153 FERC ¶ 61,289
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Norman C. Bay, Chairman;
Cheryl A. LaFleur, Tony Clark,
and Colette D. Honorable.

PJM Interconnection, L.L.C. Docket No. ER16-76-000

ORDER ACCEPTING PROPOSED TARIFF AND
OPERATING AGREEMENT REVISIONS

(Issued December 11, 2015)

1. On October 14, 2015, PJM Interconnection, L.L.C. (PJM) filed revisions to its Open Access Transmission Tariff (OATT) and parallel revisions to Schedule 1 of its Operating Agreement (collectively, tariff).[1] Specifically, PJM proposes revisions to certain tariff requirements that govern its energy market offer cap in advance of the 2015-2016 Winter. As discussed below, PJM's proposed tariff revisions are hereby accepted, to be effective December 14, 2015, as requested.

I. Background

2. In January 2014, severely cold weather caused natural gas prices to spike due to pipeline deliverability issues and increased demand, driving the costs of producing electricity from certain gas-fired generators to exceed PJM's $1,000/MWh offer cap for market-based and cost-based sell offers.[2] Because of the offer cap, certain generation

[1] PJM Interconnection, L.L.C., Intra-PJM Tariffs, OATT Attachment K Appendix Section 1.10 - Scheduling, 24.0.0, OATT Attachment K Appendix Sec 2.2 General, 6.0.0, OATT Attachment K Appendix Sec 2.4 Determination of Energy, 2.0.0, OATT Attachment K Appendix Sec 3.2 - Market Buyers, 31.0.0, OATT Attachment K Appendix Sec 6.4 Offer Price Caps, 7.0.0, OA Schedule 1 Sec 1.10 - Scheduling, 24.0.0, OA Schedule 1 Sec 2.2 General., 6.0.0, OA Schedule 1 Sec 2.4 Determination of Energy Offers, 2.0.0, OA Schedule 1 Sec 3.2 - Market Buyers, 31.0.0 , OA Schedule 1 Sec 6.4 Offer Price Caps., 7.0.0.

[2] *See PJM Interconnection, L.L.C.*, 150 FERC ¶ 61,020 at 2 (2015) (January 2015 Order). *See also* Analysis of Operational Events and Market Impacts During the January

(continued ...)

resources were not permitted to include their marginal production costs in their cost-based offers. On January 23, 2014, PJM concurrently filed two emergency requests for temporary waiver of provisions of its tariff to address this situation. First, in Docket No. ER14-1144-000, PJM sought waiver of the offer cap to permit make-whole payments to market sellers who were barred by the offer cap from including all legitimate costs in their offers. The Commission issued an order granting the waiver request on January 24, 2014.[3] Second, in Docket No. ER14-1145-000, PJM filed a waiver request to permit the submission of cost-based offers from generators into the PJM energy markets at prices that exceed the $1,000/MWh offer cap. The Commission issued an order granting the second waiver request on February 11, 2014.[4] The tariff provisions in the February 2014 Order superseded those in the January 2014 Order, and the waiver lasted through March 31, 2014.

3. To avoid a similar circumstance the following winter, PJM filed a temporary waiver request pursuant to section 206 of the Federal Power Act (FPA) on December 15, 2014, in Docket No. EL15-31-000.[5] PJM proposed to allow resources to submit cost-based offers of up to $1,800/MWh, and to allow those offers to set Locational Marginal Price (LMP) during the 2014-2015 Winter. Additionally, PJM proposed to allow generators to recover any actual incurred costs above the cap through a make-whole payment, with such costs being subject to an after-the-fact review by both PJM and the Independent Market Monitor for PJM (IMM). The Commission issued an order on January 16, 2015, accepting the tariff revisions for the time period of January 9, 2015 through March 31, 2015.

4. As further detailed below, in advance of the 2015-2016 Winter, PJM now proposes to increase its energy market offer cap from $1,000/MWh to $2,000/MWh for cost-justified offers; cap market-based offers at $2,000/MWh only when the corresponding cost-based offer is above $1,000/MWh; and allow market sellers of

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2014 Cold Weather Events, (May 8, 2014), available at http://www.pjm.com/~/media/committees-groups/task-forces/cstf/20140509/20140509-item-02-cold-weather-report.ashx (providing background and analysis on the cold weather events of January 2014).

[3] *See PJM Interconnection, L.L.C.*, 146 FERC ¶ 61,041 (2014) (January 2014 Order).

[4] *See PJM Interconnection, L.L.C.*, 146 FERC ¶ 61,078 (2014) (February 2014 Order).

[5] 16 U.S.C. § 824e (2012).

generation resources with demonstrated costs above $2,000/MWh to recover those costs through make-whole payments.

II. **Notice and Responsive Pleadings**

5. Notice of PJM's filing was published in the *Federal Register*, 80 Fed. Reg. 63,755 (2015), with protests and interventions due on or before November 4, 2015.

6. Timely motions to intervene or notices of intervention were filed by the following entities: Delaware Public Service Commission; Southern Maryland Electric Cooperative; Inc.; Rockland Electric Co.; Talen Energy Marketing, LLC (on behalf of Brunner Island, LLC; Holtwood, LLC; Talen Ironwood, LLC; Martins Creek, LLC; Montour, LLC; Susquehanna Nuclear, LLC; Lower Mount Bethel Energy, LLC; Talen New Jersey Solar; LLC; Talen New Jersey Biogas, LLC; Talen Renewable Energy, LLC); The Dayton Power and Light Co.; American Municipal Power, Inc.; East Kentucky Power Cooperative, Inc.; New Jersey Board of Public Utilities; Public Power Association of New Jersey; Consolidated Edison Energy, Inc.; NRG Power Marketing LLC; GenOn Energy Management, LLC; FirstEnergy Service Company; Maryland Public Service Commission; PSEG Companies; North Carolina Electric Membership Corporation; Pennsylvania Office of Consumer Advocate; New Jersey Division of Rate Counsel; NextEra Energy Resources, LLC; the West Virginia Consumer Advocate Division; Duke Energy Kentucky, Inc.; Delaware Division of the Public Advocate. A timely motion to intervene, protest, and request for evidentiary hearing, was filed by the Office of the Ohio Consumers' Counsel (OCC). Timely motions to intervene and comments were filed by PJM Industrial Customer Coalition (PJM ICC); PJM Power Providers Group (P3); Electric Power Supply Association (EPSA); Calpine Corporation (Calpine); Exelon Corporation (Exelon); Dominion Resources Services, Inc. (Dominion); Old Dominion Electric Cooperative (ODEC); Public Utility Commission of Ohio (Ohio PUC); IMM; America's Natural Gas Alliance (ANGA). Comments were filed by Direct Energy Business, LLC; Delaware Public Service Commission (Delaware PSC). Timely comments were filed by PJM Utilities Coalition. A joint protest was filed by the New Jersey Board of Public Utilities, the Public Service Commission of Maryland, the Public Power Association of New Jersey, and Rockland Electric Company (collectively, Load Group). Timely motions to intervene and joint protest were filed by Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., Niagara Mohawk Power Corporation, National Grid, New York Power Authority, New York State Electric & Gas Corporation, Orange and Rockland Utilities, Inc., Power Supply Long Island, and Rochester Gas and Electric Corporation (collectively, NYTOs). Motions to intervene out-of-time were filed by the Pennsylvania Public Utility Commission (Pennsylvania PUC) and Illinois Citizens Utility Board. An out-of-time motion to intervene and comments were filed by Duke Energy Kentucky, Inc. and American Electric Power Service Corporation (AEP). An out-of-time motion to intervene and protest was filed by Potomac Economics, ltd. P3 filed answers to

comments (P3 Answer). Dominion and AEP jointly filed answers to comments (Dominion and AEP Answer). The Load Group filed an answer (Load Group Answer). ODEC filed an answer (ODEC Answer). PJM filed an answer (PJM Answer). Pennsylvania PUC filed an answer to comments of the IMM (Pennsylvania PUC Answer). The IMM filed an answer to answers by PJM, Dominion/AEP, ODEC and Power Providers (IMM answer to answers). PJM filed an answer to the IMM's answer.

III. Procedural Matters

7. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2015), notices of intervention and timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding.

8. Pursuant to Rule 214(d) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2014) (d) (2015), the Commission grants the untimely motions to intervene filed by the Pennsylvania PUC, IMM, Duke Energy Kentucky, Inc., and Potomac Economics, Ltd. given their interests in the proceeding, the early stage of the proceeding, and the absence of undue prejudice or delay

9. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.2149(a)(2)(2015) prohibits an answer to a protest unless otherwise ordered by the decisional authority. We accept the answers filed in this proceeding, as they have assisted us in our decision-making process, with exceptions, the answer to answers filed by the IMM on December 3, 2015 (IMM December 3 Comments), and the answer to the IMM December 3 Comments filed by PJM on December 9. 2015, and the answer to PJM's answer the IMM's December 3 Comments, filed on December 10, 2015. Therefore, pursuant to Rule 214(d) we reject such answer.

IV. Substantive Matters

10. We will accept PJM's proposed tariff revisions to become effective December 14, 2015, as requested. As detailed below, we find that PJM has demonstrated that its proposal to increase its energy market offer cap from $1,000/MWh to $2,000/MWh for cost-justified offers is just and reasonable. We address specific aspects of the proposal and disputed issues below, including: (1) the increased offer cap; (2) shortage pricing; (3) fuel cost policy; and (4) seams issues.

A. Increased Offer Cap

1. PJM's Proposal

11. Under PJM's proposed tariff revisions, cost-based offers for incremental energy will be allowed to exceed $2,000/MWh for the purposes of calculating merit-order dispatch,[6] provided those offers are made consistent with Schedule 2 of the Operating Agreement, and the applicable fuel cost policy.[7] However, such offers will be limited to $2,000/MWh for the purposes of setting Locational Marginal Prices (LMP).[8] PJM states that this will enable PJM to differentiate between multiple market sellers of generation resources that incur costs greater than $2,000/MWh. PJM further states that the $2,000/MWh cap satisfies the request of load interests for an upper limit on the offer amount that will be allowed to set LMP and reasonably balances the interests of market buyers and sellers.[9]

12. PJM also proposes to cap market-based offers at $2,000/MWh. Specifically, PJM intends to allow market-based offers, for which the corresponding cost-based offers are above $1,000/MWh but less than or equal to $2,000/MWh, to rise along with such cost-based offer. However, for cost-based offers above $2,000/MWh, the corresponding market-based offer may not exceed $2,000/MWh. For example, PJM explains that, if a resource's cost-based offer was $1,500/MWh, the market-based offer could not exceed $1,500/MWh. However, if the cost-based offer was $2,500/MWh, the market-based offer could not exceed $2,000/MWh. PJM also notes that under this proposal, market sellers that do not have legitimate cost-based offers greater than $1,000/MWh will not be allowed to submit market-based or cost-based offers greater than $1,000/MWh. PJM

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[6] PJM does not propose any changes to the 10 percent adder, which is used to capture the uncertainty involved in computing cost-based offers.

[7] PJM Transmittal at 6-7. *See also* PJM Transmittal at n.6 ("A fuel cost policy is a document containing the methodology used by a Market Seller to calculate cost-based energy offers as defined in the Cost Development Guidelines. A Generation Owner must submit a fuel cost policy to the IMM pursuant to the requirements of the Cost Development Guidelines.").

[8] PJM Transmittal at 6 fn. 21.

[9] PJM further explains that, this time, unlike in 2014, PJM stakeholders successfully reached two-thirds majority consensus, and this filing is the product of that consensus. PJM Transmittal at 5.

further commits to filing post-winter reports on offers above $1,000/MWh, for informational purposes.[10]

13. PJM further proposes to allow market sellers of generation resources, with demonstrated costs above $2,000/MWh, to recover those costs through make-whole payments. PJM states that eligibility for any such recovery would be subject to an after-the-fact review by PJM and the IMM. PJM proposes to effectuate these revisions by adding a new subsection (r) to tariff section 3.2.3, which explains eligibility requirements in order to receive operating reserves credits for energy offers above the $2,000/MWh cap.

14. Unlike its previous waiver filings on the offer cap, PJM's proposal here would apply year-round, rather than only to the winter months, and would remain effective until superseded by future Commission action. PJM states that it is proposing to revise its tariff now, and will await the conclusion of a Commission rulemaking that addresses offer caps in all Regional Transmission Organizations (RTOs) and Independent System Operators (ISOs) that might modify or supersede its proposed revisions.[11] Specifically, PJM notes the Commission announced its intention to take further action with respect to price formation issues in a recently issued Notice of Proposed Rulemaking (NOPR), addressing, as relevant here, energy market offer caps. [12]

15. PJM also notes that it has received offers greater than $1,000/MWh sparingly. For example, PJM notes that its December 2014 waiver request resulted in only 25 units submitting offers greater than $1,000/MWh, and none of those offers directly affected energy market prices or result in any uplift payments.[13]

2. **Comments**

16. The PJM Utilities Coalition and ANGA support PJM's tariff revisions but urge the Commission not to consider the proposed tariff revisions to be a template for future price

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[10] PJM Transmittal at 8.

[11] PJM Transmittal at 7-8.

[12] *Settlement Intervals and Shortage Pricing in Markets Operated by Regional Transmission Organizations and Independent System Operators*, Notice of Proposed Rulemaking, 80 Fed. Reg. 58,393 (Sept. 29, 2015), FERC Stats. & Regs. ¶ 32,710 (2015) (Shortage Pricing NOPR).

[13] PJM Transmittal at 8-9, and n.27.

formation issues related to offer caps.[14] ANGA explains that the proposed revisions should be viewed as a stop-gap measure for the coming winters, and not as a sustaining rule. ANGA questions the need for an offer cap, arguing that such caps interfere with the ability of suppliers to develop offers based on market fundamentals.[15] Similarly, EPSA asserts that the proposed tariff revisions should not be deemed as the basis for a long-term solution. EPSA states it is encouraged by and strongly supports the Commission's statement in its recent Notice of Proposed Rulemaking in Docket No. RM15-24-000,[16] and urges the Commission to direct PJM and its stakeholders to begin work now on a long-term solution to address the market setting price.[17] Ohio PUC also expresses support for PJM's filing as reasonably balancing cost and reliability objectives by increasing reliability and reducing uplift.[18] Calpine, Exelon, P3, and Dominion all agree that, while the proposed revisions are not ideal long-term solutions, the proposal should be viewed as the product of broad stakeholder support.

17. P3 encourages the Commission to approve the PJM proposal. However, P3 and Exelon criticize PJM for not going far enough in its energy offer cap increase. In particular, they disagree with the PJM proposal for allowing the use of make-whole out-of-market payments[19] and, instead, urge the Commission to require that all cost-based offers above the proposed offer cap be eligible to set the market clearing price.[20] Similarly, the PJM Utilities Coalition asserts that there should be no cost-based or market-based offer cap into the PJM energy market; however, it generally supports PJM's proposal as an incremental improvement on the status quo.[21]

18. The IMM states that the Commission should accept the revisions subject to condition that PJM clarify the process for receiving operating reserves credits. The IMM asserts that the tariff language in section 3.2.3 (r) should be revised to clarify the different

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[14] ANGA Comments at 1.

[15] ANGA Comments at 5.

[16] Shortage Pricing NOPR.

[17] EPSA Comments at 2, 7-8.

[18] Ohio PUC Comments at 3-5.

[19] P3 Comments at 2-8.

[20] Exelon Comments at 3.

[21] PJM Utilities Coalition Comments at 4.

purpose of PJM's and the IMM's review of relevant offers.[22] Specifically, the IMM states that the IMM's role should be clarified to review offers for market power concerns and that PJM's role should be clarified to review offers for tariff compliance.[23] Additionally, the IMM requests that the Commission direct the IMM to file annual reports reviewing the experience with offer caps and related changes.[24]

19. The Load Group seeks rejection of the filing. The Load Group asserts that there is a low expectation of monthly natural gas price spikes and therefore PJM has no reason to increase the offer cap. The Load Group argues that the offer cap is a critical market mitigation tool necessary to protect consumers from market manipulation.

20. NYTOs and OCC argue that PJM's filing is neither necessary nor likely to accomplish the objective of reimbursing generators for legitimately incurred costs, since, according to NYTO and OCC, PJM has not provided evidence that the current offer cap harms generators.[25] In particular, OCC objects to the proposal to allow the $2,000/MWh cost-based offer cap to set LMP. OCC, like the Load Group, asserts that the appropriate mechanism to recover costs incurred during extreme weather events is through make-whole uplift charges.[26]

3. Answers

21. Pennsylvania PUC supports the IMM's proposed language in section 3.2.3 (r) and contends that this revision is reasonable and will avoid any potential confusion over the roles of the IMM and PJM in reviewing requests for operating reserve credits.[27] PJM challenges these assertions and contends that this additional language is unnecessary since the respective roles of the IMM and PJM already are sufficiently described elsewhere in the tariff.[28]

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[22] IMM Comments at 10.

[23] IMM Comments at 2.

[24] IMM Comments at 10.

[25] OCC Protest at 4.

[26] OCC Protest at 4. The Load Group Protest 3-4.

[27] Pennsylvania PUC Answer at 8.

[28] PJM Answer at 5-6.

22. While acknowledging the Commission's efforts to address offer cap issues more broadly, PJM asserts that its tariff revisions are necessary, as an interim solution, to preserve the integrity of the PJM markets. PJM states that the revisions will aid in avoiding uplift and help set prices that reflect actual incremental costs production, effectively sending efficient price signals to the market.[29]

23. PJM asserts that describing PJM's proposal as "doubling" the offer cap, which various commenters have done, is not precise and potentially misleading. PJM explains that the cap for market-based offers is not doubled, but is limited by the corresponding cost-based offer, which is capped at $2,000/MWh for the purpose of setting LMP. PJM clarifies that market-based offers above $1,000/MWh will not be allowed to set LMP, absent having the submittal of a cost-based offer between $1,000/MWh and $2,000/MWh.

24. In its answer, the Load Group challenges the 10 percent adder to cost-based offers up to the proposed $2,000/MWh offer cap. The Load Group asserts that, in its orders approving PJM's previous offer cap waivers, the Commission adopted PJM's recommended limited application of the 10 percent adder to only those offers made up to $1,000/MWh, despite the fact that offers above $1,000/MWh were permitted to set LMP.[30] The Load Group contends that, in its instant filing, PJM reverses its prior position and deviates from Commission-approved practices by proposing an extension of the 10 percent adder to cost-based offers made up to $2,000/MWh. The Load Group also states its concerns that PJM's Manual 15 cost definition does not limit a generator's claimed costs to the actual experienced costs incurred to generate electricity, and that generators are permitted to employ either their actual costs or a market index cost of natural gas as the basis of their cost-based offer.[31] The Load Group explains that, to the extent that a selected market index specifies a fuel cost higher than what is actually incurred for fuel, generators increase their margin before even accounting for the 10 percent adder. Further, the Load Group alleges that the IMM has rejected a significant

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[29] PJM Answer at 2-3.

[30] The Load Group Answer at 13 (citing *PJM Interconnection, LLC*, 150 FERC ¶ 61,020, at ¶ PP7 & 41 (2015); *PJM Interconnection, L.L.C*, 149 FERC ¶ 61,059, at P 13 (2014)).

[31] The Load Group Answer at 14 (citing PJM Manual 15 at 11). PJM Manual 15, Section 2.3.2 states "The method of calculation of fuel cost may include the use of actual fuel prices paid, e.g. the contract price paid for fuel, or the spot price for fuel…."

portion of claimed cost-based offers above $1,000/MWh submitted during the waiver periods.[32]

4. Determination

25. We find PJM's proposed tariff revisions, which allow generators to recover their verifiable marginal costs above the existing $1,000/MWh energy market price cap, to be just and reasonable. The proposed filing appropriately allows cost-based offers up to $2,000/MWh to set LMP; promotes efficient resource selection, by allowing merit order dispatch above $2,000/MWh;[33] and sends transparent market signals.

26. Less than two years ago, the PJM system was faced with challenging extreme weather conditions that caused relatively high natural gas prices, which in turn caused marginal costs for certain resources to exceed the $1,000/MWh offer cap in effect at that time. Consequently, certain Market Sellers were required to sell energy at a price that did not reflect their marginal costs.[34] We agree with PJM that the potential for high natural gas prices remains a risk. PJM's filing addresses this potential risk while protecting consumers, by requiring verification of offers above the price cap. As PJM points out, allowing market prices to reflect actual costs by raising the current offer cap provides benefits to load by allowing such prices to be hedged, whereas uplift costs cannot be hedged as effectively.[35]

27. A number of protestors contend that this filing is not just and reasonable, asserting that the risk of a repeat of the gas shortages and extremely high gas prices has diminished. These parties note that PJM has taken measures to assure that generation resources operate efficiently and economically during extreme system conditions. However, forecasts are not assurances against extreme weather and do not provide a sufficient basis to render PJM's proposal unjust and unreasonable. And, even if PJM is more prepared now for a potential natural gas shortage than it was in 2014, PJM may continue to offer improvements to its tariff.

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[32] The Load Group Answer at 14.

[33] PJM states that cost-based offers above $2,000/MWh will be considered in merit order for dispatch purposes. However, for purposes of setting LMP, all offers will be capped at $2,000/MWh.

[34] *Id*. at 4.

[35] PJM Transmittal at 6-7.

28. The IMM requests conditional acceptance of PJM's proposed revisions, subject to a compliance requirement that PJM file tariff language clarifying the IMM's role to review offers for market power concerns. We do not find this condition necessary as the IMM's review of cost-based offers is already a component of PJM's Cost Development Guidelines.[36]

29. Calpine, the Load Group, OCC, and P3 express concerns about the revised offer cap as a long-term solution. OCC argues that maintaining the revised offer cap year-round will cause costs to rise in periods outside of the winter peaks.[37] However, as previously stated, the purpose of raising the offer caps is to allow market prices to reflect generators' underlying cost during any period of operation. Accordingly, we find it reasonable for PJM to make these provisions a permanent part of its tariff rather than reapplying each year for the authority to raise the offer cap.

30. The Load Group asserts that PJM has not presented evidence supporting the 10 percent adder to be included in cost-based offers. We find the inclusion of the 10 percent adder for offers between $1,000/MWh and $2,000/MWh just and reasonable as it reflects PJM's current approach to bids for mitigated offers. PJM currently requires generators to have in place a fuel policy that PJM applies automatically whenever that unit is mitigated. As PJM explains, the 10 percent adder is allowed for determining these *ex ante* bids in order to account for uncertainty in the values of the costs utilized in computing those cost-based offers before all costs are known. These mitigated bids are then included in the bid stack to determine the clearing price. In this filing, PJM has proposed that bids between $1,000/MWh and $2,000/MWh will also set the clearing price. It further proposes that all these bids be cost justified based on the existing mitigation cost based methodology.[38] Because the same *ex ante* uncertainties apply both to offers between $1,000/MWh and $2,000/MWh, and to mitigated offers up to $1,000/MWh, we accept PJM's application of the 10 percent adder, as proposed here.

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[36] "The Market Monitoring Unit shall review upon request of a Market Seller, and may review upon its own initiative at any time, the incremental costs (defined in Section 6.4.2 of Schedule 1 of the Operating Agreement) included in the Offer Price Cap of a generating unit in order to ensure that the Market Seller has correctly applied the Cost Development Guidelines and that the level of the Offer Price Cap is otherwise acceptable." *See* PJM Tariff, Att. M-Appendix, Sec. II(A)2.

[37] OCC Comments at 4, 5, 8.

[38] *See PJM Interconnection L.L.C.*, 149 FERC ¶ 61, 059 at P 13 (PJM Polar Vortex Rehearing Order) (2014).

31. For offers above $2,000/MWh, PJM proposes a different approach under which the offers will not set the clearing price, but the generator will submit documentation of its costs above $2,000/MWh to be paid through uplift. The IMM and PJM will conduct an *ex post* review of these costs. Consistent with prior orders, the 10 percent adder would not apply to the documented costs above $2,000/MWh. The Commission has found that the 10 percent adder is unjust and unreasonable as applied to *ex post* review of documented costs, because the cost are no longer uncertain.[39]

32. Finally, we welcome PJM's commitment to filing post-winter reports on offers above $1,000/MWh, for informational purposes.[40] We also welcome any annual reports from the IMM reviewing the experience with offer caps and related changes.[41]

B. Impacts on Shortage-Pricing Provisions

1. PJM's Filing

33. In its transmittal letter, PJM states it is not proposing any changes to its shortage pricing provisions but explains that one consequence of the proposed tariff revisions may be that energy shortage prices increase, as shortage prices are determined based on the sum of the marginal energy offer price plus the operating reserve shortage penalty factors. Under PJM's current tariff, the shortage price cannot exceed $2,700/MWh because the current energy offer cap is $1,000/MWh and the two reserve penalty factors are $850/MWh each. PJM notes that stakeholders did not address revising the penalty factors during the discussions on the energy market offer cap, and therefore, PJM proposes to maintain the penalty factors at their current levels and address changes to them in the Shortage Pricing NOPR proceedings. PJM states that under the proposed increase in the energy offer price cap, shortage prices could exceed $2,700/MWh but would not exceed $3,700/MWh.[42] PJM states it believes this increase to be reasonable because the basis of the shortage price would still be the offer price at which the resource clears the energy market.[43]

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[39] *Id.*

[40] PJM Transmittal at 8.

[41] IMM Comments at 10.

[42] This shortage pricing limit represents the sum of the proposed $2,000/MWh energy offer cap and the two reserve penalty factors of $850/MWh each.

[43] PJM Transmittal at 15.

2. Comments

34. ODEC, the Load Group and the IMM assert that revised scarcity pricing during shortages was not agreed to by stakeholders as part of the proposed offer cap increase.[44] The IMM argues that the purpose of increasing energy offer caps is to allow high fuel costs to be reflected in the LMP, and that this objective can be met without an increase to scarcity prices. Thus, the IMM and PJM ICC requests clarification that PJM's proposal will not revise scarcity pricing limits.[45] In particular, PJM ICC states that maintaining the status quo on shortage pricing penalty factors was key to PJM ICC's willingness to accept a doubling of the energy market offer cap. Moreover, PJM ICC seeks clarification that generators' fuel cost policies must be in a form acceptable to the IMM and should be incorporated into PJM's operative documents and tariffs.[46]

3. Answers

35. Pennsylvania PUC does not oppose PJM's proposal to allow market-based bids equal to or less than cost-based bids to set LMP up to $2,000/MWh. However, Pennsylvania PUC concurs with the IMM that the potential increase in scarcity prices does not necessarily reflect the agreement reached through the stakeholder process.[47] Pennsylvania PUC asserts that an increase in the maximum scarcity price could adversely impact retail customers in Pennsylvania if extreme weather conditions or transmission outages occur for significant periods of time, resulting in scarcity conditions where the $3,700/MWh maximum scarcity price is reached and sets LMP.[48] Pennsylvania PUC acknowledges the Shortage Pricing NOPR[49] and agrees with the IMM that the current limits on scarcity pricing should be maintained until the issue is addressed in the PJM stakeholder process and the following should be addressed: (1) potential adjustment of the penalty factors; (2) whether scarcity pricing above $2,700/MWh should be permitted

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[44] IMM Comments at 4-5. ODEC Comments at 5.

[45] IMM Comments at 5. PJM ICC Comments at 5.

[46] PJM ICC Comments at 5.

[47] Pennsylvania PUC Answer at 6-7.

[48] Pennsylvania PUC Answer at 7.

[49] Pennsylvania PUC Answer at 7 (citing Shortage Pricing NOPR).

to set LMP; and (3) should scarcity pricing be applicable to shortage conditions caused by transmission outages.[50]

36. The Load Group concurs with the IMM's arguments and recommendation for Commission rejection of any increase above the current $2,700/MWh scarcity price ceiling. The Load Group asserts that PJM's proposal goes far beyond the stakeholders' agreement and urges the Commission to consider the IMM's comments on scarcity pricing and reject PJM's filing.[51] The IMM and ODEC disagree with PJM's assertion that scarcity prices should be allowed to exceed $2,700/MWh, noting that this possibility did not garner stakeholder support and that the agreement, as voted on by market participants, did not include an increase in the scarcity price to $3,700/MWh from $2,700/MWh. Moreover, the IMM asserts that PJM is acting outside the scope of section 205 of the FPA, and intends to interpret the proposed tariff revisions in a manner contrary to what stakeholders approved. In its answer, PJM largely reiterates the statements in its filing, explaining that the relatively higher scarcity prices are the result of a formulaic relationship with the energy offer cap.

4. <u>Determination</u>

37. Some commenters assert that PJM did not obtain the requisite stakeholder support to revise shortage pricing in this filing. However, such concerns are misplaced given that PJM has not proposed to change the shortage pricing formula. Any changes to resulting prices are the result of a formula approved by the Commission, a filed rate that is not at issue, or disputed, here.

38. In any case, we find the possible increase in energy shortage prices up to $3,700/MWh to be reasonable, because it permits energy prices during shortages to reflect the opportunity costs of foregone operating reserve profits. Many generators are capable of providing both energy and operating reserves. A generator that is asked to provide one of these services would need to be compensated for the opportunity cost associated with providing the other service. For example, if a generator is dispatched to produce energy, its energy compensation should allow it to receive at least as much profit from producing energy as it could have received from providing reserves.[52] This holds true regardless of the value of the energy offer cap, as we explain next.

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[50] Pennsylvania PUC Answer at 7-8.

[51] The Load Group Answer at 10.

[52] The Commission has found it appropriate to reflect opportunity costs in PJM's market clearing price. Specifically in *PJM Interconnection, L.L.C.*, 139 FERC ¶ 61,057 at P 32, (2012) the Commission stated "PJM's proposal also relies on the implementation

(continued ...)

39. Under PJM's shortage pricing tariff, the price for providing reserves can reach $1,700/MWh. Since at least some generators do not incur operating costs to provide operating reserves, such a generator providing reserves during such a shortage could receive a profit of $1,700/MWh, so the opportunity cost of producing energy for such a generator under these conditions is $1,700/MWh. Thus, under the existing $1,000/MWh offer cap, the energy price cap during a shortage must be the current $2,700/MWh to ensure that every generator asked to produce energy can receive at least as much profit from providing energy and as from providing reserves. [53] Following the same formulaic approach, when the energy offer cap is increased to $2,000/MWh, the energy price cap for shortage pricing must be increased to $3,700/MWh.

40. The cost of providing reserves is a valid opportunity cost that is appropriately reflected in energy prices. Consistent with our January 2015 Order, we find that limiting energy shortage prices to existing levels (i.e., levels associated with a $1,000/MWh offer cap) would depress energy prices below appropriate levels.[54] The record does not show that the existing formulaic relationship between the energy offer cap and shortage pricing is unjust or unreasonable. As the Commission continues to explore issues relevant to price formation, by accepting PJM's proposal here, we do not intend to prejudge the outcome of any broader reforms.

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of joint optimization, i.e., the simultaneous dispatch of energy and reserves and the clearing of these markets at five-minute intervals. We agree that joint optimization will appropriately reflect opportunity costs in PJM's market clearing price. Specifically, as energy prices rise to reflect the operating costs of the higher marginal cost provider, reserve prices will also rise to reflect the higher opportunity costs component, based on the difference between LMP and the energy cost of the unit that is marginal for reserves."

[53] The Commission found the formulaic $2,700/MWh theoretical maximum to be appropriate on the basis that it enhanced reliability. Here, as then, we find the proposed theoretical maximum of $3,700/MWh to also be just and reasonable. Specifically, the Commission stated "We find that this maximum energy-reserves cap is appropriate. For example, the maximum energy-reserves cap will be implemented in conjunction with jointly optimized energy and ancillary service markets, with operating reserve demand curves set at levels that allow the market-clearing price during periods of operating reserve shortage to more accurately reflect the cost of providing reserves, thereby enhancing reliability." *See PJM Interconnection, L.L.C.*, 139 FERC ¶ 61,057 at PP 66-67.

[54] *See* January 2015 Order, 150 FERC ¶ 61,020, at P 40, *see also* February 2014 Order, 146 FERC ¶ 61,078.

C. Fuel Cost Policy

1. PJM's Proposal

41. PJM proposes to allow cost-based offers to exceed $1,000/MWh, provided that such offers are made consistent with Cost Development Guidelines[55] and a market seller's fuel cost policy. PJM explains that a fuel cost policy is a document, which must be submitted to the IMM, containing the method used by a market seller to calculate cost-based energy offers.[56]

2. Comments

42. Several parties raise issues regarding the IMM's role in reviewing a generator's fuel cost policy, particularly for offers above $1,000/MWh. Specifically, the IMM states that PJM failed to include the condition for offers in excess of $1,000/MWh, that generation owners have an approved fuel cost policy, despite that fact that this was part of the stakeholder agreement. Similarly, the PJM ICC requests a clarification that is consistent with stakeholder discussions, that generators' fuel cost policies must be in a form acceptable to the IMM.[57] Delaware PSC also emphasizes the importance of including the IMM in the determination of energy offers that are in compliance with the market sellers fuel cost policy.

3. Answers

43. Dominion and AEP state that, as participants in the stakeholder process, they neither agreed nor understood that the ability to submit a cost-based offer in excess of $1,000/MWh was conditioned on having an approved fuel-cost policy. Dominion and AEP maintain that, based on recent experience, reaching agreement with the IMM on fuel cost policy is not a simple matter. Moreover, Dominion and AEP assert that no market participant has an approved fuel cost policy in place. Dominion and AEP conclude that this proceeding is not the proper venue to make such a determination, and that the IMM can consult directly with a market participant when a cost-based offer appears inconsistent with a fuel cost policy. Similarly, ODEC does not recall any agreement among stakeholders for an "approved fuel cost policy" as a condition of submitting an offer above $1,000/MWh, or as the basis for PJM's filing.

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[55] Schedule 2 of the Operating Agreement and PJM Manual 15: Cost Development Guidelines, collectively, are referred to as Cost Development Guidelines.

[56] Offers are defined in the Cost Development Guidelines.

[57] PJM ICC at 5.

44. Pennsylvania PUC supports IMM's request to require market participants to have an approved fuel policy to be eligible to submit cost-based offers, and contends that this requirement will not impose any undue burdens on market participants and provides greater market transparency where market participants are seeking cost recovery for higher than expected fuel costs.[58]

45. In response to the IMM, PJM asserts that its proposed revisions are not intended to change the existing approval process for fuel cost policies, and that the existing process, set forth in PJM Manual 15, provides a role for the IMM that is consistent with the Commission's prior ruling in Order No. 719[59] pertaining to the role of external market monitors. PJM also contends that the IMM's assertion that section 1.10.1A(d) should include language that a Market Seller must have an approved fuel cost policy in order to submit cost-based offers above $1,000/MWh is unnecessary since a market seller is required to have a fuel cost policy that conforms to the tariff, Operating Agreement, and PJM Manual 15 regardless of whether the market seller intends to submit cost-based offers above $1,000/MWh.[60]

46. The Load Group concurs with the IMM that the tariff should include the requirement that a generator have an approved fuel cost policy as a precondition for the submission of cost-based offers exceeding $1,000/MWh. The Load Group asserts that this requirement is essential to ensuring cost-based offers exceeding $1,000/MWh are consistent with the claimed cost of fuel underlying those offers in accordance with Manual 15 Cost Development Guidelines, and would prevent market power from being exercised.[61]

4. Determination

47. The Delaware PSC, the IMM and PJM ICC contend the Commission should make clear the role of the IMM in approving generators' fuel cost policies. These commenters assert that tariff language should be in place to clarify that the IMM must review and accept a market participant's fuel cost policy before offers above $1,000/MWh may be

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[58] Pennsylvania PUC Answer at 8.

[59] PJM Answer at 5 (citing *Wholesale Competition in Regions with Organized Electric Markets*, Order No. 719, FERC Stats. & Regs. ¶ 31,281 (2008) (Order No. 719), *as amended*, 126 FERC ¶ 61,261, *order on reh'g*, Order No. 719-A, III FERC Stats. & Regs. ¶ 31,292, *order on reh'g*, Order No. 719-B, 129 FERC ¶ 61,252 (2009)).

[60] PJM Answer at 5.

[61] The Load Group Answer at 11.

made into the PJM energy markets. The IMM appears to seek new authority to "approve" fuel cost policies that Market Sellers are already required to have submitted as a prerequisite for any level of cost-based offers, consistent with the tariff, Operating Agreement and Manual 15. In particular, with respect to energy offer caps, the Tariff currently provides that the "Market Monitor or his designee shall *advise* the Office of the Interconnection whether it believes that the cost references, methods and rules included in the Cost Development Guidelines are accurate and appropriate, as specified in the PJM Manuals" (emphasis added).[62] We clarify here that the authority to approve or reject fuel cost policies lies with PJM, and the role of the IMM is to advise the generator and PJM. To the extent fuel cost policies do not meet tariff and PJM manual guidelines, the IMM may recommend to PJM not to accept such deficient fuel cost policies. Further, if the IMM believes aspects of the tariff or Manuals are unjust and unreasonable as it relates to the fuel cost policy, it should present evidence to the Commission demonstrating why a change is necessary.

48. Further, we note that the process for reviewing market participants' energy offers has not changed. We agree with Dominion and AEP that, if the IMM has questions about a market participant's fuel costs, it can consult directly with that participant, and request the proper documentation to verify costs.[63] We therefore approve PJM's proposal as filed.

D. Seams Issues

49. As discussed further below, some commenters raise concerns regarding the impact of higher PJM prices at the seams. In particular, concerns are raised regarding the potential harm to neighboring electric and gas markets. We summarize and address those issues below.

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[62] *See* PJM Tariff, Attachment M-Appendix, Section II (A) 1 (10.0.0).

[63] *See* Monitoring Analytics, *Informational Filing re Waiver to Permit Make-Whole Payments*, Docket No. ER14-1144-000, at 2 (2014), http://www.monitoringanalytics.com/reports/Reports/2014/IMM_Make_Whole_Waiver_Report_ER14-1144_000_20140326.pdf. ("the IMM sent a list of questions to all market participants that requested waivers under the January [2015] Order about the input assumptions used in their January 28 cost-based energy offers and the actual fuel purchase costs, including natural gas transactions relevant to January 28 and any hedges used to protect against gas price volatility").

1. **Comments**

50. The Load Group asserts that the impacts of PJM's proposed tariff revisions on potential seams issues have not been addressed by PJM. The Load Group argues that raising the offer cap unilaterally in PJM will have adverse consequences for MISO and NYISO, creating new and unwarranted seams issues. Specifically, the Load Group argues that the higher PJM offer cap will lead to inefficient exports from MISO and NYISO to PJM and will lead to inefficient allocations of natural gas to the higher priced PJM market. Thus, the Load Group argues, PJM has not satisfied its burden of showing that the proposal is just and reasonable burden.[64] NYTOs argue that PJM's filing is patently deficient, and that the Commission should reject the filing, because PJM failed to show that the proposed new offer cap will not harm neighboring electric and gas markets.[65]

51. Potomac Economics, as the Independent Market Monitor for the Midcontinent Independent System Operator (MISO) and the Market Monitoring Unit for the New York Independent System Operator (NYISO), expresses concern with the potential for adverse market impacts in NYISO and MISO from PJM unilaterally increasing the offer cap.[66] Potomac Economics argues that modifying the offer cap is not a highly urgent need that would warrant unilateral action by PJM. Instead, Potomac Economics supports the Commission's expressed intention to consider offer cap changes generically through a rulemaking process. Potomac Economics explains that possible unintended consequences could include higher gas prices. Potomac Economics also argues the instant proposal could inefficiently allocate scarce natural gas to PJM even if it is more valuable, from a reliability perspective, in other areas. Additionally, Potomac Economics argues that, if high gas costs were reflected in PJM prices but not in the energy prices in MISO and NYISO, an inefficient incentive will be created to export power excessively from the adjacent RTO areas.[67]

2. **Answers**

52. PJM states that it supports the development of a national standard on offer caps for ISO/RTOs, which presumably would address any interregional coordination or seams issues associated with offer caps. PJM also states that the Commission's approval of

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[64] The Load Group Protest at 2-3.

[65] NYTOs Protest at 2-4.

[66] Potomac Economics at 1.

[67] Potomac Economics at 4-5.

PJM's proposed revisions will not obstruct efforts by neighboring ISO/RTOs to address their own offer cap matters through Commission filings.[68]

53. P3 states that it strongly disagrees with Potomac Economics and NYTOs that the Commission should reject the instant filing. P3 states that it shares some of their concerns regarding inefficiencies that can be created by different energy market offer caps in different regions, but argues that rejecting PJM's proposal would leave in place an unjust and unreasonable energy market offer cap during the pending winter season. To that end, P3 maintains that in looking beyond this coming winter, the optimal solution is a single energy market offer cap policy that applies to all RTOs in the country.

54. Dominion and AEP argue that Potomac Economics' concerns that a higher offer cap in PJM may lead to artificially high natural gas prices are unfounded. Dominion and AEP state that there is no evidence that this has occurred in past instances where the offer cap was raised.

3. Determination

55. We acknowledge the seams concerns raised by protestors, but we find that on balance, based upon the record here, PJM's proposal represents a just and reasonable improvement to the current tariff. As noted above, the potential for high natural gas prices remains a risk, especially during the upcoming winter, and PJM's filing addresses this potential risk while protecting consumers by requiring that costs above the price cap be verified. The Commission continues to explore issues relevant to price formation, and by accepting PJM's proposal here, we do not intend to prejudge the outcome of any broader reforms.

The Commission orders:

PJM's proposed tariff revisions are hereby accepted, to become effective December 14, 2015.

By the Commission.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.

[68] PJM Answer at 3.