogut, George | New York Power Authority | Other Supplier |
| Kolo, Elta | GTM | Not Applicable |
| Kotras, Craig | Baltimore Gas and Electric Company | Transmission Owner |
| Kreitler, Ginny | National Audobon | Not Applicable |
| Laios, Takis | Appalachian Power Company | Transmission Owner |
| Lang, Courtney | NRG Power Marketing LLC | Generation Owner |
| Langbein, Pete | PJM Interconnection, LLC | Not Applicable |
| LaRocque, Matthew | PJM Interconnection, LLC | Not Applicable |
| Lavery, Eric | Aces | Not Applicable |
| Lawson, Ryen | Dominion Virginia Power | Not Applicable |
| Lee, Lori Murphy | PJM Interconnection, LLC | Not Applicable |
| Lejcar, Jamie | Allegheny Electric Cooperative, Inc. | Electric Distributor |
| Lieberman, Steven | American Municipal Power, Inc. | Electric Distributor |
| Lin, Jiadong | DC Energy, LLC | Other Supplier |
| Little, Timothy | Shell Energy North America (US), LP | Other Supplier |
| Lockwood, Craig | Appalachian Power Company | Transmission Owner |
| Long, Amanda | PJM Interconnection, LLC | Not Applicable |
| Long, Glenn | PJM Interconnection, LLC | Not Applicable |
| Lowe, Connie | Dominion Virginia Power | Not Applicable |
| Lu, Chenchao | PJM Interconnection, LLC | Not Applicable |
| Lyons Chris | Customized Energy Solutions, Ltd. | Not Applicable |
| Mabry, David | McNees Wallace & Nurick LLC | Not Applicable |
| Mack, Amanda | PJM Interconnection, LLC | Not Applicable |
| Maina, Jennifer | Cargill Power Markets LLC | Other Supplier |
| Manion, Evelyn | PJM Interconnection, LLC | Not Applicable |
| Mariam, Yohannes | Office of the Peoples Counsel for the District of Columbia | End User Customer |
| Marton, David | FirstEnergy Solutions Corp. | Transmission Owner |



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| Marzewski, Skyler | Monitoring Analytics, LLC | Not Applicable |
| Matheson, Doug | EnerNOC, Inc. | Other Supplier |
| Matheson, Eric | Pennsylvania Public Utility Commission | Not Applicable |
| Mathsen, Michael | Cargill Power Markets LLC | Other Supplier |
| Maye, Shelly Ann | North America Power Partners LLC | Other Supplier |
| McCaffree, Matthew | Comverge Inc. | Not Applicable |
| McDaniel, John | Baltimore Gas and Electric Company | Transmission Owner |
| McKeever, Katie | Enel Trading North America, LLC | Not Applicable |
| McLavery, Megan | PJM Interconnection, LLC | Not Applicable |
| Mellovitz, Alan | Accenture | Not Applicable |
| Meridionale, Kevin | Jersey Central Power & Light Company | Transmission Owner |
| Meridionale, Kevin | FirstEnergy Corp. | Transmission Owner |
| Midgley, Sharon | Exelon Business Services Company, LLC | Transmission Owner |
| Miller, John | Commonwealth Edison Company | Transmission Owner |
| Mok, Alan | Duke Energy Kentucky, Inc. | Transmission Owner |
| Mooney, Molly | PJM Interconnection, LLC | Not Applicable |
| Mudra, Bob | Commonwealth Edison Company | Transmission Owner |
| Nix, Emma | PJM Interconnection, LLC | Not Applicable |
| Norton, Chris | American Municipal Power, Inc. | Electric Distributor |
| Nowell, Cynthia | Delmarva Power & Light Company | Electric Distributor |
| O'Connell, Robert | PPGI Fund A/B Development, LLC | Generation Owner |
| O'Neill, Jack | PJM Interconnection, LLC | Not Applicable |
| Ondayko, Brock | Appalachain Power Company | Transmission Owner |
| Patten, Kevin | Appalachain Power Company | Transmission Owner |
| Peoples, John | Duquesne Light Company | Transmission Owner |
| Philip, Rich | Duke Energy Business Services LLC | Transmission Owner |
| Philips, Jack | Hess Corporation | Other Supplier |
| Philips, Marjorie | Direct Energy Business, LLC | Other Supplier |
| Phillips, Darlene | PJM Interconnection, LLC | Not Applicable |
| Pino, Bill | Baltimore Gas and Electric Company | Transmission Owner |
| Piollo-Alam, Gail | Exelon Generation Co., LLC | Generation Owner |
| Polka, Joseph | Duquesne Light Company | Transmission Owner |
| Poulos, Greg | CAPS | Not Applicable |
| Power, Sean | Linde Energy Services, Inc. | End User Customer |
| Powers, Sean | Linde Energy Services, Inc. | End User Customer |
| Pratzon, Dave | GT Power Group | Not Applicable |
| Price, Ruth | Division of the Public Advocate of the State of Delaware | End User Customer |
| Price, Ruth Ann | Division of the Public Advocate of the State of Delaware | End User Customer |
| Rawley, Josh | Burns McDonnell | Not Applicable |



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| Reynolds, John | PJM Interconnection, LLC | Not Applicable |
| Rismiller, Randy | Illinois Commerce Commission | Not Applicable |
| Robinson, Maria | Advanced Energy Economy, Inc. | Not Applicable |
| Roch, Grant | Orthogonal Energy LLC | Not Applicable |
| Rocha Garrido, Patricio | PJM Interconnection, LLC | Not Applicable |
| Rohrbach, John | Southern Maryland Electric Cooperative | Electric Distributor |
| Rouland, James | PPL Electric Utilities Corp. dba PPL Utilities | Transmission Owner |
| Rutigliano, Tom | Achieving Equilibrium LLC | Other Supplier |
| Sanders, Melanie | Exelon Business Services Company, LLC | Transmission Owner |
| Sasser, Jonathan | Customized Energy Solutions, Ltd. | Not Applicable |
| Saunders, Cy | PJM Interconnection, LLC | Not Applicable |
| Scarpignato, David | Calpine Energy Services, L.P. | Generation Owner |
| Schaefer, Stephen | SAS Energy | Not Applicable |
| Scheidecker, Paul | PJM Interconnection, LLC | Not Applicable |
| Schmidt, Eric | PSEG Energy Resources and Trade, LLC | Transmission Owner |
| Schmitt, Jeff | PJM Interconnection, LLC | Not Applicable |
| Schneider, Jon | FirstEnergy Solutions Corp. | Transmission Owner |
| Schreim, Morris | Maryland Public Service Commission | Not Applicable |
| Schuyler, Ken | PJM Interconnection, LLC | Not Applicable |
| Schweizer, David | PJM Interconnection, LLC | Not Applicable |
| Shah, Pulin | PECO Energy Company | Transmission Owner |
| Shanker , Roy | H.Q. Energy Services (U.S.), Inc. | Not Applicable |
| Shegarfi, Roozbeh | Exelon Energy Company | Transmission Owner |
| Shoemaker, Jason | PJM Interconnection, LLC | Not Applicable |
| Singer, Chad | Fellon McCord | Not Applicable |
| Slagel, Ron | Market Interconnection | Not Applicable |
| Sotkiewicz, Paul | ITC | Not Applicable |
| Steinkuhl, Steve | Duke Energy Business Services LLC | Transmission Owner |
| Stern , Alex | BP Energy Company | Other Supplier |
| Sturgeon, John | Duke Energy Carolinas, LLC | Other Supplier |
| Suh, Jung | Noble Americas Energy Solutions LLC | Other Supplier |
| Swalwell, Brad | Tangent Energy Solutions, Inc. | Other Supplier |
| Swan, Nicole | Public Service Electric & Gas Company | Transmission Owner |
| Sweeney, Rory | RTO Insider | Not Applicable |
| Taylor, Miles | Northern Indiana Public Service Company | Other Supplier |
| Taylor, Robert | Exelon Business Services Company, LLC | Transmission Owner |
| Tekle, Zelalem | Baltimore Gas and Electric Company | Transmission Owner |
| Thomas, Bob | Illinois Municipal Electric Agency | Electric Distributor |
| Thomas, Jack | PJM Interconnection, LLC | Not Applicable |



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| Thundiyil, Kevin | Exelon Energy Company | Transmission Owner |
| Trayers, Barry | Citigroup Energy, Inc. | Other Supplier |
| Trevino, Rita | Siemens Industry, Inc. | Other Supplier |
| Tsao, Stephanie | SPGlobal | Not Applicable |
| Tutino, Joseph | PJM Interconnection, LLC | Not Applicable |
| VanderLaan, William | Illinois Commerce Commission | Not Applicable |
| Von Pinho, Frederico | NextEra Energy Transmission, LLC | Other Supplier |
| Ward, Michael | PJM Interconnection, LLC | Not Applicable |
| Watson, Betty | SolarCity | Not Applicable |
| Weber, Adam | Union Electric Company d/b/a Ameren Missouri | Other Supplier |
| Webster, John | Icetec.com, Inc. | Other Supplier |
| Wehr, Christopher | Metropolitan Edison Company | Transmission Owner |
| Whitehead, Jeff | GT Power Group | Not Applicable |
| Wiegand-Jackson, Laurie | North America Power Partners LLC | Other Supplier |
| Wilkie, Brian | Consolidated Edison Solutions, Inc | Other Supplier |
| Williams, Jo | Tenaska Virginia Parnters, L.P. | Generation Owner |
| Wilmoth, Emily | Dominion Virginia Power | Not Applicable |
| Wilson, Bram | Diamond State Generation Partners, LLC | Generation Owner |
| Wilson, James | Wilson Energy Economics | Not Applicable |
| Winkler, Eric | Winkler Energy Consulting | Not Applicable |
| Wisersky, Megan | Madison Gas & Electric Company | Other Supplier |
| Wolfe, Sam | Viridity Energy, Inc. | Other Supplier |
| Xenopoulos, Damon | Stone Mattheis Xenopoulous & Brew, PC | Not Applicable |
| Yeaton, Andrea | PJM Interconnection, LLC | Not Applicable |
| York, Amy | McNees Wallace & Nurick | Not Applicable |
| Zemanek, Kevin | Buckeye Power, Inc. | Electric Distributor |
| Zhang, Frank | Other | Not Applicable |
| Zhao, Ji | Appalachian Power Company | Transmission Owner |
| Zhuang, Julia | Commonwealth Edison Company | Transmission Owner |
| Zweig, James | American Transmission Company, LLC | Transmission Owner |