

171 FERC ¶ 61,010
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Neil Chatterjee, Chairman;
Richard Glick, Bernard L. McNamee
and James P. Danly.

PJM Interconnection, L.L.C.

Docket No. ER20-955-000

ORDER ACCEPTING TARIFF AND OPERATING AGREEMENT REVISIONS

(Issued April 3, 2020)

1. On February 4, 2020, pursuant to section 205 of the Federal Power Act,¹ and Part 35 of the Commission's regulations,² PJM Interconnection, L.L.C. (PJM) filed proposed revisions to the PJM Open Access Transmission Tariff (Tariff) and the Amended and Restated Operating Agreement of PJM (Operating Agreement) to revise existing language regarding the application of parameter-limited schedules.³ In this order, we accept PJM's proposed Tariff and Operating Agreement revisions, effective April 6, 2020, as requested.

I. Background

2. Generation resources participate in the PJM energy market by submitting offer schedules composed of both financial parameters (price-megawatt pairs, start-up cost, and no-load cost) and operating parameters like minimum run time. Generation resources can submit three types of schedules in the day-ahead and real-time markets: a market-based schedule and two types of schedules used for mitigation: a cost-based schedule and a market-based parameter-limited schedule. For market-based offers, generation resources may submit any values for their operating parameters. For the

¹ 16 U.S.C § 824d (2018).

² 18 C.F.R. pt. 35 (2019).

³ PJM Interconnection, L.L.C., Intra-PJM Tariffs, Operating Agreement, Schedule 1, § 6.6 (7.0.0); PJM Interconnection, L.L.C., Intra-PJM Tariffs, OATT, Attachment K, app. (7.0.0). Because PJM proposes identical revisions to the parallel provisions of Schedule 1 of the Operating Agreement and Attachment K-Appendix of the Tariff, all discussions herein of Schedule 1 of the Operating Agreement apply equally to those parallel provisions in the Tariff.

two mitigation-related schedules, PJM places limits on the values generation resources may submit for their operating parameters.⁴

3. Operating Agreement, Schedule 1, section 6.6, requires generation resources to submit parameter-limited schedules.⁵ PJM introduced the section in 2008 to address the concern that generation resources could exert market power through the submission of inflexible operating parameters for the sole purpose of increasing the generation resources' uplift payments.⁶ Operating parameter limits are meant to ensure that generation resources submit parameters at least as flexible as certain predetermined limits (for example, a minimum down time no longer than X hours). Parameter limits apply to minimum down time, minimum run time, maximum run time, maximum daily starts, maximum weekly starts, maximum run time, start-up time, notification time, and turn down ratio.⁷

4. Pursuant to Operating Agreement, Schedule 1, section 6.4.1, PJM also limits financial parameters in its day-ahead and real-time energy markets.⁸ Section 6.4.1 explains that PJM caps offer prices at predetermined \$/MWh levels when the following two conditions occur simultaneously: (1) PJM may commit certain generation resources out of economic merit order to maintain system reliability as a result of limits on transmission capability; and (2) PJM determines these generation resources to have market power (due to their failing the three-pivotal-supplier test). Section 6.4.1 also describes how PJM decides on which available schedule to commit generation resources. The section explains that PJM commits generation resources having market power in the day-ahead market using the "market-based offer or cost-based offer which results in the lowest overall system production cost," and commits generation resources having market power in the real-time market using the "market-based or cost-based schedule that results

⁴ PJM Interconnection, L.L.C., Day-Ahead and Real-Time Market Operations, *PJM Manual 11: Energy and Ancillary Services Market Operations*, § 2.3.3.2 (rev. 108, eff. Dec. 3, 2019) (hereinafter Manual 11).

⁵ PJM Interconnection, L.L.C., Intra-PJM Tariffs, Operating Agreement, Schedule 1, § 6.6 (6.0.0).

⁶ *PJM Interconnection, L.L.C.*, 125 FERC ¶ 61,244, at P 5 (2008).

⁷ PJM Interconnection, L.L.C., Intra-PJM Tariffs, Operating Agreement, Schedule 1, § 6.6(b) (6.0.0); Manual 11, § 2.3.4.1.

⁸ PJM Interconnection, L.L.C., Intra-PJM Tariffs, Operating Agreement, Schedule 1, § 6.4.1 (11.1.2).

in the lowest dispatch cost,” assuming that the generation resources are operating at their minimum economic output level.⁹

II. PJM Filing

5. PJM states that the purpose of its filing is to clarify existing Tariff language to make it clear that when a generation resource fails the three-pivotal-supplier test, it is evaluated on its cost-based offer, which is always parameter-limited, and that, when certain emergency conditions are triggered, a generation resource is evaluated on its market-based parameter-limited offer.¹⁰ PJM proposes the following revisions to section 6.6(a), along with the creation of section 6.6(b):

(a) Market Sellers submitting Offer Data for Generation Capacity Resources shall submit and be subject to pre-determined limits on cost-based offers, which are always parameter limited. Such offers must specify parameter values equal to or less limiting, i.e. more flexible, than the defined parameter limits. Such cost-based offers (“parameter limited schedules”) shall be considered in the commitment of a resource when the Market Seller does not pass the three pivotal supplier test, as further described in Operating Agreement, Schedule 1, section 6.4.1 and the parallel provisions in Tariff, Attachment K-Appendix, section 6.4.1.

(b) Market Sellers submitting Offer Data for Generation Capacity Resources shall submit and be subject to pre-determined limits on market-based offers conforming to parameter limitations (“parameter limited schedules”). Such market-based parameter limited schedules must specify parameter values equal to or less limiting, i.e. more flexible, than the defined parameter limits. Such market-based parameter limited schedules shall be considered in the commitment of a resource under the following circumstances:

~~(i) — The Market Seller fails the three pivotal supplier test. When this subsection applies, the parameter limited schedule shall be the less limiting, i.e. more flexible, of~~

⁹ *Id.* § 6.4.1(a) (11.1.2).

¹⁰ PJM Transmittal at 1-2.

~~the defined parameter limited schedules or the submitted offer parameters.~~

~~(ii) For the 2014/2015 through 2017/2018 Delivery Years, the Office of the Interconnection: (i) declares a Maximum Generation Emergency; (ii) issues a Maximum Generation Emergency Alert; or (iii) schedules units based on the anticipation of a Maximum Generation Emergency or a Maximum Generation Emergency Alert for all, or any part, of an Operating Day.~~

(iii) For Capacity Performance Resources, the Office of the Interconnection: (i) declares a Maximum Generation Emergency; (ii) issues a Maximum Generation Emergency Alert, Hot Weather Alert, Cold Weather Alert; or (iii) schedules units based on the anticipation of a Maximum Generation Emergency, Maximum Generation Emergency Alert, Hot Weather Alert or Cold Weather Alert for all, or any part, of an Operating Day.

(iiv) For Base Capacity Resources, the Office of the Interconnection: (i) declares a Maximum Generation Emergency during hot weather operations during the period of June 1 through September 30; (ii) issues a Maximum Generation Emergency Alert or Hot Weather Alert during hot weather operations during the period of June 1 through September 30; or (iii) schedules units based on the anticipation of a Hot Weather Alert, or a Maximum Generation Emergency or Maximum Generation Emergency Alert during hot weather operations during the period of June 1 through September 30, for all, or any part, of an Operating Day.¹¹

6. PJM states that the revisions also clarify that both the cost-based offer and the market-based parameter-limited offer must specify parameter values that are at least as

¹¹ PJM Interconnection, L.L.C., Intra-PJM Tariffs, Operating Agreement, Schedule 1, § 6.6 (7.0.0).

flexible as the default parameter limits.¹² PJM states that the proposed revisions clearly separate cost-based schedules from market-based parameter-limited schedules by adding new subsection 6.6(b). Further, PJM explains that under new subsection 6.6(b) it proposes to remove romanette (i) because the application of parameter limits when a generation resource does not pass the three-pivotal-supplier test is addressed in subsection 6.6(a) and also to remove romanette (ii) because it addresses the 2014/2015 through 2017/2018 delivery years, which are no longer applicable.¹³ PJM states that section 6.4.1 of the Operating Agreement governs which offer a generation resource is ultimately committed on if the generation resource does not pass the three-pivotal-supplier test and a generation resource may be dispatched out of economic merit order to maintain system reliability.¹⁴

7. PJM argues that requiring the submission of parameter-limited schedules subject to operating parameters at least as flexible as the default parameter values limits the ability of generation resources that do not pass the three-pivotal-supplier test to exert market power through the submission of inflexible operating parameters and also guards against the exertion of market power under emergency conditions.¹⁵

8. PJM requests an effective date of April 6, 2020, for the proposed revisions.¹⁶

III. Notice and Responsive Pleadings

9. Notice of PJM's February 4, 2020, filing was published in the *Federal Register*, 85 Fed. Reg. 7994 (Feb. 12, 2020), with interventions and protests due on or before February 25, 2020. Timely motions to intervene were filed by Monitoring Analytics, LLC, acting in its capacity as the Independent Market Monitor for PJM (Market Monitor), NRG Power Marketing LLC, Organization of PJM States, Inc., Talen Energy Corporation, American Electric Power Service Corporation, and American Municipal Power, Inc. On March 4 and March 5, 2020, respectively, Calpine Corporation and PJM Power Providers Group (P3) filed motions to intervene out-of-time.

10. On February 25, 2020, the Market Monitor filed a timely protest. On March 9, 2020, PJM filed a motion for leave to answer and answer. On March 16, 2020,

¹² PJM Transmittal at 3-5.

¹³ *Id.* at 2-4.

¹⁴ *Id.* at 3.

¹⁵ *Id.* at 2.

¹⁶ *Id.* at 5.

P3 late-filed comments in support of PJM's filing. On March 24, 2020, the Market Monitor filed a motion for leave to answer and answer.

A. Market Monitor Protest

11. The Market Monitor argues that PJM, instead of clarifying its Operating Agreement language, is proposing a substantial change to its market rules to match its noncompliant practices. The Market Monitor states that PJM's proposed revisions would undermine market power mitigation and harm competition. The Market Monitor argues that the Commission should reject PJM's filing and require PJM to implement its existing Tariff and Operating Agreement language. The Market Monitor states that PJM has failed to show that its proposed revisions are just and reasonable, while the Market Monitor shows that they are not just and reasonable.¹⁷

12. The Market Monitor states that Operating Agreement, Schedule 1, section 6.6(a), requires that generation resources operate at least as flexibly as their PJM-approved parameter limits under two conditions: failure of the three-pivotal-supplier test and under certain emergency conditions. The Market Monitor explains that PJM in practice, however, requires only that certain schedules contain operating parameters within those limits; but if the least-cost offer is the market-based schedule without parameter limits, PJM can and does commit a generation resource on that schedule.¹⁸

13. The Market Monitor explains that PJM's proposed language would require PJM only to evaluate parameter-limited schedules and would not require generation resources to operate subject to parameter limits after they fail the three-pivotal-supplier test or under certain emergency conditions. The Market Monitor states that the revisions would allow PJM to continue exempting generation resources from operating parameter mitigation on a regular basis, thereby undermining market power mitigation. Therefore, the Market Monitor argues that the Commission should reject the revisions as contrary to the public interest.¹⁹

14. The Market Monitor argues that PJM is attempting to unwind market power mitigation rules that the Commission approved in 2008, asserting that these rules defined parameter limits that required flexible market dispatch and competitive compensation to prevent market power abuse resulting from inflexible parameters.²⁰ The Market Monitor

¹⁷ Market Monitor Protest at 1-3.

¹⁸ *Id.* at 2-3, 11.

¹⁹ *Id.* at 2-3.

²⁰ *Id.* at 3-4 (citing *PJM Interconnection, L.L.C.*, 125 FERC ¶ 61,244).

explains that inflexible operating parameters require PJM to run generation resources based on their preferences rather than on actual physical operating requirements, resulting in increased payments to generation resources.²¹ The Market Monitor states that historical evidence, including PJM's initial filing, the language of the Operating Agreement, and manual and training materials, clearly shows that both the intent and language of the 2008 rules were unambiguous.²² The Market Monitor states that the intent of PJM's 2008 filing was to mitigate market power by requiring market dispatch and settlement according to limited parameters anytime generation resources failed the three-pivotal-supplier test or under certain emergency conditions.²³

15. The Market Monitor argues that PJM implies that there is a conflict between Operating Agreement, Schedule 1, section 6.4.1, which describes the energy market offer-capping process, and section 6.6, which limits operating parameters. The Market Monitor asserts that there is no conflict; instead, the conflict was created by PJM's implementation of section 6.6, in which PJM unnecessarily links operating parameters with financial parameters. The Market Monitor states that when a generation resource fails the three-pivotal-supplier test, PJM should determine the lower price offer based solely on the financial parameters and require its use, and simultaneously and without conflict, PJM should require the use of the most flexible operating parameters by selecting the more flexible of (1) the unrestricted parameters submitted by the generation resource, and (2) the defined parameter limits for the generation resource.²⁴

16. The Market Monitor states that currently PJM improperly allows many generation resources to operate with inflexible parameters, even though section 6.6 requires PJM to enforce parameter limits. The Market Monitor explains that this occurs when generation resources combine more costly offers with flexible operating parameters and less costly offers with less flexible operating parameters. The Market Monitor states that the assertion that PJM must choose among schedules with financial parameters inextricably

²¹ *Id.* at 4.

²² *Id.* at 3-4, 6-9 (citing PJM Interconnection, L.L.C., Filing, Docket No. ER08-1569-000, at 5, 30 (filed Sept. 25, 2008); Monitoring Analytics, LLC, *PLS Implementation Background Documents*, at 27, 146-47, 235 (2019), http://www.monitoringanalytics.com/reports/Presentations/2019/IMM_MIC_PLS_Implementation_Background_Documents_20191211.pdf).

²³ *Id.* at 4.

²⁴ *Id.* at 4-5. In other words, the Market Monitor argues that financial parameters and operating parameters should be considered separately (i.e., not linked together in one offer schedule).

bound to operating parameters is not supported and is the core implementation choice underlying PJM's noncompliance with section 6.6.²⁵

17. The Market Monitor explains that PJM, in committing generation resources, chooses among the multiple schedules submitted by a generation resource by evaluating the system production cost based on submitted offers in the day-ahead market and the offered commitment cost in the real-time market. The Market Monitor states that "the least cost evaluation should result in a lower cost to customers among the offered schedules for a given unit, but the evaluation is not an absolute. The least cost evaluation is vulnerable to varying offer markups in incremental offer curves and inflexible time-based physical offer parameters, like minimum run time and minimum down time."²⁶ The Market Monitor states that evaluating the financial parameters independently from the operating parameters, as intended by sections 6.4.1 and 6.6, would provide greater protection to customers.²⁷

B. P3 Comments

18. P3 argues that the Commission should approve PJM's proposed revisions as an appropriate clarification of its current practice regarding the use of parameter limits.²⁸ P3 argues that separating the offer and parameter portions of a schedule, as the Market Monitor suggests, into separate and mutually exclusive inputs would not be just and reasonable, because it could result in a generation resource losing the ability to offer a complete schedule that allows for full recovery of costs.²⁹ Further, P3 argues that when a generation resource can make a market-based offer that is less expensive than its cost-based offer due to operating parameter differences, PJM should be able to select the cheaper offer as long as reliability violations are not created, as that is the most efficient outcome.³⁰ Finally, P3 explains that nothing in PJM's proposed revisions changes PJM's

²⁵ *Id.* at 5.

²⁶ *Id.*

²⁷ *Id.* at 5-6.

²⁸ P3 Comments at 2-4.

²⁹ *Id.* at 2 (arguing that PJM does not, and should not, assemble offer schedules for generation resources).

³⁰ *Id.* at 3 (explaining that PJM will only commit on a non-parameter-limited schedule when "doing so would lower system production cost, which by definition is a more efficient outcome").

implementation of the three-pivotal-supplier test, and the Market Monitor retains the ability to mitigate energy market offers when the three-pivotal-supplier test is failed.³¹

C. PJM's Answer

19. In its answer, PJM reasserts that its proposed revisions maintain the status quo and merely remove any potential ambiguity in the existing language pertaining to parameter-limited schedules. PJM states that its proposed clarifications are consistent with the 2008 implementation of parameter-limited schedules. PJM explains that the original language of section 6.6, accepted by the Commission in 2008, made clear that a generation resource would be subject to parameter limits when a unit owner failed the three-pivotal-supplier test, or during certain emergency conditions.³² PJM states that it implemented this rule by imposing limits on the parameters of cost-based schedules and market-based parameter-limited schedules during certain emergency conditions. PJM states that since implementation of section 6.6, cost-based schedules have remained applicable only when a generation resource fails the three-pivotal-supplier test, and market-based parameter-limited schedules have remained applicable only during certain emergency conditions.

20. PJM explains that when section 6.6 was modified as part of its Capacity Performance filing, the revisions inadvertently implied an extension of the use of market-based parameter-limited schedules beyond the specified emergency conditions (i.e., to instances when the three-pivotal-supplier test was failed).³³ PJM explains that this implied extension of the use of market-based parameter-limited schedules conflicts with section 6.4.1 of the Operating Agreement, which requires that a generation resource that fails the three-pivotal-supplier test be committed on the lesser of its market-based offer or cost-based (parameter-limited) offer. PJM states that this conflict was not intended, and that its proposed revisions in the instant filing seek to clarify the language to reflect its current implementation of parameter-limited schedules.³⁴

21. PJM argues that the Market Monitor's proposal to change the existing mitigation paradigm is beyond the scope of this proceeding, which is limited to a clarification that cost-based schedules are considered when a generation resource fails the three-pivotal-supplier test, while market-based parameter-limited schedules are

³¹ *Id.*

³² PJM Answer at 2-3 (citing *PJM Interconnection, L.L.C.*, 125 FERC ¶ 61,244).

³³ *Id.* at 4-6 (citing *PJM Interconnection, L.L.C.*, 151 FERC ¶ 61,208 (2015)).

³⁴ *Id.* at 6-7.

considered during certain emergency conditions.³⁵ PJM argues that unilaterally reconstructing energy offer schedules submitted by generation resources, to use the lowest price offered and the most flexible parameters offered (even if not linked in a single energy offer schedule), could result in PJM's not adequately compensating generation resources. PJM states that this raises constitutionality concerns regarding potential confiscatory outcomes, and represents a drastic change to the existing application of parameter-limited schedules.³⁶ PJM argues that the Market Monitor's protest is not the proper vehicle to advance such a significant change; rather, PJM states that any such change is more appropriately raised through PJM's stakeholder process.³⁷

D. Market Monitor's Answer

22. The Market Monitor reiterates its arguments that the language of section 6.6 is unambiguous, that PJM's mitigation practices are inconsistent with the Operating Agreement, and that operating parameters and financial parameters should be evaluated separately (not linked in a schedule).³⁸ The Market Monitor provides evidence of the frequency with which PJM is committing on non-parameter-limited schedules pursuant to section 6.4.1, and argues that PJM's commitment practices do not guarantee the lowest costs and are inefficient and noncompetitive.³⁹ The Market Monitor rejects PJM's argument that the Market Monitor's proposed approach would result in generation resources not recovering their costs, explaining that cost-based offers (which are parameter-limited) provide adequate compensation and that generation resources may submit any market-based offer they choose.⁴⁰

IV. Discussion

A. Procedural Matters

23. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure,

³⁵ *Id.* at 7-8 (citing Market Monitor Protest at 4-5).

³⁶ *Id.* at 8 (“[c]ourts have consistently held that rates that do not afford sufficient compensation for the use of privately-owned resources amount to a violation of the takings clause of the Fifth Amendment”) (citations omitted).

³⁷ *Id.* at 8-9.

³⁸ Market Monitor Answer at 1-2, 4-7.

³⁹ *Id.* at 2-3.

⁴⁰ *Id.* at 7-8.

18 C.F.R. § 385.214 (2019), the timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding. Pursuant to Rule 214(d) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214(d) (2019), we grant the motions to intervene out-of-time of Calpine Corporation and P3 given their interests in the proceeding, the early stage of the proceeding, and the absence of undue prejudice or delay. P3 filed comments 20 days after comments/protests were due without requesting leave to file, and the comments were in the form of an answer to the Market Monitor's protest. Nonetheless, we will accept P3's late-filed comments and the Market Monitor's answer, given their interests in this proceeding and the absence of any undue prejudice or delay.

24. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2019), prohibits an answer to a protest or comments unless otherwise ordered by the decisional authority. We accept the answer filed by PJM because it has provided information that assisted us in our decision-making process.

B. Substantive Matters

25. We accept PJM's proposed revisions to the Operating Agreement, Schedule 1, section 6.6, and the parallel provisions of the Tariff, Attachment K-Appendix, effective April 6, 2020, as requested. As revised, section 6.6(a) makes clear that when a generation resource fails the three-pivotal-supplier test, it shall submit and be subject to predetermined limits on its cost-based offer schedule, and that PJM shall consider that cost-based, parameter-limited offer schedule when making commitment decisions for the generation resource under section 6.4.1. Similarly, section 6.6(b) makes clear that under certain emergency conditions, a generation resource shall submit and be subject to predetermined limits on its market-based offer schedules, and that PJM shall consider those market-based, parameter-limited offer schedules when making commitment decisions for the generation resource. We find that imposing these parameter limits on offers when the applicable conditions are satisfied and clarifying that PJM will consider such parameter-limited offers in commitment decisions are just and reasonable. The revisions ensure that PJM has access to parameter-limited offer schedules from generation resources when either (a) those generation resources are demonstrated to possess market power or (b) the existence of emergency conditions may heighten the risk of market power being exerted through submission of inflexible operating parameters.

26. The Market Monitor's protest contends that PJM's proposed revisions to section 6.6 are not just and reasonable because they do not require that PJM commit and dispatch generation resources on the parameter-limited offer schedules mandated in sections 6.6(a) and 6.6(b). We find the Market Monitor's protest to be beyond the scope of this filing because it relates to PJM's commitment and dispatch decisions. PJM's commitment and dispatch decisions are not governed by section 6.6; they are governed by section 6.4.1, which PJM has not proposed to revise and which is not at issue in this

proceeding. As explained above, proposed section 6.6 sets out the circumstances in which generation resources' cost-based or market-based offer schedules are subject to parameter limits and then refers to unchanged section 6.4.1 for the determination of the offer schedule upon which PJM will commit and dispatch those generation resources.

27. The Market Monitor focuses on the use of the phrase “submit and be subject to” in section 6.6 (in both its existing and proposed forms) and argues that the phrase requires that PJM commit and dispatch generation resources only on the parameter limits imposed by that section. But section 6.6 states only that generation resources' cost-based offers (per section 6.6(a)) and market-based offers conforming to parameter limitations (“parameter limited schedules”) (per section 6.6(b)) will be subject to such limits.⁴¹ Section 6.6 does not cover at all the third type of offer: unmitigated market-based offers. Moreover, the term “subject to” means only that the generation resource is subject to the parameter limit if PJM commits or dispatches the generation resource based on that offer. We do not read this language as conflicting with section 6.4.1 or as preventing PJM from considering non-parameter-limited market-based offers in its commitment and dispatch decisions under section 6.4.1.

The Commission orders:

PJM's proposed Tariff and Operating Agreement revisions are hereby accepted, effective April 6, 2020, as discussed in the body of this order.

By the Commission.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.

⁴¹ PJM Interconnection, L.L.C., Intra-PJM Tariffs, Operating Agreement, Schedule 1, § 6.6 (7.0.0) (“Market Sellers submitting Offer Data for Generation Capacity Resources *shall submit and be subject to pre-determined limits on cost-based offers. . . .* Market Sellers submitting Offer Data for Generation Capacity resources *shall submit and be subject to pre-determined limits on market-based offers conforming to parameter limitations* (“parameter-limited schedules’).”) (emphasis added).