

173 FERC ¶ 61,028
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

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

PJM Interconnection, L.L.C.

Docket No. ER20-2573-000

ORDER ACCEPTING TARIFF REVISIONS

(Issued October 13, 2020)

1. On July 31, 2020, pursuant to section 205 of the Federal Power Act (FPA),¹ PJM Interconnection, L.L.C. (PJM) filed proposed revisions to the PJM Open Access Transmission Tariff (Tariff), Attachment K-Appendix, section 2.5, and to the identical corresponding provisions in the Amended and Restated Operating Agreement of PJM (Operating Agreement), Schedule 1, section 2.5. PJM states that these proposed revisions will enhance accuracy in the pricing and dispatch of resources in PJM's footprint by aligning dispatch instructions with the corresponding target interval for pricing. In this order, we accept the proposed revisions as just and reasonable, effective October 15, 2020, as requested.

I. Background

A. PJM Fast-Start Pricing Proceeding

2. On April 18, 2019, the Commission issued an Order on Paper Hearing which found that PJM's fast-start pricing practices are unjust and unreasonable because the practices do not allow prices to reflect the marginal cost of serving load, and directed PJM to revise its Tariff to implement certain changes that would result in just and reasonable rates.² Among other changes, the Commission required PJM to revise its pricing practices to separate the pricing and dispatch runs in its market model.

¹ 16 U.S.C. § 824d.

² *PJM Interconnection, L.L.C.*, 167 FERC ¶ 61,058 (2019) (Order on Paper Hearing).

Specifically, the Commission directed PJM to first execute a cost-minimizing dispatch run and follow it with a subsequent pricing run.³

3. On August 30, 2019, PJM submitted, in Docket No. ER19-2722-000, proposed Tariff revisions to comply with the Commission's directives in the Order on Paper Hearing. In response to PJM's compliance filing, commenters identified that PJM computes dispatch instructions using a different market interval than it uses to calculate prices.

4. On January 23, 2020, the Commission issued an order finding that it appears that resources in PJM may be compensated with prices that do not correspond to their dispatch instructions, a pricing and dispatch misalignment.⁴ Additionally, the Commission found that PJM may not be able to implement separate dispatch and pricing runs (as directed in the Order on Paper Hearing) in a way that is just and reasonable without first resolving the pricing and dispatch misalignment problem.⁵ Therefore, the Commission held PJM's fast-start pricing compliance proceeding in abeyance until July 31, 2020 pending consideration of the pricing and dispatch misalignment problem in PJM's stakeholder process.⁶

B. PJM Real-Time Security Constrained Economic Dispatch and Locational Pricing Calculator

5. PJM states that the primary price signal in the PJM day-ahead and real-time energy markets is the Locational Marginal Price (LMP), which is the market clearing marginal price for energy at the location the energy is delivered or received.⁷ PJM uses the Real-Time Security Constrained Economic Dispatch (RT SCED) application in the real-time energy market to dispatch specific resources in order to maintain the system balance of energy and reserves over a 10-minute look-ahead period, based on forecasted system conditions.⁸ PJM explains that the future target dispatch time is 10 minutes from the program's execution time, rounded up to the nearest five-minute interval. PJM states

³ *Id.* P 70.

⁴ *PJM Interconnection, L.L.C.*, 170 FERC ¶ 61,018, at P 30 (2020) (Abeyance Order).

⁵ *Id.* P 31.

⁶ *Id.* P 32.

⁷ Transmittal at 3.

⁸ *Id.*

that RT SCED produces dispatch cases using load forecast and other system information that are effective for the look-ahead interval to achieve a dispatch solution that will control adequately for forecasted conditions. PJM explains that, historically, a dispatch case was *executed* automatically less than every five minutes, or manually by the PJM dispatcher on an ad hoc basis. According to PJM, this is distinguishable from *approval* of an RT SCED case, which is currently not automatic but rather requires manual action by the PJM dispatcher.⁹

6. In coordination with RT SCED, PJM uses an incremental linear optimization program called the Locational Pricing Calculator (LPC) to determine real-time LMP values and ancillary service clearing prices on a five-minute basis. PJM states that the LPC uses input data from the approved RT SCED case that was used to dispatch the PJM system at the time the LPC case was executed.¹⁰ PJM explains that the LPC calculates the LMPs for each of the PJM nodes in the State Estimator model,¹¹ and for interface busses used as proxies for transfers to and from PJM and external control areas.

II. Filing Summary

7. PJM proposes changes to its Tariff such that, in lieu of the current practice of assigning prices based on a RT SCED solution for a future 10-minute interval to the current five-minute interval, the LPC program will assign prices to the interval with the same target time as the RT SCED dispatch, effectively calculating real-time LMPs, regulation, and reserve clearing prices based on the latest RT SCED program solution.¹² PJM refers to this RT SCED solution as the “reference case.” According to PJM, the reference case aligns the future 10-minute dispatch (i.e., RT SCED) with the corresponding target five-minute interval for pricing (i.e., LPC).¹³ PJM notes that if

⁹ *Id.* at 3, 5.

¹⁰ *Id.* at 4.

¹¹ The State Estimator uses actual operating conditions that exist on the power grid along with fundamental power system equations to calculate the remaining flows and conditions that are not metered.

¹² Transmittal at 5; Proposed PJM Tariff, Attach. K-App., § 2.5(e) (9.0.0), Operating Agreement, Sched. 1, § 2.5(e) (9.0.0) (providing that real-time price calculations “shall be performed every five minutes, . . . producing the Real-time Prices for the current five minute interval based on forecasted system conditions and the latest approved PJM security-constrained economic dispatch solution with a target time at the end of the current five minute interval”).

¹³ Transmittal at 5.

there is not an approved RT SCED solution for the same future target interval time, LPC will use the most recently approved RT SCED solution prior to the target time as the reference case. If RT SCED or LPC has technical problems or failures, the market operator will use the best available RT SCED solution to calculate LMPs.¹⁴

8. Additionally, PJM proposes to modify the effective time of the input data exported to RT SCED in order to support the alignment of dispatch and pricing. PJM states that data from multiple sources will be used including, but not limited to, data regarding online and available resources, resource offers, forecasted load, scheduled interchange, as well as various other input parameters, effective for the period ending at that future dispatch target time. For example, resource offers, regulation and inflexible synchronized reserve assignments from the 11:00 to 12:00 hour will be effective until the 12:00 future dispatch target time. Resource offers, regulation, and inflexible synchronized reserve assignments for the 12:00 to 13:00 hour will be used as inputs to RT SCED for the future dispatch target time of 12:05 and onwards until 13:00.¹⁵

9. PJM states these revisions are just and reasonable because they will effectuate greater accuracy in the pricing and dispatch of resources in PJM's footprint in furtherance of the Commission's overarching price formation policy objectives.¹⁶ PJM argues that, by modifying LPC to use the approved RT SCED case for the same target time and making corresponding modifications to the effective time of the data exported to RT SCED, its proposal will better align pricing and dispatch intervals by ensuring that prices appropriately reflect the costs of the marginal resources consistent with the future timing of the dispatch resources they will receive. PJM states that with LPC using the reference RT SCED case with the same target time, resources will be compensated appropriately once those resources meet the target dispatch objective, thus more accurately reflecting the marginal cost of serving the next increment of load and providing better incentives for resources to continue following PJM dispatch. PJM states that these incentives are solidified because the calculated prices that determine real-time, five-minute settlements for generators will be better aligned with the timing of when they are expected to achieve their indicated dispatch levels.¹⁷

¹⁴ *Id.*; Proposed PJM Tariff, Attach. K-App., § 2.5(e), Operating Agreement, Sched. 1, § 2.5(e).

¹⁵ Transmittal at 5-6.

¹⁶ *Id.* at 7.

¹⁷ *Id.* at 8-9.

10. PJM refers to the proposal in the instant proceeding as its “short-term” reform, and notes that it has also been developing intermediate-term and long-term reforms through its stakeholder process that are intended to further address pricing and dispatch misalignment.¹⁸ PJM states that, while not part of the instant filing, as of June 22, 2020, it has changed the frequency of automatically executed RT SCED cases from *less than* every five minutes to every five minutes, the same frequency as the LPC is executed. PJM asserts that with consistent intervals between both RT SCED and LPC execution, this has reduced the fraction of RT SCED cases that were never priced by LPC. PJM refers to these changes as its intermediate-term reforms.¹⁹ With respect to long-term reforms, PJM states that it plans to implement an automatic approval (as opposed to manual execution) of RT SCED cases as well as adjustments to RT SCED’s ramping methodology. PJM states that these long-term changes are more complex and will require additional analysis to better understand their potential benefits and reliability impacts.²⁰

III. Notice of Filing and Responsive Pleadings

11. Notice of PJM’s filing was published in the *Federal Register*, 85 Fed. Reg. 47,783 (Aug. 6, 2020), with interventions and protests due on or before August 21, 2020.²¹

12. Timely motions to intervene were submitted by: Monitoring Analytics, LLC, the Independent Market Monitor for PJM (Market Monitor); PJM Industrial Customer Coalition; LS Power Associates, L.P.; Calpine Corporation; Vistra Corp. and Dynegy Marketing and Trade, LLC (collectively, Vistra); PJM Power Providers Group; NRG Power Marketing LLC and Midwest Generation LLC; Electric Power Supply Association; the FirstEnergy Utility Companies;²² Rockland Electric Company; Exelon Corporation; Talen Energy Corporation; American Municipal Power, Inc.; North

¹⁸ *Id.* at 2, 9.

¹⁹ *Id.* at 10-11.

²⁰ *Id.* at 11-14.

²¹ On August 5, 2020, PJM submitted a corrected table to be included in “Affidavit of Rebecca Carroll on Behalf of PJM Interconnection, L.L.C.,” which was previously submitted in its July 31, 2020 Filing in this proceeding.

²² The FirstEnergy Utility Companies are: Ohio Edison Company, The Cleveland Electric Illuminating Company, The Toledo Edison Company, Pennsylvania Power Company, Pennsylvania Electric Company, Metropolitan Edison Company, West Penn Power Company, Jersey Central Power & Light Company, Monongahela Power Company and The Potomac Edison Company.

Carolina Electric Membership Corporation; Old Dominion Electric Cooperative; Dominion Energy Services, Inc.; Shell Energy North America (US), L.P.; the PSEG Companies;²³ and American Electric Power Service Corporation. Illinois Commerce Commission filed a notice of intervention.

13. Comments were filed by the Indicated Companies²⁴ and PJM Power Providers Group and Electric Power Supply Association (collectively, P3/EPSCA). The Market Monitor filed a protest. On September 10, 2020, PJM filed an answer to the Market Monitor's protest. On September 25, 2020, the Market Monitor filed an answer to PJM's answer. On October 7, 2020, PJM filed an answer to the Market Monitor's answer. On October 13, 2020, the Market Monitor filed an answer to PJM's second answer.

A. Comments and Protest

1. Supportive Comments

14. The Indicated Companies and P3/EPSCA state that PJM's proposal resolves any issue that led the Commission to hold the fast-start pricing compliance proceeding in abeyance by aligning the intervals used by the RT SCED and LPC programs for pricing and dispatch, such that resources are compensated with prices reflecting the timing of when they are expected to achieve their indicated dispatch levels.

2. Market Monitor Protest

15. The Market Monitor argues that PJM's filing does not resolve the pricing and dispatch misalignment problem identified in the Abeyance Order and should be rejected. The Market Monitor maintains that PJM's proposal creates a systematic delay between the dispatch signal and pricing that undermines the incentive to follow dispatch.²⁵ According to the Market Monitor, this mismatch occurs for any price fluctuations due to changes in load or transmission constraints, not just shortages.²⁶ The Market Monitor argues that, under PJM's proposal, prices will not reflect the marginal cost of serving

²³ The PSEG Companies are: Public Service Electric and Gas Company, PSEG Power LLC and PSEG Energy Resources & Trade LLC

²⁴ Indicated Companies are: Dominion Energy Services, Inc., Exelon Corporation, PSEG Energy Resources & Trade LLC, PSEG Power LLC, Public Service Electric and Gas Company, and Talen Energy Corporation.

²⁵ Market Monitor Protest at 15.

²⁶ *Id.* at 15.

load, and generators will be encouraged not to follow dispatch instructions.²⁷ Because PJM uses a 10-minute ramp time, the Market Monitor explains, LMPs are based on resources achieving their targets 10 minutes in the future. The Market Monitor argues that PJM's process of approving a new dispatch case every five minutes or less will send resources a new dispatch signal in the middle of the 10-minute ramp time. The Market Monitor claims that resources will be expected to follow this new signal while they are compensated using LMPs corresponding to the original dispatch signal. As a result, the Market Monitor maintains that a profit maximizing generator in the real-time energy market, capable of following price signals, will ignore PJM's dispatch instructions and simply follow the LMP, or follow PJM's dispatch instructions with a five-minute delay, when the LMP from the dispatch instruction is used in settlements.²⁸

16. The Market Monitor argues that having RT SCED set to a 10-minute ramp time and a five-minute execution frequency prevents accurate pricing. According to the Market Monitor, the use of RT SCED with a 10-minute ramp time executed on a three-to five-minute basis tends toward overgeneration as load increases and undergeneration as load decreases, because PJM sends a new dispatch signal before the unit completes the ramp up or ramp down to the previous dispatch target, i.e., overlapping dispatch periods.²⁹ Moreover, the Market Monitor contends that PJM's proposal adds a significant delay in the use of an approved RT SCED solution in LPC compared to the status quo.³⁰

17. The Market Monitor contends that PJM's filing is inconsistent with Order No. 825³¹ because it creates a price signal that does not correspond to the effective dispatch signal during the five-minute real-time market interval to which the prices apply for settlements.³² The Market Monitor argues that, by failing to align the dispatch and pricing intervals, PJM's filing fails to address unpriced shortages and fails to create a defined process for allowing prices to reflect the RT SCED's indicated

²⁷ *Id.*

²⁸ *Id.* at 17.

²⁹ *Id.* at 23.

³⁰ *Id.* at 33.

³¹ *Settlement Intervals & Shortage Pricing in Mkts. Operated by Reg'l Transmission Organs. & Indep. Sys. Operators*, Ord. No. 825, 155 FERC ¶ 61,276 (2016).

³² Market Monitor Protest at 3.

shortages.³³ The Market Monitor contends that the issue with PJM's misaligned dispatch and pricing intervals should have been identified in PJM's Order No. 825 compliance filing but was not because PJM incorrectly represented that its resources are dispatched in five-minute intervals.³⁴ According to the Market Monitor, the length of time between dispatch signals varies widely and is not set at five minutes.³⁵

18. According to the Market Monitor, to properly address the misalignment issue, PJM must implement the intermediate- and long-term aspects of the solution and not merely the short-term ones.³⁶ The Market Monitor asserts that, while the short-term proposal was designed to align the pricing and settlement intervals, and the intermediate-term proposal changed the automatic execution of RT SCED from three to five minutes, only the long-term solution would complete the alignment by reducing the ramp time to align the dispatch period with the pricing interval and settlement interval.³⁷ Further, the Market Monitor argues that, without the intermediate- and long-term changes, the instant proposal produces inefficient market outcomes and is inconsistent with Order No. 825.³⁸

19. Regarding the intermediate solution (to automatically execute RT SCED every five minutes), the Market Monitor states that PJM has not included this in its market rules, and states that PJM has made no formal commitment to the long-term solution to reduce the RT SCED dispatch interval (ramp time) to five minutes or to implement a process to approve RT SCED cases on a five-minute basis.³⁹

20. Regarding the long-term solution, the Market Monitor disagrees with PJM that automated approval of RT SCED solutions is required.⁴⁰ The key step, according to the Market Monitor, is reducing the ramp time to five minutes. The Market Monitor points out that PJM reduced the RT SCED ramp time from 15 minutes to 10 minutes in 2017

³³ *Id.* at 20.

³⁴ *Id.* at 18.

³⁵ *Id.*

³⁶ *Id.* at 3.

³⁷ *Id.* at 8.

³⁸ *Id.* at 10-11.

³⁹ *Id.* at 26.

⁴⁰ *Id.* at 34.

without prolonged testing or training, and there should be no reason for a lengthy implementation time here.⁴¹

21. The Market Monitor maintains that PJM's instant proposal will not result in the market outcomes intended by fast-start pricing.⁴² Specifically, the Market Monitor argues that the misaligned dispatch and pricing intervals under the short-term proposal results in incorrect pricing and a dispatch differential lost opportunity cost calculation that does not achieve the correct compensation.⁴³ The Market Monitor points out that, according to PJM, the dispatch differential lost opportunity cost payment is needed to ensure that resources follow dispatch instructions rather than chase price.⁴⁴ The Market Monitor argues that PJM's short-term proposal results in precisely the incentive to deviate from dispatch instructions that the Commission sought to avoid in the Order on Paper Hearing.⁴⁵

B. Answers

1. PJM's First Answer

22. PJM argues that the fact that its proposal does not implement the changes preferred by the Market Monitor is not a legally cognizable basis for rejecting PJM's FPA section 205 filing.⁴⁶ PJM reiterates that its proposed long-term reforms require further examination to determine whether they will yield benefits and to understand possible operational and market impacts.⁴⁷

23. In response to the Market Monitor's argument that resources may experience overlapping ramping signals, PJM argues that its proposal would ensure that dispatch instructions will target an interval ten minutes in the future, such that actual pricing and

⁴¹ *Id.* at 34.

⁴² *Id.* at 26-33.

⁴³ *Id.* at 26.

⁴⁴ *Id.* at 27.

⁴⁵ *Id.* at 30.

⁴⁶ PJM First Answer at 3.

⁴⁷ *Id.* at 8-12.

settlements will use the information from that exact same interval.⁴⁸ In response to the IMM's concern about overlapping dispatch periods, PJM contends that many resources are continually dispatched up or down to account for dynamic operating conditions.

2. Market Monitor's First Answer

24. The Market Monitor states that it analyzed the alignment of dispatch instructions from approved RT SCED solutions with concurrent prices in the PJM real-time energy market under the status quo and under PJM's proposal.⁴⁹ The Market Monitor notes that under the status quo, prices were aligned with the dispatch instructions 69.6% of the time. However, the Market Monitor argues, under PJM's proposal, prices would not be not aligned with or consistent with the dispatch more than 90% of the time because PJM's proposal would require prices to be based on an RT SCED dispatch that is almost always for the wrong interval as the dispatch target is 10 minutes ahead.⁵⁰

25. The Market Monitor also argues that PJM fails to provide a reason why it cannot reduce the RT SCED ramp time to five minutes. The Market Monitor states that other components of the long-term plan could be phased in over time, including the automatic case approval reform and use of prior RT SCED cases as a dispatch starting point. The Market Monitor contends that implementing fast-start pricing, including any associated uplift payments, without reducing the ramp time to five minutes will also result in a failure to realize the benefits of fast-start pricing.⁵¹ With respect to overlapping dispatch signals, the Market Monitor responds that a source of misalignment between dispatch and pricing is PJM's practice of sending new dispatch signals to resources before the ramp time of the first dispatch instruction is complete.⁵²

3. PJM's Second Answer

26. In its second answer PJM responds to the Market Monitor's analysis regarding the extent to which dispatch instructions from approved RT SCED solutions are reflected in prices under the status quo process, and under PJM's proposal.⁵³ PJM states that the

⁴⁸ *Id.* at 13.

⁴⁹ *Id.* at 4-6.

⁵⁰ *Id.* at 5-6.

⁵¹ *Id.* at 7.

⁵² *Id.*

⁵³ PJM Second Answer at 2.

Commission specifically identified alignment with the future target dispatch interval as the basis for its concern in the Abeyance Order. PJM argues that the data provided by the Market Monitor does not compare the target dispatch interval with pricing and settlements information for that same target interval.⁵⁴ PJM contends that the Market Monitor instead compares the dispatch interval at the time the dispatch signal is provided with the actual pricing and settlements interval. PJM states that using this method to illustrate alignment will ensure an overt disconnect because the dispatch signal is for a different target interval (one that is ten minutes into the future). By contrast, PJM contends, the effect of its proposal is to ensure that the prices coinciding with the dispatch instructions at a target time are kept synchronized.⁵⁵

4. Market Monitor's Second Answer

27. The Market Monitor explains that PJM presented, at the October 7, 2020 PJM Markets Implementation Committee (MIC) meeting, its intention to implement the long-term solution, as proposed by the Market Monitor, to align dispatch and pricing.⁵⁶ The Market Monitor states that, under the long-term solution, the dispatch period will end at the RT SCED solution target time, consistent with resources completing the ramp up or down to meet the dispatch instruction.⁵⁷ The Market Monitor argues that, contrary to PJM's statements in PJM's Second Answer, an RT SCED "target dispatch interval" does not exist in RT SCED because RT SCED solves for a target time. The Market Monitor contends that its analysis in the Market Monitor's First Answer is correct because it correctly applied PJM's proposal to historic RT SCED data and the analysis also considers changes to the alignment of pricing and dispatch consistent with the principles of Order No. 825.⁵⁸ The Market Monitor states that, to achieve pricing and dispatch alignment, PJM should file its long-term solution, as presented at the October 7, 2020 MIC meeting.⁵⁹

⁵⁴ *Id.* at 4.

⁵⁵ *Id.*

⁵⁶ Market Monitor Second Answer at 2.

⁵⁷ *Id.*

⁵⁸ *Id.* at 4-5.

⁵⁹ *Id.* at 5.

IV. Discussion

A. Procedural Matters

28. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2020), the notice of intervention and the timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding.

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

B. Substantive Matters

30. We accept PJM's proposed Tariff revisions as just and reasonable enhancements to its pricing and dispatch methodologies. Currently, PJM calculates current prices based on a future dispatch interval, contributing to a misalignment between pricing and dispatch. We find PJM's proposal just and reasonable because, under the proposal, prices will be assigned to the same interval for which RT SCED's dispatch instructions are intended (i.e., roughly 10 minutes in the future), which provides an incremental improvement in the alignment between pricing and dispatch. We agree with PJM that its proposal to modify its LPC pricing program to use the approved RT SCED dispatch case for the same target time, along with corresponding modifications to the effective time of the input data exported to RT SCED, will better align pricing and dispatch intervals. Specifically, we find that PJM's proposal will more accurately ensure that prices appropriately reflect the costs of the marginal resources consistent with the future timing of the dispatch instructions they receive.

31. We disagree with the Market Monitor's argument that the Commission should reject PJM's proposal because it does not resolve the pricing and dispatch misalignment issue identified in the Abeyance Order.⁶⁰ Under FPA section 205, the Commission evaluates the proposal that was filed on its own merits and does not evaluate whether the proposal resolves another pending proceeding initiated under section 206 or whether an alternative solution would be preferable.⁶¹ As discussed above, we find that the specific

⁶⁰ Abeyance Order, 170 FERC ¶ 61,018 at P 31.

⁶¹ *NRG Power Mktg., LLC v. FERC*, 862 F.3d 108, 114 (D.C. Cir. 2017) (“Section 205 puts FERC in a ‘passive and reactive role.’ . . . FERC reviews the proposed rate scheme filed by a utility or Regional Transmission Organization and determines whether the proposal is just and reasonable.” (citation omitted)); *Petal*

changes to pricing and dispatch contained in PJM's filing are just and reasonable. The Commission will address in Docket No. ER19-2722-001 whether the concerns identified in the Abeyance Order have been resolved.

32. The Market Monitor argues that PJM's proposal is inconsistent with the requirements of Order No. 825. The Commission already found that PJM's existing tariff complies with Order No. 825,⁶² and the revisions proposed in this filing are consistent with the requirements of Order No. 825. For example, PJM's proposal provides for a more consistent response to shortage conditions by assigning shortage prices to the same interval for which RT SCED found the shortage to have occurred. Further, PJM's proposal would better align calculated prices that determine real-time, five-minute settlements for generators with the timing of when they are expected to achieve their indicated dispatch levels.

33. We recognize that PJM's instant proposal represents one of three steps it intends to take in its ongoing efforts to address the pricing and dispatch misalignment issue the Commission discussed in the Abeyance Order. For example, PJM has already implemented its intermediate-term reforms,⁶³ including executing RT SCED every five minutes instead of less than every five minutes to better align with LPC. We encourage PJM to continue to work with stakeholders on the long-term reforms.

The Commission orders:

PJM's filing is hereby accepted, as discussed in the body of this order.

By the Commission.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.

Gas Storage, L.L.C. v. FERC, 496 F.3d 695, 703 (D.C. Cir. 2007) ("FERC is not required to choose the best solution, only a reasonable one.").

⁶² *PJM Interconnection, L.L.C.*, 162 FERC ¶ 61,150 (2018); *PJM Interconnection, L.L.C.*, Docket Nos. ER17-775-003 and ER17-775-004 (July 17, 2018) (delegated letter order).

⁶³ *See supra* P 10.