

178 FERC ¶ 61,170
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Richard Glick, Chairman;
James P. Danly, Allison Clements,
Mark C. Christie, and Willie L. Phillips.

PJM Interconnection, L.L.C.

Docket No. ER22-797-000

ORDER ACCEPTING PROPOSED REVISIONS

(Issued March 11, 2022)

1. On January 10, 2022, pursuant to section 205 of the Federal Power Act (FPA),¹ PJM Interconnection, L.L.C. (PJM) filed modifications to its Open Access Transmission Tariff (Tariff) and the Amended and Restated Operating Agreement of PJM (Operating Agreement) to revise auction revenue right (ARR) and financial transmission right (FTR) market rules. As discussed below, we accept PJM's proposed revisions, effective as of the dates requested as listed on the attached Appendix.²

I. Background

2. ARRs are the right to receive the revenues resulting from the FTR auction that are allocated annually to PJM's network transmission customers and firm point-to-point transmission customers.³ PJM allocates ARRs in a two-stage process, taking into account

¹ 16 U.S.C. § 824d.

² The proposed tariff provisions are listed in the Appendix. PJM proposed one unchanged tariff record (PJM, Intra-PJM Tariffs, OATT, attach. K, app. K, (Financial Transmission (1.0.0)) with a March 11, 2022 effective date to establish a date for Commission action on the filing under section 205. See Notice of Procedures for Making Statutory Filings when Authorization for New Or Revised Tariff Provisions is not Required *Electronic Tariff Filings*, Docket No. RM01-5-000 (June 3, 2020), <https://elibrary.ferc.gov/eLibrary/filedownload?fileid=020866AC-66E2-5005-8110-C31FAFC91712>.

³ PJM, Intra-PJM Tariffs, Operating Agreement, OA Definitions A - B (8.0.0) (definition of Auction Revenue Right); PJM, Intra-PJM Tariffs, Operating Agreement, OA Schedule 1 § 7.4 (Allocation of Auction Revenues) (15.1.0), §§ 7.4.1(a), 7.4.2(b), (c) & (d). Schedule 1 of the Operating Agreement and Attachment K-Appendix of the PJM

the total transmission capability of the PJM transmission system.⁴ In Stage 1, ARRs are allocated based on native load as of a fixed (historical) reference year, as assessed first in reference to Zonal Base Load⁵ (a Stage 1A allocation) and then second, in reference to peak load (a Stage 1B allocation).⁶ In Stage 1A, PJM must allocate a minimum amount of ARRs and ensure this allocation can be made for a 10-year period.⁷ In Stage 2, PJM uses an iterative process to allocate its remaining system capability to qualifying network transmission customers and firm point-to-point transmission customers.⁸ Currently, the process consists of three rounds with up to one-third of the remaining system ARRs capability allocated in each round.⁹ ARR holders may convert their ARRs into FTRs by self-scheduling them in the annual FTR auction.¹⁰

3. FTRs are financial contracts that entitle the holder to the day-ahead hourly congestion revenue (a Transmission Congestion Credit), based on the FTR MWs and the difference between the day-ahead congestion price at the point of delivery (sink point)

Tariff contain parallel provisions. References to Schedule 1 of the Operating Agreement also refer generally to the parallel schedule in Attachment K-Appendix of the PJM Tariff.

⁴ PJM, Intra-PJM Tariffs, Operating Agreement, OA Schedule 1, § 7.4, (Allocation of Auction Revenues) (15.1.0), § 7.4.2.

⁵ PJM defines Zonal Base Load as the “lowest daily zonal peak load from the twelve month period ending October 21 of the calendar year immediately preceding the calendar year in which an annual Auction Revenue Right allocation is conducted, increased by the projected load growth rate for the relevant Zone, when non-extraordinary conditions exist for the applicable twelve month period, as determined by PJM. . . .” PJM, Intra PJM Tariffs, Operating Agreement, OA Definitions U - Z (5.0.0) (definition of Zonal Base Load).

⁶ PJM, Intra-PJM Tariffs, Operating Agreement, OA Schedule 1, § 7.4, (Allocation of Auction Revenues) (15.1.0), § 7.4.2(b) & (c).

⁷ *Id.* § 7.4.2(b).

⁸ *Id.* § 7.4.2(d).

⁹ *Id.*

¹⁰ PJM, Intra-PJM Tariffs, Operating Agreement, OA Schedule 1, § 7.1, (Auctions of Financial Transmission Rights) (4.0.0), § 7.1.1(b).

and the point of receipt (source point) of the FTR.¹¹ FTRs may be purchased by market participants in PJM's FTR auctions or may be obtained through the self-scheduling of an ARR into an FTR.¹² FTRs can be acquired in the form of an option or an obligation.¹³

II. Filing

4. PJM states that it is proposing revisions to its Tariff and Operating Agreement that seek to implement several recommendations identified in a recent detailed third-party review of PJM's ARR and FTR market rules by London Economics International LLC (LEI).¹⁴ PJM states that, in August 2020, it hired LEI to conduct a third-party holistic review of the FTR/ARR market (LEI Report).¹⁵ PJM states that the LEI Report concluded that the existing FTR product is fulfilling its intended purposes of serving as a financial equivalent to firm transmission service and ensuring open access to firm transmission service by providing a congestion-hedging function.¹⁶ PJM also states that the LEI Report included findings supporting the existing FTR/ARR market construct while making multiple recommendations to enhance PJM's FTR/ARR market construct, including recommendations that focused on the themes of equity and efficiency.¹⁷

5. PJM's states that its proposal is constructed around two themes: equity (focused on significant ARR reforms) and efficiency (focused on FTR reforms that enhance rather than transform the FTR market construct).¹⁸ PJM explains that the equity-focused revisions are meant to address the concern that the ability for some load to efficiently

¹¹ PJM, Intra-PJM Tariffs, Operating Agreement, OA Schedule 1, § 5.2, (Transmission Congestion Credit Calculation) (16.0.0), § 5.2.2(b).

¹² PJM, Intra-PJM Tariffs, Operating Agreement, OA Schedule 1, § 7.1, (Auctions of Financial Transmission Rights) (4.0.0), §§ 7.1, 7.1.1.

¹³ *Id.* § 7.1.1(a).

¹⁴ Transmittal at 1 (citing *Review of PJM's Auction Revenue Rights and Financial Transmission Rights*, London Economics International LLC (Dec. 16, 2020), <https://www.pjm.com/-/media/committees-groups/task-forces/afmtf/postings/lei-review-of-pjm-arrs-and-fters-report.ashx> (LEI Report)).

¹⁵ *Id.* at 3.

¹⁶ *Id.* (citing LEI Report at 16-17).

¹⁷ *Id.* at 3-4.

¹⁸ *Id.* at 5.

hedge congestion costs can be adversely affected at times when a misalignment occurs between the allocations of congestion rights (i.e., ARRs) and congestion charges paid by load. PJM further explains that the equity-focused principles of its proposal are intended to: (1) preserve the existing point-to-point construct; (2) strengthen assurance of load's priority rights to congestion revenues; (3) enhance alignment of allocated rights with actual congestion costs; (4) advance flexibility for load to claim or sell rights; and (5) help ensure value-added processes. PJM states that the efficiency-focused revisions contain features intended to advance the efficiencies of the FTR auctions and include changes to enhance market liquidity and future price discovery, both of which add value and contribute to a robust, competitive market.

6. PJM states that it is proposing revisions to expand the source/sink combinations permitted in the ARR allocation process.¹⁹ PJM explains that the revisions provide that source buses for ARRs requested during Stage 1B of the ARR allocation process may include valid zones, hubs, and external interface pricing points in addition to the existing active historical resources and qualified replacement resources. Additionally, PJM states that under the revisions, in Stage 2 of the ARR allocation process, source and sink buses are expanded to include valid zones, generators, hubs and external interface pricing points instead of the existing mechanism that only allows source buses to include generators and sink buses at the location of customer load.

7. PJM states that these revisions help prioritize directing congestion revenues to load and enhance alignment of ARRs to congestion paid through congestion LMP billing.²⁰ PJM explains that allowing expanded source-sink combinations in the ARR allocation process will help prioritize directing congestion revenues to load by providing load the first rights to the transmission system before FTR holders can purchase such rights.²¹ PJM states that this aligns with the core purpose of ARRs and FTRs as tools for load to hedge against the costs of day-ahead transmission congestion.²² PJM also proposes to streamline the ARR allocation process by reducing the number of rounds of

¹⁹ *Id.* at 7.

²⁰ *Id.* at 6.

²¹ *Id.* at 7-8.

²² *Id.* at 8.

ARR allocations from three to two.²³ PJM states that this change is intended to offset the increased burden of administering a more flexible source/sink standard.²⁴

8. PJM proposes revisions to Operating Agreement, Schedule 1, sections 5.2.2, 7.4.2, 7.5, and 7.6 governing the creation of Stage 1 ARR to replace the concept of Zonal Base Load²⁵ with a standard of 60% of network service peak load.²⁶ PJM explains that the new Stage 1 ARR 60% load standard increases up-front capability to load and reduces excess congestion and auction revenue allocation equity concerns.²⁷ PJM states that during its stakeholder process, it considered five different percentages of network service peak load as the load standard: 50%, 60%, 70%, 80%, and 90%.²⁸ PJM explains that it selected 60% as a reasonable limit at which additional value could be guaranteed without significantly increasing Stage 1A violations or producing additional transmission constraints.²⁹ PJM further explains that, based on its studies, a 60% standard produced relatively few additional Stage 1A violations and additional transmission constraints as compared to higher percentage standards and only slightly more of both compared to a lower 50% standard, while increasing Stage 1A MW awards for all zones.³⁰ PJM concludes that increasing to 60% of network service peak load ratio-share provides an equitable balance between using existing, valuable headroom on the system but not significantly contributing to an over-allocation of ARRs.³¹ PJM states that it plans to use the proposed 60% threshold in its 10-year feasibility study of Stage 1A ARRs.³²

²³ *Id.* (citing *Proposed Operating Agreement*, Schedule 1, § 7.4.2(d); *Proposed Tariff*, attach. K, app., § 7.4.2(d)).

²⁴ *Id.*

²⁵ PJM proposes to delete the definition of Zonal Base Load.

²⁶ Transmittal at 6, 8.

²⁷ *Id.* at 8.

²⁸ *Id.*

²⁹ *Id.* at 8-9.

³⁰ *Id.* at 9.

³¹ *Id.*

³² *Id.* (citing *Proposed Operating Agreement*, Schedule 1, § 7.5(c), (d) & (e); *Proposed Tariff*, attach. K, app. § 7.5(c), (d) & (e)).

9. PJM proposes revisions to Operating Agreement, Schedule 1, section 7.1.1 to provide additional self-scheduling options for ARR holders.³³ PJM states that the additional options are in the form of additional types of FTR products into which ARR holders may self-schedule their ARRs, beyond the current singular 24-hour product option.³⁴ PJM asserts that with this change it is providing ARR holders with a more diverse set of tools to hedge against congestion costs.³⁵

10. PJM also proposes revisions to Operating Agreement, Schedule 1, section 7.8 to ensure source/sink combinations are limited to valid Stage 1 ARR paths for the customer funded Incremental ARR (IARR) option to ensure that new IARRs create value by enhancing market efficiency on valid, useful paths.³⁶ PJM states that IARRs are available to customers that fund or construct physical transmission upgrades that provide incremental transfer capability to the transmission network.³⁷ PJM explains that there are currently opportunities for customers to request IARRs which provide revenues to the customer with minimal or no investment or improvement to the transmission system.³⁸ PJM states that requiring that IARRs are limited to valid Stage 1 ARR paths ensures that requests are only made where the IARRs add meaningful transfer capability to the system and eliminates the potential for awarded IARRs that do not provide such value.³⁹

11. PJM proposes revisions to Operating Agreement, Schedule 1, sections 7.1.1, 7.1A.3 and 7.3.4 to create new FTR class types to provide for on-peak weekday, on-peak weekend and holiday, general everyday off-peak, and 24-hour products to increase hedging flexibility for market participants.⁴⁰ PJM argues that the increase in options from the status quo, which only provides three products (on-peak, off-peak, and 24-hour),

³³ *Id.* at 6.

³⁴ *Id.* at 9.

³⁵ *Id.*

³⁶ *Id.* at 6.

³⁷ *Id.* at 9.

³⁸ *Id.* at 10.

³⁹ *Id.* at 9-10.

⁴⁰ *Id.* at 6. In addition to proposing parallel provisions in Tariff, Attachment K-Appendix for each proposed revision to its Operating Agreement, PJM also proposes revisions to Tariff, attach. Q, § VI.C.2 to reflect the proposed additional FTR class types. *Id.* at 11.

will provide more hedging opportunities to support the evolving industry resource mix, including renewables.⁴¹

12. PJM proposes revisions to Operating Agreement, Schedule 1, section 7.3.6 to create a floor for clearing prices for FTR options, specifically providing that FTR options with a market-clearing price of less than one dollar will not be awarded.⁴² PJM states that the one dollar price floor will ensure that all FTR options that clear have actual value when they are awarded and do not provide the opportunity for a risk free profit to market participants.⁴³ PJM explains that the price floor represents a compromise with stakeholders after analysis of prior auctions revealed an average of approximately 4,500 MW of FTR options per Planning Period cleared at a price of less than one dollar.⁴⁴

13. PJM seeks waiver of the prior notice requirements to allow effective dates more than 120 days after the date of filing, specifically, effective dates of September 1, 2022 for the proposed FTR⁴⁵ revisions, and February 1, 2023 for the proposed ARR⁴⁶ revisions.⁴⁷ PJM contends that these dates will give market participants adequate notice and lead time to prepare for the implementation of the revisions and that those are the earliest dates that the respective revisions can be implemented efficiently and effectively in the PJM market construct.⁴⁸

III. Notice of Filing and Responsive Pleadings

14. Notice of PJM's filing in Docket No. ER22-979-000 was published in the *Federal Register*, 87 Fed. Reg. 2427 (Jan. 14, 2022) with interventions and protests due on or

⁴¹ *Id.* at 10.

⁴² *Id.* at 7.

⁴³ *Id.* at 11.

⁴⁴ *Id.*

⁴⁵ See *proposed* Tariff, attach. K, app., §§ 7.1, 7.1A & 7.3; *proposed* Tariff, Attachment Q; *proposed* Operating Agreement, Schedule 1, §§ 7.1, 7.1A & 7.3.

⁴⁶ See *proposed* Tariff, attach. K, app. §§ 5.2, 7.4, 7.5, 7.6, & 7.8; *proposed* Tariff, Definitions - W-X-Y-Z; *proposed* Operating Agreement, Schedule 1, §§ 5.2, 7.4, 7.5, 7.6 & 7.8; *proposed* Operating Agreement, Definitions U-Z.

⁴⁷ Transmittal at 11.

⁴⁸ *Id.* at 11-12.

before January 31, 2022. The following parties filed timely motions to intervene without protests or comments: Calpine Corporation; Vistra Corp. and Dynegy Marketing and Trade, LLC; American Electric Power Service Corporation (AEP);⁴⁹ Rockland Electric Company; Elliot Bay Energy Trading LLC; EDF Trading North America, LLC and EDF Energy Services, LLC; Financial Marketers Coalition; SESCO Enterprises, LLC; American Municipal Power, Inc.; Boston Energy Trading and Marketing, LLC; Shell Energy North American (U.S.), L.P.; North Carolina Electric Membership Corporation; Exelon Corporation and Exelon Generation Company, LLC; NextEra Energy Marketing, LLC; DC Energy LLC; Old Dominion Electric Cooperative; Energy Trading Institute (ETI); Appian Way Energy Partners (Appian Way); Vitol Inc. (Vitol); Monitoring Analytics LLC, acting in its capacity as the Independent Market Monitor for PJM (IMM); Dominion Energy Services, Inc. (Dominion); Office of the People's Counsel for the District of Columbia; Delaware Division of the Public Advocate; Maryland Office of People's Counsel; New Jersey Division of Rate Counsel; and PJM Industrial Customer Coalition.⁵⁰

15. Indicated Industry Coalition,⁵¹ ETI, Appian Way, and Vitol filed timely supporting comments.

16. The IMM, Dominion, and Joint Consumer Advocates⁵² filed timely protests.

⁴⁹ AEP moves to intervene on behalf of Appalachian Power Company, Indiana Michigan Power Company, Kentucky Power Company, Kingsport Power Company, Ohio Power Company, Wheeling Power Company, AEP Appalachian Transmission Company, Inc., AEP Indiana Michigan Transmission Company, Inc., AEP Kentucky Transmission Company, Inc., AEP Ohio Transmission Company, Inc., and AEP West Virginia Transmission Company, Inc.

⁵⁰ Dominion moves to intervene on behalf of Virginia Electric and Power Company d/b/a Dominion Energy Virginia.

⁵¹ Indicated Industry Coalition includes Exelon Corporation and Exelon Generation Company, LLC, NextEra Energy Marketing, LLC, DC Energy LLC, and Old Dominion Electric Cooperative.

⁵² Joint Consumer Advocates include the Office of the People's Counsel for the District of Columbia, Citizens Utility Board, Delaware Division of the Public Advocate, Maryland Office of People's Counsel, New Jersey Division of Rate Counsel, Pennsylvania Office of Consumer Advocate, and the PJM Industrial Customer Coalition. Citizens Utility Board and Pennsylvania Office of Consumer Advocate did not file motions to intervene.

17. Southern Maryland Electric Cooperative, Inc. (SMECO) filed an out-of-time motion to intervene.

18. The IMM, Appian Way, and PJM submitted answers. The IMM submitted a second answer.

A. Comments

19. The Indicated Industry Coalition, ETI, Appian Way and Vitol state that they support PJM's proposal. The Indicated Industry Coalition explains that PJM's proposal appropriately maintains the existing FTR/ARR path-based construct, which fulfilled its intended purpose and saves customers millions of dollars, as determined in the LEI Report.⁵³ Vitol states that it supports PJM's proposal as further strengthening PJM's FTR/ARR market design and benefiting stakeholder and commercial interests.⁵⁴ Vitol also states that PJM's proposal will increase the equity and efficiency of the FTR/ARR market and will better facilitate investment in renewable intermittent generation to meet decarbonization goals.⁵⁵

20. Vitol explains that, as LEI's Report found, the FTR/ARR market is a foundational component to the overall PJM market design, bolsters the liquidity of other related forward markets, and meaningfully assists with price discovery and market design.⁵⁶ Vitol further explains that PJM's FTR auction model optimizes the value of the entire grid to maximize revenues to ARR holders.⁵⁷ Additionally, ETI states that LSEs use the ARR process for important congestion management by converting ARRs to revenue, converting ARRs to FTRs, or using ARR revenue to offset FTR purchases.⁵⁸

⁵³ Indicated Industry Coalition Comments at 7.

⁵⁴ Vitol Comments at 1.

⁵⁵ *Id.* at 1-2.

⁵⁶ *Id.* at 6.

⁵⁷ *Id.* at 7 (citing PJM Interconnection, Brian Chmielewski, "FTR Market Fundamentals," at p. 37 (May 2, 2019), <https://www.pjm.com/-/media/committees-groups/committees/mrc/20190502-special/20190502-item-04-pjm-arr-ftm-market-overview.ashx> (explaining that PJM's FTR market is "[f]undamentally an optimization problem" with an objective function to "[m]aximize bid-based revenue to (i.e., revenue to ARR holders)" ... subject to transmission constraints)).

⁵⁸ ETI Comments at 13.

21. Commenters explain that the Commission should reject alternative proposals seeking to replace the existing FTR/ARR construct.⁵⁹ For example, ETI notes that stakeholders rejected an alternative proposal by the IMM, as discussed further below, because that proposal misunderstood the purpose of the FTR/ARR market design and the commercial usage of the products.⁶⁰ Appian Way explains that the IMM proposal would devalue the congestion hedging product for LSEs and would result in congestion entitlement that could not be monetized, traded, or priced easily.⁶¹ Speaking to the IMM's alternative proposal, Vitol states that while it is possible to replace the FTR/ARR construct with a mechanism that would permit a full return of congestion revenues to load, such as establishing the value of paths after the settlement of day-ahead and real-time energy markets, it would do so at the expense of market efficiency and liquidity.⁶² Vitol also states that any such proposal is contrary to Commission precedent. Vitol asserts that such proposals assume that new bilateral markets will form to replace the FTR market, but it is not clear what other markets are available to effectively manage risk related to congestion in PJM.⁶³

22. ETI states that the IMM incorrectly concludes that all congestion paid by load should be returned to load and "leakage" occurs when any congestion is not captured by load participants, which must be corrected.⁶⁴ ETI argues this perspective ignores the risks taken by non-load participants when they pay for FTRs, which they do through competitive market prices. ETI explains that non-load participants can purchase FTRs in the auction, but in the auction they compete with load serving entities that may or may not have ARRs. ETI explains that congestion purchased by non-load participants is based on willingness to pay, reflecting risks they have taken, and is not an economic loss.

23. ETI, Appian Way, and Vitol state that they support the proposed FTR class types because it will improve the granularity of FTR products and allow market participants to

⁵⁹ Indicated Industry Coalition at 7; Appian Way Comments at 3; Vitol Comments at 15.

⁶⁰ ETI Comments at 5.

⁶¹ Appian Way Comments at 15-16.

⁶² Vitol Comments at 14.

⁶³ *Id.* at 15.

⁶⁴ ETI Comments at 16-17.

hedge with more time periods.⁶⁵ ETI, Appian Way, and Vitol explain that the additional granularity in FTR products will permit renewable generation to achieve more efficient hedges, such as solar operators and developers using the proposed weekend on-peak FTR plus weekday on-peak FTRs as a more appropriate day-time hedge without having to pay for unnecessary overnight hours.⁶⁶ Vitol also explains that the improved hedging capability will help mitigate material risks that confront renewable intermittent generation assets like wind and solar.⁶⁷ Vitol states that the additional granularity will also create better price discovery of the actual congestion costs which should lower the financing costs of future projects.⁶⁸ Additionally, ETI states that the proposed FTR class types meet Order No. 2000 goals as a “workable market approach [of] clear and established tradable rights for transmission usage ... to hedge locational differences in energy prices,” and, consistent with Order No. 681, provides more granularity for FTR settlement with short and long term contracts that can hedge LMP differences and congestion.⁶⁹

24. ETI states that PJM’s proposed additional ARR source/sink combinations and modifications to Stage 1 ARR allocation are two changes that support the goal to allocate the majority of system capability to ARR holders.⁷⁰ ETI states that the LEI Report explained that the additional ARR source/sink combinations provide load with rights to the transmission system before FTR holders through more sources and sinks for more accurate allocation. ETI states that the Stage 1 modifications will provide additional up-front load hedging capability, reduce excess congestion, and mitigate against the overallocation of ARRs.⁷¹ Similarly, Vitol states that PJM’s proposed ARR enhancements represent significant improvement to equity standing for load members, provide greater flexibility and hedging capability, and afford better competitive

⁶⁵ Vitol Comments at 10; ETI Comments at 10-11; Appian Way Comments at 12-13.

⁶⁶ Vitol Comments at 10; ETI Comments at 10-11; Appian Way Comments at 12-13.

⁶⁷ Vitol Comments at 11.

⁶⁸ *Id.* at 11.

⁶⁹ ETI Comments at 10-11 (citing *Regional Transmission Organizations*, Order No. 2000, 89 FERC ¶ 61,285, at P 333 (1999)).

⁷⁰ *Id.* at 11-12.

⁷¹ *Id.* at 12.

outcomes.⁷² Vitol explains that these types of improvements to the ARR design and PJM's overall market design should continually be considered by power pools as liquidity enhancing efforts that are critical to deriving competitive commercial benefits in serving load.

B. Protests

25. Joint Consumer Advocates state that they support PJM's proposal, but assert that it does not go far enough in some respects.⁷³ Joint Consumer Advocates acknowledge that PJM's filing contains several revisions to the existing FTR/ARR market construct that are necessary elements to enhancing the overall equity and efficiency of the market and that they will: (1) improve the allocation of ARRs; (2) enhance load's property rights through additional flexibility in self-scheduling and source/sink combinations; (3) benefit ratepayers by reducing the potential for unjust profiteering; and (4) help enable a cost-efficient clean energy transition.⁷⁴ However, Joint Consumer Advocates argue that while a more direct alignment of congestion revenues and costs—and thus smaller surplus congestion revenues—is undoubtedly a step towards a more efficient and equitable FTR/ARR market, such a change does nothing to address those situations where surplus congestion or auction revenues do occur and should be returned to the load that paid for the transmission upgrades that made those surplus revenues possible.⁷⁵ Joint Consumer Advocates assert that leaving the surplus component unchanged should not be accepted as just and reasonable.⁷⁶ Joint Consumer Advocates further assert that the filing should be rejected without prejudice to PJM filing a new proposal that includes provisions that address surplus congestion and auction revenues.⁷⁷

26. Similarly, Dominion expresses some support for PJM's proposal but contends that PJM's revisions do not go far enough to address the under-allocation of congestion revenues for load and the inability of certain LSEs to come close to covering their congestion costs.⁷⁸ Dominion argues that the current FTR/ARR construct persistently

⁷² Vitol Comments at 9-10.

⁷³ Dominion Protest at 3; Joint Consumer Advocates Protest at 8.

⁷⁴ Joint Consumer Advocates Protest at 8-9.

⁷⁵ *Id.* at 11.

⁷⁶ *Id.* at 13.

⁷⁷ *Id.* at 16-17.

⁷⁸ Dominion Protest at 3.

creates results where the congestion cost recovery by LSEs varies greatly, with some LSEs over-recovering and other LSEs under-recovering in an unduly discriminatory manner.⁷⁹ Dominion argues that, at a minimum, the inter-LSE equity issues cannot be ignored.⁸⁰ Dominion asserts that PJM's filing does little to address these disparate outcomes and that certain provision may even exacerbate the current inequalities.⁸¹ Dominion elaborates that while the proposal to allocate a flat 60% of network service peak load in Stage 1A may enhance the ability of LSEs to offset their congestion costs, the proposal applies to all LSEs with no adjustment based on whether an LSE is over-recovering or under-recovering.⁸² Dominion concludes that the current allocation of congestion revenues amongst LSEs and the inability to consistently provide a consistent level of offsets to LSEs for congestion charges makes the current market unjust and unreasonable.⁸³

27. Dominion further alleges that the solution could simply require prioritizing allocation of surplus congestion and FTR auction revenues first to LSEs that have not fully offset congestion costs. Dominion requests that the Commission either reject the filing and direct additional proceedings to address inter-LSE equity issues or accept the filing while instituting further proceedings to address inter-LSE inequities found in PJM's FTR/ARR construct.⁸⁴

28. The IMM recommends that the Commission reject PJM's filing and institute an FPA section 206 investigation into whether the PJM FTR/ARR market design is just and reasonable.⁸⁵ The IMM alleges that PJM's filing perpetuates or worsens fundamental flaws in the existing PJM FTR/ARR market. The IMM contends that PJM's current FTR/ARR design has consistently failed to return the congestion revenues to the load that paid it.⁸⁶ The IMM contends that the congestion rights defined in the market are flawed and incomplete and that a market based on flawed and incomplete rights cannot provide

⁷⁹ *Id.* at 6.

⁸⁰ *Id.* at 7.

⁸¹ *Id.* at 6-7.

⁸² *Id.* at 7.

⁸³ *Id.*

⁸⁴ *Id.* at 7-8.

⁸⁵ IMM Protest at 1-2.

⁸⁶ *Id.* at 4.

an efficient market signal.⁸⁷ The IMM argues that the total congestion offset paid to load is inequitable and varies by zone, with some zones receiving more in offsets than their total congestion payments and other zones receiving less in offsets than their total congestion payments.⁸⁸ The IMM asserts that the offsets are a function of the assignment of ARRs and the valuation of ARRs in the FTR auctions.⁸⁹ The IMM alleges that arbitrarily expanding or modifying the path-based rights available to load and the market will simply change the arbitrary allocation of congestion among ARR holders and participants in the FTR market and will not correct the arbitrary allocation of congestion.⁹⁰

29. The IMM argues that the proposed changes to Stage 1A ARR allocations will not improve the assignment of congestion property rights to load, and PJM's proposed revision will exacerbate the current misalignment.⁹¹ The IMM explains that PJM's filing proposes to increase Stage 1A MW allocation on paths that are inconsistent with actual network service and the sources of actual congestion paid by load. The IMM asserts that this proposed change will increase Stage 1A MW allocations, but that these increases are arbitrary, and are not related to relative over- or under-collection of congestion from allocated rights relative to actual congestion paid.

30. Additionally, the IMM notes that the issue with the efficiency of the FTR market is not the number of FTR products available, but that the congestion rights defined in the market are flawed and incomplete.⁹² The IMM also notes that a price floor for FTR options, as proposed by PJM, is a band-aid and not a fix for the underlying problem.

C. Answers

31. The IMM submitted an answer responding to Appian Way and Vitol, primarily reiterating arguments from its protest. The IMM also asserts that, contrary to Appian Way and the LEI Report, load is not better off under the current system because over approximately the last 10 years load paid \$2.7 billion more in congestion than what load

⁸⁷ *Id.* at 13.

⁸⁸ *Id.* at 4.

⁸⁹ *Id.* at 4-5.

⁹⁰ *Id.* at 5-6.

⁹¹ *Id.* at 6-8.

⁹² *Id.* at 13.

received back as an offset.⁹³ The IMM claims that the \$2.7 billion in congestion revenues that load does not receive is not leakage but a subsidy from load to other market participants.

32. Appian Way explains that PJM must take the surplus allocation into account when determining the amount of transfer capability available to support ARR in the ARR allocation process.⁹⁴ Appian Way further explains that changing the surplus allocation rules to give loads the surplus as recommended by Joint Consumer Advocates would result in loads having fewer ARRs allocated at the outset. Appian Way explains that PJM's existing ARR allocation process allows for ARRs to more easily align with specific commercial hedging arrangements associated with sources of supply, to be more easily valued on a forward basis and monetized, and imbues commercial and risk management value for LSEs, providing greater commercial flexibility.⁹⁵ Appian Way argues that PJM's method of allocating transmission rights when a new utility joins PJM based on that utility's network is the fairest business solution.⁹⁶

33. PJM submitted an answer to explain that the protests predominantly challenge existing elements of PJM's Commission-approved FTR/ARR construct, and do not demonstrate that any element of the proposed revisions are anything other than just and reasonable.⁹⁷ PJM states that the Commission has examined PJM's FTR/ARR construct and found it to be a just and reasonable feature of PJM's organized market. PJM states that "although significant congestion and auction revenues are returned to load, the [p]rotestors object that some such congestion and revenues go to other market participants."⁹⁸ PJM also states that the protestors voice concerns that "the proportion of congestion and auction revenues that is returned to load is not uniform across the load zones of PJM."⁹⁹ PJM states that these are both characteristics of the FTR/ARR market construct that predate and are unrelated to the proposed revisions. PJM further states that

⁹³ IMM Answer at 2-4.

⁹⁴ Appian Way Answer at 4.

⁹⁵ *Id.* at 5.

⁹⁶ *Id.* at 6.

⁹⁷ PJM Answer at 2.

⁹⁸ *Id.*

⁹⁹ *Id.* at 2-3.

Commission has previously rejected similar critiques of the FTR/ARR construct.¹⁰⁰ PJM asserts that protestors preference for an FTR/ARR market approach that allocates more congestion and auction revenues to load and allocates such congestion and auction revenues differently among load does not render PJM's proposal unjust and unreasonable.

34. In its second answer, the IMM responds to Appian Way's answer and reiterates its previous arguments.

IV. Discussion

A. Procedural Matters

35. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2021), the timely, unopposed motions to intervene serve to make the entities that filed them parties to the proceeding.

36. Pursuant to Rule 214(d) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214(d), we grant SMECO's late-filed motion to intervene given its interest in the proceeding, the early stage of the proceeding, and the absence of undue prejudice or delay.

37. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2021), prohibits an answer to a protest or answer unless otherwise ordered by the decisional authority. We accept the IMM's, Appian Way's, and PJM's answers because they have provided information that assisted us in our decision-making process.

B. Substantive Matters

38. We accept PJM's proposed Tariff revisions, effective September 1, 2022, for the proposed FTR revisions, and February 1, 2023, for the proposed ARR revisions. We find that PJM's proposal is just and reasonable because it enhances hedging opportunities for load and helps enhance market liquidity and future price discovery.

39. As noted above, PJM hired LEI to conduct a detailed, third-party review of the FTR/ARR market to determine whether PJM's ARR allocation process and FTR auctions appropriately ensure that load is adequately compensated for the value provided to the transmission system. The LEI Report found that PJM's FTR/ARR market design is achieving its dual purposes of facilitating the return of congestion charges to load and enabling hedging and supporting forward market activity, and overall is "creating overall

¹⁰⁰ *Id.* at 3.

positive value for load.”¹⁰¹ However, the LEI Report outlined potential enhancements to PJM’s FTR/ARR market design, focused on the themes of equity, efficiency, and transparency, which PJM reflected in the instant proposal.

40. First, we find that PJM’s proposed enhancements to the ARR market construct are just and reasonable. PJM’s proposal to expand the source/sink combinations permitted in Stage 1B and Stage 2 of the ARR allocation process provides load the first rights to the transmission system before FTR holders can purchase such rights, and therefore, increases the network capacity allocated to load. While not the sole purpose, one of the purposes of the FTR/ARR market is to return congestion charges to load and this proposed change is consistent with that purpose. Similarly, PJM’s proposal to modify Stage 1A ARRs to replace the concept of Zonal Base Load with a standard of 60% of network service peak load protects zonal native load hedging ability by increasing up-front capability to load. During the stakeholder process, PJM presented analyses that studied five different percentages – 50%, 60%, 70%, 80%, and 90%. PJM selected 60% as a reasonable limit at which additional value could be guaranteed without significantly increasing Stage 1A violations or producing additional transmission constraints.¹⁰² We agree with PJM that the 60% of network service peak load ratio share provides an equitable balance between utilizing existing, valuable headroom on the system while not significantly contributing to an over-allocation of ARRs. Further, we agree with PJM that its proposal to reduce the number of rounds of ARR allocations from three to two is a reasonable means of streamlining the process. In addition, we find that PJM’s proposal to provide additional types of FTR products into which ARR holders may self-schedule their ARRs adds flexibility to more efficiently hedge congestion. Further, we find that PJM’s proposal to ensure that source/sink combinations are limited to valid Stage 1 ARR paths for customer-funded IARRs closes an existing loophole in which a customer could otherwise obtain a potentially valuable IARR path with little to no physical transmission network investment or improvement to the transmission system.

41. Second, we find that PJM’s proposed enhancements to the FTR market construct are just and reasonable. We find that PJM’s proposal to not award FTR options with a market-clearing price of less than one dollar mitigates risk-free profit by ensuring all FTR options that clear have, at least at the time they were bid and awarded, actual value. We

¹⁰¹ LEI Report at 19.

¹⁰² PJM explains that a 60% standard produced relatively few additional Stage 1A violations and relatively few additional transmission constraints as compared to higher percentage standards and only slightly more of both as compared to a lower 50% standard, all while providing additional value by increasing Stage 1A MW awards for all zones. Transmittal at 9.

also find that PJM's proposal to create new FTR class types provides more flexible hedging opportunities.

42. We agree with supporting comments that these enhancements to PJM's FTR/ARR market design collectively provide market participants with additional hedging capability as compared with the current tariff, allowing for congestion to be hedged more granularly, mitigate the risks to developing resources, reducing excess congestion, and mitigating against the risk of overallocation of ARRs. Therefore, we find that PJM's proposal is in line with the multipurpose design of PJM's FTR/ARR market.

43. Protesters challenge how congestion surplus is allocated and the fundamental nature of a path-based FTR/ARR construct. Nothing in PJM's filing proposes to change how congestion surplus is allocated or the path-based FTR/ARR construct. For example, the IMM raises issues with the equity of the current FTR/ARR path-based market design. Joint Consumer Advocates argue that because PJM's filing leaves the allocation of congestion surplus unchanged, it should not be accepted as just and reasonable. Similarly, Dominion argues that allocation of surplus congestion and FTR auction revenues should be prioritized first to LSEs that have not fully offset congestion costs. We find that these concerns regarding provisions of the existing FTR/ARR market construct, which are not revised by the instant proposal, are outside the scope of this proceeding.

44. Turning to the IMM's argument that PJM's proposal is unjust and unreasonable because the revisions do not return "sufficient" congestion revenue to load, we reject the IMM's foundational argument that the sole purpose of FTRs is to return congestion revenue to load and the market should therefore be redesigned to accomplish that purpose.¹⁰³ PJM's proposal returns more congestion revenue to load without significantly contributing to an overallocation of ARRs in Stage 1A. PJM's proposal is not rendered unjust and unreasonable simply because the IMM thinks a further allocation to load would be desirable.¹⁰⁴ Consistent with Commission precedent, we reiterate that

¹⁰³ IMM Protest at 4. The Commission also rejected this argument in *PJM Interconnection L.L.C.*, 158 FERC ¶ 61,093, at P 27 (2017).

¹⁰⁴ The IMM does not claim that load "will be worse off" if the Commission were to accept PJM's proposal, but that load will be worse off than if the Commission were to act under section 206 to make additional reforms to the FTR construct. IMM Protest at 1-2. See *Alabama Mun. Distributors Grp. v. FERC*, 312 F.3d 470, 472 (D.C. Cir. 2002) (dismissing appeal for lack of standing when the Commission approved a certificate reducing appellants' rates); *JMC Power Projects v. FERC*, 116 F.3d 941 (D.C. Cir. 1997) ("If, as petitioner asserts, a new schedule reflecting a rate decrease is evidence that

“[t]he purpose of FTRs to serve as a congestion hedge has been well established.”¹⁰⁵ FTRs were designed to serve as the financial equivalent of firm transmission service and play a key role in ensuring open access to firm transmission service by providing a congestion-hedging function.¹⁰⁶

45. Further, focusing solely on the amount of congestion revenues returned to load, as the IMM does, ignores a number of important benefits provided by the path-based paradigm. For example, the path-based nature of the design allows market participants to hedge exposure to locational price differences between the location of their forward contract, self-supply or bilaterally contracted supply, and the location of their load obligations. In other words, the market design allows participants to match their hedge to the price risk based on how the load is served.¹⁰⁷ In addition, the market design provides load with the option to maintain its allocated ARRs, to self-schedule them as FTRs, or a combination of both, which gives load the flexibility to act as it sees fit. These options can be monetized, are tradable, and are priced. Additionally, profitable trading opportunities increase liquidity and competition, which enhances price discovery and provides additional congestion-hedging opportunities. An alternative design that assigns 100% of congestion revenue to load, as contemplated by the IMM, may not provide these same benefits.

46. Lastly, we address the IMM’s and Dominion’s arguments that under both the current market construct and under PJM’s proposal, there are equity concerns where some LSEs will over-recover their congestion while others will under-recover. The IMM and Dominion claim that PJM’s proposal may exacerbate such concerns due to PJM’s proposed change to the Stage 1A ARR allocation. Dominion adds that, while the proposal to allocate a flat 60% of network service peak load in Stage 1A may enhance the ability of LSEs to offset their congestion costs, the proposal applies to all LSEs, with no adjustment based on whether an LSE is over-recovering or under-recovering. However, we agree with PJM that this argument challenges existing elements of PJM’s Commission-approved FTR/ARR market construct. To the extent this argument pertains

existing rates are unjust or unreasonable, then section 5 provides a procedure for challenging the delayed implementation of a lower-rate schedule.”).

¹⁰⁵ *PJM Interconnection, L.L.C.*, 158 FERC ¶ 61,093 at P 27.

¹⁰⁶ *Id.*; see also LEI Report at 5.

¹⁰⁷ PJM FTR Market Review Whitepaper at 2-3 (April 2020), <https://www.pjm.com/-/media/library/reports-notice/special-reports/2020/fttr-market-review-whitepaper.ashx>. PJM’s analysis shows that historically roughly 75% of load is served through either self-supply or bilateral contracts which rely on point-to-point definitions.

to existing elements of PJM's FTR/ARR market construct that are not being changed in PJM's proposal, we find that this argument is beyond the scope of this proceeding. Further, we are unpersuaded by the IMM's and Dominion's assertions that the change to the Stage 1A allocation will necessarily exacerbate differences in the amount of congestion costs recovered between LSEs. Each LSE's recovery of their congestion will vary year-on-year because of each LSE's decisions and the varying amount of congestion that the system experiences annually. While the IMM applies PJM's proposed changes to Stage 1A to several historical data sets, we find this analysis does not necessarily provide an accurate indicator of future results given the multitude of factors that ultimately determine the congestion costs recovered by each LSE. In addition, contrary to what the IMM and Dominion allege, we find that the 60% network service peak load change for Stage 1A ARR allocation could increase the efficiency of the ARR allocations for all zones while inhibiting overallocations because available transmission capability that is currently unallocated will be allocated without causing a significant increase in violations.

47. We recognize that protesters in this docket have raised a number of concerns, some of which exceeded the scope of this proceeding. We encourage PJM to explore these concerns with its stakeholders by engaging on these issues and to pursue any necessary improvements.

The Commission orders:

PJM's proposed tariff revisions are hereby accepted, effective as of the dates requested as listed on the attached Appendix, as discussed in the body of this order.

By the Commission.

(S E A L)

Debbie-Anne A. Reese,
Deputy Secretary.

Appendix

Tariff Records Accepted PJM Interconnection, L.L.C. Intra-PJM Tariffs

Tariff Records Accepted Effective March 11, 2022

[OATT ATT K APPX K Sec 7, OATT ATTACHMENT K APPENDIX SECTION 7 - FINANCIAL TRANSMISSION \(1.0.0\)](#)

Tariff Records Accepted Effective September 1, 2022

[OATT ATT K APPX Sec 7.1, OATT Attachment K Appendix Sec 7.1 Auctions of Financial \(5.0.0\)](#)

[OATT ATT K APPX Sec 7.1A, OATT Attachment K Appendix Sec 7.1A Long-Term Financial Tran \(9.0.0\)](#)

[OATT ATT K APPX Sec 7.3, OATT Attachment K Appendix Sec 7.3 Auction Procedures \(13.0.0\)](#)

[ATTACHMENT Q, OATT ATTACHMENT Q \(47.0.0\)](#)

[OA Schedule 1 Sec 7.1, OA Schedule 1 Sec 7.1 Auctions of Financial Transmission Ri \(5.0.0\)](#)

[OA Schedule 1 Sec 7.1A, OA Schedule 1 Sec 7.1A Long-Term Financial Transmission Righ \(8.0.0\)](#)

[OA Schedule 1 Sec 7.3, OA Schedule 1 Sec 7.3 Auction Procedures \(13.0.0\)](#)

Tariff Records Accepted Effective February 1, 2023

[W-X-Y-Z, OATT Definitions - W - X - Y - Z \(8.0.0\)](#)

[OATT ATT K APPX Sec 5.2, OATT Attachment K Appendix Sec 5.2 Transmission Congestion \(18.0.0\)](#)

[OATT Attch K Appx Sec 7.4, OATT Attachment K Appendix Sec 7.4 Allocation of Auction Re \(17.0.0\)](#)

[OATT ATT K APPX Sec 7.5, OATT Attachment K Appendix Sec 7.5 Simultaneous](#)

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[Feasibility \(4.0.0\)](#)

[OATT ATT K APPX Sec 7.6, OATT Attachment K Appendix Sec 7.6 New Stage 1 Resources \(2.0.0\)](#)

[OATT ATT K APPX Sec 7.8, OATT Attachment K Appendix Sec 7.8 Elective Upgrade Auction \(3.0.0\)](#)

[U-Z, OA Definitions U - Z \(6.0.0\)](#)

[OA Schedule 1 Sec 5.2, OA Schedule 1 Sec 5.2 Transmission Congestion Credit Cal \(18.0.0\)](#)

[OA Schedule 1 Sec 7.4, OA Schedule 1 Sec 7.4 Allocation of Auction Revenues. \(17.0.0\)](#)

[OA Schedule 1 Sec 7.5, OA Schedule 1 Sec 7.5 Simultaneous Feasibility \(4.0.0\)](#)

[OA Schedule 1 Sec 7.6, OA Schedule 1 Sec 7.6 New Stage 1 Resources. \(2.0.0\)](#)

[OA Schedule 1 Sec 7.8, OA Schedule 1 Sec 7.8 Elective Upgrade Auction Revenue Right \(3.0.0\)](#)

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