155 FERC ¶ 61,213
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. ER16-1336-000

ORDER REJECTING TARIFF AMENDMENTS

(Issued May 31, 2016)

1. On April 1, 2016, pursuant to section 205 of the Federal Power Act (FPA),[1] PJM Interconnection, L.L.C. (PJM) filed revisions to the PJM Open Access Transmission Tariff (Tariff), Attachment DD, section 10A(d) to excuse a Capacity Performance Resource from Non-Performance Charges, provided the resource is following PJM's dispatch instructions and operating consistent with a ramp rate previously approved by PJM. For the reasons discussed below, we reject PJM's proposed tariff revisions.

I. Background

2. In the Commission's June 9, 2015 order conditionally accepting PJM's proposal to revise its Tariff to establish enhanced capacity resource performance requirements,[2] the Commission accepted, subject to condition, PJM's proposal to provide certain limited exemptions from Non-Performance Charges[3] assessed against capacity resources that do

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[1] 16 U.S.C. § 824d (2015).

[2] *PJM Interconnection, L.L.C.*, 151 FERC ¶ 61,208 (2015) (Capacity Performance Order), *reh'g denied*, 155 FERC ¶ 61,157 (2016) (Capacity Performance Rehearing).

[3] These exemptions apply if the unit was on a planned or maintenance outage, or if it was not scheduled for reasons other than seller-specified operating parameter limitations or the seller's submission of a market-based offer price higher than its cost-based offer price. Capacity Performance Order, 151 FERC ¶ 61,208 at P 167.

not provide energy or reserves during a Performance Assessment Hour.[4] The Commission conditioned its acceptance on PJM clarifying that a resource will be subject to Non-Performance Charges if it was not scheduled during a Performance Assessment Hour due to any operating parameter limitations.[5] Multiple parties requested rehearing of the Commission's conditional acceptance of the scheduling exemption to the Non-Performance Charge, which the Commission denied on May 10, 2016.[6]

3. PJM proposes in its April 1 filing to revise its Tariff to exempt resources from Non-Performance Charges if they follow dispatch according to a "PJM-acceptable ramp rate" during a Performance Assessment Hour.[7] Under PJM's proposal, resources must include in their energy offers a ramp rate that reflects at least the unit's average historical ramp rate performance over a three-month reference period. PJM, in consultation with the Independent Market Monitor (Market Monitor), will review and verify that these values are consistent with PJM internal analysis. A resource that followed PJM dispatch in accordance with its approved ramp rate will be excused of any Non-Performance Charges resulting from its ramping capabilities.[8]

4. PJM argues that, without this exemption, resources may seek to avoid the risk of incurring a Non-Performance Charge by self-scheduling their capacity before a Performance Assessment Hour, even if the resource is not needed to meet demand.[9] PJM asserts that such self-scheduling would pose operational challenges for PJM operators and create reliability issues in advance of an expected Performance Assessment Hour.[10]

5. PJM characterizes its proposal to set the PJM-acceptable ramp rate based on historical performance as an interim solution to address the ramp rate issue for the

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[4] A Performance Assessment Hour, as established in Section 2.4(A) of Attachment DD of PJM's Tariff, occurs during any full or partial hour where the Office of Interconnection declares an Emergency Action.

[5] *Id*. PP 170-171.

[6] Capacity Performance Rehearing, 155 FERC ¶ 61,157 at P 89.

[7] PJM Filing at 7.

[8] *Id.* at 7-8.

[9] *Id*. at 4-5.

[10] *Id*. at 4-7.

upcoming 2016-17 delivery year. PJM notes that it will discuss with stakeholders more refined approaches to determining the PJM-acceptable ramp rate with an aim of potentially submitting a longer-term solution in advance of the 2017-18 delivery year.[11]

II. Notice of Filing and Responsive Pleadings

6. Notice of PJM's filing was published in the *Federal Register*, 81 Fed. Reg. 20,631 (2016), with protests and interventions due on or before April 22, 2016.

7. The following parties filed timely motions to intervene: American Electric Power Service Corporation; Exelon Corporation; American Municipal Power, Inc.; Dominion Resources Services, Inc.; NRG Power Marketing LLC and GenOn Energy Management, LLC; PJM Industrial Customer Coalition; East Kentucky Power Cooperative, Inc.; and FirstEnergy Service Company. Calpine Corporation and Rockland Capital, LLC (collectively, Calpine/Rockland), and LS Power Associates, L.P. (LS Power) filed timely motions to intervene and protests. The Independent Market Monitor for PJM (Market Monitor), the PJM Power Providers Group (PJM Power Providers), the Delaware Public Service Commission, and the Dayton Power and Light Company (Dayton Power) filed timely motions to intervene and comments. Buckeye Power, Inc. and Duke Energy Corporation filed out-of-time motions to intervene. PJM, the PJM Utilities Coalition (Coalition),[12] the Market Monitor, and Calpine/Rockland filed motions for leave to answer and answers.

III. Substantive Matters

A. Procedural Issues

8. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2015), the timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding. We also grant the unopposed motions to intervene filed out-of-time by Buckeye Power, Inc. and Duke Energy Corporation, given their interest in the proceeding, the early stage of the proceeding, and the absence of any undue prejudice or delay.

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[11] *Id*. at 7 & n.12.

[12] The PJM Utilities Coalition is composed of American Electric Power Service Corporation, the Dayton Power and Light Company, FirstEnergy Service Company, Buckeye Power, Inc., Duke Energy Corporation, and East Kentucky Power Cooperative, Inc., each of which separately intervened in this proceeding.

9. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure prohibits an answer to protests unless otherwise ordered by the decisional authority. We accept the answers filed by PJM, the PJM Utilities Coalition, the Market Monitor, and Calpine/Rockland because they have provided information that assisted us in our decision-making process.

B. Responsive Pleadings

10. The Market Monitor and LS Power argue that the Commission should not approve PJM's proposal, stating that PJM did not support its assertion that excessive self-scheduling during high load periods would cause system control issues.[13] According to the Market Monitor, if resource owners self-schedule their resources in anticipation of tight conditions in the energy market, it is less likely that emergency procedures would be triggered and would instead indicate that Non-Performance Charges are working as intended to incent generation to operate during high demand conditions.[14] The Market Monitor also contends that PJM's claimed problem of over-generation is addressed more directly through use of objective, calculated metrics based on available reserves, rather than through subjective and nontransparent triggers.[15] Calpine/Rockland similarly argue that PJM's claims of overscheduling are not an appropriate basis for accepting the PJM proposal, and note that the vast majority of resources should be expected to be operating at or close to their maximum capacity in the event of a Performance Assessment Hour.[16]

11. The Market Monitor argues that PJM's proposal is discriminatory and disincents flexibility by holding more flexible resources (i.e., those with faster ramp rates) to a higher standard for expected incremental MW during a Performance Assessment Hour than less flexible resources.[17] PJM's proposal to use a historical three-month average ramp rate would, according to the Market Monitor, incent capacity performance resources to intentionally perform at slower ramp rates to lower their historical average,

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[13] Market Monitor Comments at 4-5; LS Power Protest at 6-7.

[14] Market Monitor Comments at 4-5.

[15] *Id.* at 6.

[16] Protest of Calpine Corporation and Rockland Capital, Inc. at 12 (Calpine/Rockland Protest).

[17] Market Monitor Comments at 7.

making it easier to avoid Non-Performance Charges.[18] Similarly, Calpine/Rockland argue that it is unduly discriminatory to set different performance standards for capacity market sellers that ostensibly provide the same product for the same price, thereby allowing less flexible resources to avoid being penalized for their failure to perform while providing fewer penalty revenues to award to those resources that perform when needed.[19] Such an approach, according to Calpine/Rockland, would over time result in performance deteriorations as rational sellers will seek to maximize profits by investing in the least flexible resources available.[20] LS Power argues that PJM's proposal creates unduly preferential or discriminatory treatment by subjecting capacity performance resources to different requirements and performance obligations.[21] This differing treatment, according to LS Power, disincents capacity market sellers from making investments to ensure that their resources are flexible and available when needed.[22]

12. Calpine/Rockland further contend that allowing excuses based on operating parameters, like ramp rates, is at odds with both PJM's characterization of the key aspect of the Capacity Performance construct—i.e., the ability to deliver needed energy and reserves when called upon by PJM, particularly during emergency conditions—and the Commission's determinations in the Capacity Performance Order that a resource will only be exempt from Non-Performance Charges if it is not scheduled by PJM because it was not needed to alleviate a capacity shortage.[23] Calpine/Rockland also argue that sellers should not be excused from Non-Performance Charges as a result of their choice of the nature or type of capacity resource that they offer to the PJM market.[24]

13. The Market Monitor argues that if the Commission accepts PJM's interim proposal, the Commission should order PJM to set a sunset date for the rule at the end of the 2016-17 delivery year. Further, the Market Monitor states that if operational experience demonstrates in the upcoming delivery year that self-scheduling and system

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[18] *Id*. at 8.

[19] Calpine/Rockland Protest at 10-11.

[20] *Id*. at 11-12.

[21] LS Power Protest at 3-5.

[22] *Id*. at 5.

[23] Calpine/Rockland Protest at 7-8.

[24] *Id*. at 10.

control are indeed operational problems that need to be addressed, PJM should be required to develop a long-term solution that includes redefining the triggers for Performance Assessment Hours using an analytical metric.[25] Finally, the Market Monitor states that the Commission should reject PJM's proposal because PJM failed to detail the method by which it would calculate an acceptable ramp rate to be used during Performance Assessment Hours, and its proposal is thus incomplete.[26]

14. PJM Power Providers, the Delaware Public Service Commission, and Dayton Power filed comments in support of PJM's proposal. PJM Power Providers argue that PJM's proposal is a pragmatic approach that provides PJM with the tools it needs to manage its grid during system emergencies.[27] The Delaware Public Service Commission notes that it does not disagree with PJM's argument for the need for the interim proposal, but cautions that relying solely on historical data could diminish the incentives for performance and allow resources to reduce their risk of nonperformance penalties.[28] It argues that the Commission should require PJM and its stakeholders to consider the appropriate role of Original Equipment Manufacturer data in determining an acceptable ramp rate.[29] Dayton Power argues that PJM's proposal alleviates the potential system problems that would result from generators self-scheduling to avoid Non-Performance Charges, and that assessing penalties against generators that follow a PJM-acceptable ramp rate would not provide an incentive to change behavior.[30]

PJM's May 9, 2016 Answer

15. PJM, in its answer, defends its proposal as a reasonable approach to balance the performance incentives of the Capacity Performance construct while maintaining

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[25] Market Monitor Comments at 8-9.

[26] *Id*. at 9-10.

[27] PJM Power Providers Comments at 5-6.

[28] Delaware Public Service Commission Comments at 3-5.

[29] *Id*. at 6.

[30] Dayton Power Comments at 1-2.

the reliability of the system.[31] PJM argues that its proposal is a narrowly tailored, interim solution to address the ramp rate issue for the upcoming delivery year beginning June 1, 2016, and states its intent to continue discussions with stakeholders on developing a longer-term solution.[32]

16. PJM states that its concern is that generators will take unilateral action to ramp their resources to maximum capacity *before* the system is subject to emergency or near emergency conditions.[33] PJM offers an example of its actions during extreme winter conditions in January 2014 to illustrate the detrimental impact that unilateral action before a system emergency could have on its procedures in advance of Emergency Actions.[34] These procedures, according to PJM, are intended to control an orderly dispatch of its system and allow members to prepare to take actions, but not actually take actions until instructed by PJM.[35] PJM also argues that it would not be practical for it to verbally dispatch down nearly 1,000 resources during escalating emergency conditions, and attempting to do so would distract dispatchers from preparing for a true emergency during peak hours.[36]

17. PJM contends that its concern about self-scheduling is valid because it is based on market participants' feedback to PJM and its own knowledge about participants' behavior.[37] PJM states that market sellers, in the position of having to either follow dispatch instructions to ensure system reliability or not follow instructions and be subject to financial consequences under the current rules, will accept the risk of being assessed deviation charges for not following dispatch to avoid the much higher Non-Performance Charges (about 48 times larger than the deviation charge, according to PJM) for not meeting a capacity obligation.[38]

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[31] Motion for Leave to Answer and Answer of PJM at 2.

[32] *Id*. at 2 n.6.

[33] *Id*. at 3-4.

[34] *Id*. at 4-5.

[35] *Id*.

[36] *Id*. at 5-6.

[37] *Id*. at 6.

[38] *Id*. at 7-8.

Additional Answers

18. The Coalition, in its answer, asks the Commission to approve PJM's proposed tariff modifications in time for the 2016-17 delivery year.[39] In response to the Market Monitor's comments alleging that the PJM proposal was not supported by any analysis, the Coalition notes that most market participants have expressed concern to PJM regarding the assessment of Non-Performance Charges.[40] The Coalition also states that generators will self-schedule to avoid the risk of paying Non-Performance Charges that are significantly higher than the deviation charges they would pay for not following dispatch, adversely impacting system reliability.[41] In response to commenters' arguments that the PJM proposal is unduly discriminatory and undermines the incentive for generators to make investments to enhance flexibility and availability during emergencies, the Coalition argues that different resource types necessarily have different operational characteristics and that PJM should be permitted to take into account these unit-specific characteristics (e.g., ramp rates), along with a broad range of considerations, when making dispatch decisions.[42] The Coalition contends that the PJM proposal is a limited, realistic solution that does not apply to all types of system emergencies and allows PJM to avoid the reliability consequences from generation oversupply by different resource types with different operational characteristics.[43]

19. The Market Monitor, in its answer, states that the Coalition provides no credible justification for allowing excuses based on ramp rates, and that the Commission has already resolved this issue by rewarding better performing units and disincenting poor performing ones.[44] The Market Monitor argues that a market signal to incent resources to supply energy and reserves at the level of their Capacity Performance obligation should occur when the market is close to or in a capacity shortage situation, and thus the appropriate trigger for a Performance Assessment Hour should be based on an analytical

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[39] Motion for Leave to Answer and Answer of PJM Utilities Coalition Answer at 1.

[40] *Id*. at 1-2.

[41] *Id*. at 2.

[42] *Id*. at 2-3.

[43] *Id*. at 3.

[44] Motion for Leave to Answer and Answer of PJM Independent Market Monitor Answer at 1-2.

metric of available measured reserves rather than subjective metrics that may bear little or no relationship to actual shortage conditions.[45] The Market Monitor disputes the January 2014 scenario that PJM describes in its answer, noting that capacity resources did not then have an incentive to be available as they do now under the Capacity Performance construct and that the January 2014 scenario would not have arisen under the Capacity Performance construct.[46] The Market Monitor also contends that PJM's proposal would hold flexible and fast-start resources to a higher performance standard and provide no incentive to inflexible resources to improve performance.[47]

20. In its May 19, 2016 answer, PJM requests that the Commission deny the Market Monitor's request for a different trigger for Performance Assessment Hours. PJM states that the request was already denied in the Capacity Performance Order making the Market Monitor's request an untimely request for rehearing.

21. Calpine/Rockland, in their answer, argue that PJM's concerns regarding over-generation from self-scheduling are overblown and do not justify its proposed adoption of a penalty system that unduly discriminates against more flexible resources.[48] Calpine/Rockland also point out that PJM's changes to its market rules since the Polar Vortex should reduce the potential for excessive self-scheduling.[49] Furthermore, Calpine/Rockland caution that allowing slower ramping resources to avoid non-performance penalties could result in fewer penalty proceeds that could be used as bonus payments to reward more flexible resources that are actually maintaining the system.[50] Finally, Calpine/Rockland contend that PJM's proposal is inconsistent with both the goals and design of the Capacity Performance construct and the Commission's recent Capacity Performance rehearing order.[51]

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[45] *Id*. at 3.

[46] *Id*. at 3-4.

[47] *Id*. at 4.

[48] Request for Leave to Answer and Answer of Calpine/Rockland at 2.

[49] *Id*. at 4.

[50] *Id*. at 7.

[51] *Id*. at 7-8.

C. **Discussion**

22. As discussed below, we find that PJM has not met its burden under section 205 of the FPA to justify its proposed tariff revisions. Thus, we reject PJM's proposal.

23. Under PJM's proposal, capacity resources with a Capacity Performance obligation that follow PJM's dispatch according to a PJM-approved ramp rate during a Performance Assessment Hour would be exempt from Capacity Performance obligation Non-Performance Charges. PJM argues that this exemption is necessary to mitigate the incentive that Capacity Performance resources might have to avoid Non-Performance Charges by self-scheduling in advance of an anticipated Performance Assessment Hour. In effect, to address a potential operational issue in the hours leading up to a Performance Assessment Hour, PJM proposes to exempt certain Capacity Performance resources from Non-Performance Charges, which could reduce the program's broader performance incentives. Given the importance of the penalty structure to the Capacity Performance design, we therefore must carefully weigh whether the operational concerns documented in the record justify the negative impact that PJM's proposed penalty exemption would have on these performance incentives. As discussed below, we conclude that PJM has not met that burden here.

24. In denying a request to provide Non-Performance Charge exemptions for resources based upon their physical operating parameters, the Commission quoted PJM's own argument from its initial filing:

> Parameter limits should not be viewed as a permanent entitlement to under-perform. Instead, those limits should be exposed to financial and market consequences: if sellers of resources with fewer operating limits earn more from the capacity market (after taking Non-Performance Charge and Performance credits into account) than sellers of resources with more restrictive operating limits, then all sellers will be incented to find ways to minimize those operating limits, which should over time increase overall fleet performance and benefit loads in the region.[52]

We agree with PJM's fundamental rationale in the Capacity Performance filing, and believe that it naturally extends to ramp rates. Moreover, the Commission also

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[52] Capacity Performance Rehearing, 155 FERC ¶ 61,157 at P 103 (referencing PJM December 12, 2014 Capacity Markets Filing at 46).

emphasized in its order denying rehearing of the Capacity Performance Order that "[i]t is critical that the capacity market rules send the proper long-term investment signals to ensure capacity that can meet the reliability needs of the region."[53] The proposed ramp rate exemption runs counter to that goal, by dampening the long-term incentive for retention and entry of flexible capacity resources. Such an exemption also may reduce the pool of money available as bonus payments to resources that perform in excess of their capacity obligation, thus decreasing the incentive for those resources to "over perform" to meet system needs.[54]

25. The question, then, is whether the potential operational difficulties raised by PJM nonetheless warrant the ramp rate exemption, notwithstanding its broader impact on the Capacity Performance incentive structure. We agree with the Market Monitor that PJM has not provided sufficient evidence to justify the proposed tariff revisions; based on the record here, we are not persuaded that the potential difficulties of resources' self-scheduling in advance of emergencies warrant PJM's proposed change to the Capacity Performance penalty structure. More specifically, Performance Assessment Hours tend to occur during periods where PJM's system is under stress. In most circumstances, the majority of units within PJM will also be needed to meet demand in the run-up to a Performance Assessment Hour. Should there be a rare situation where PJM does not require most economic units to meet demand, PJM operators can ramp down flexible units to avoid a reliability problem, and they can reject self-scheduling requests as necessary. To the extent PJM is concerned that resources will self-schedule in the hours leading up to a Performance Assessment Hour, before the system is under stress, resources risk economic losses should they self-schedule during a period where energy prices are below their cost of production. At this point, we find that the threat of a Non-Performance Charge, combined with the risk of losses due to self-scheduling, creates a strong incentive for resource owners to both properly maintain their units and follow PJM dispatch.

26. With respect to PJM's reference to the polar vortex, we agree with the Market Monitor that Capacity Performance, which was developed in part to address resource performance problems identified during the polar vortex, was intended to provide new performance incentives to address problems operators faced during the polar vortex and to incent resource owners to be able to respond when called upon during a Performance Assessment Hour. To the extent that increased requests for self-scheduling constitute a problem for PJM operators, that problem should be offset by additional

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[53] *Id*. P 103.

[54] We note that resources without a capacity obligation, or Energy-Only resources, may also be eligible for bonus payments.

resource availability and flexibility resulting from the currently approved Capacity Performance construct.

27. Last, we are not persuaded by PJM's argument that the ramp rate exception is needed because deviation charges are insufficient to prevent a resource from ignoring PJM's real-time dispatch instructions. Although, as PJM notes, a unit facing a high penalty risk may be willing to accumulate guaranteed, likely low deviation charges, we do not find PJM's comparison of deviation charges to penalties convincing. PJM compares a year-long average on deviation charges to a penalty that is only incurred during times of system stress. It may be the case that deviation charges are much higher during times of system stress than they are on a year-long average.

28. For all the reasons discussed above, we find that PJM has not met its burden under section 205 of the FPA to establish that its proposal is just and reasonable. To the extent PJM identifies operational issues as it monitors the impact of the Capacity Performance program on the energy markets, we encourage PJM to work with its stakeholders to develop solutions that are better aligned with the goals and design of the Capacity Performance program.

The Commission orders:

PJM's proposed tariff revisions are hereby rejected, as discussed in the body of this order.

By the Commission.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.