UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

PJM Interconnection, L.L.C.	)	Docket No. ER22-797-000

ANSWER AND MOTION FOR LEAVE TO ANSWER OF THE INDEPENDENT MARKET MONITOR FOR PJM

Pursuant to Rules 212 and 213 of the Commission's Rules and Regulations,[1] Monitoring Analytics, LLC, acting in its capacity as the Independent Market Monitor ("Market Monitor") for PJM Interconnection, L.L.C. ("PJM"), submits this answer to the answer filed February 18, 2022, by Appian Way ("Appian Way") and to the answer of PJM filed February 18, 2022. This proceeding concerns PJM's filing on January 10, 2022 ("January 10th Filing"), that seeks to implement several recommendations identified in a recent review of PJM's Auction Revenue Right ("ARR") and Financial Transmission Right ("FTR") market rules by London Economics International LLC ("LEI") and what PJM describes as certain complementary revisions.

Appian Way's answer includes numerous assertions that have no basis in the facts about congestion revenues. This answer should be accepted because it corrects potential confusion in the record and facilitates the decision making process.

The Market Monitor continues to recommend that the Commission reject the January 10th Filing. The January 10th Filing would continue the fundamental flaws in the existing PJM ARR/FTR market and in some cases make them worse. The PJM ARR/FTR design continues to require comprehensive reform. The Market Monitor recommends that

[1] 18 CFR §§ 385.212 & 385.213 (2021).

the Commission institute a proceeding to investigate, under Section 206 of the Federal Power Act, whether the PJM ARR/FTR market design is just and reasonable.[2] A Section 206 investigation would allow the Commission to consider multiple proposals for reform, develop its own proposal, and adopt a durable solution that results in true reform.

I. ANSWER

A. ARR Surplus and Congestion Surplus Belong to Load.

Appian Way states (at 4) that ARR and DA congestion surplus should be used to make FTRs fully funded "because this would allow more ARRs to be allocated and reduce uncertainty regarding FTR funding which could negatively impact FTR prices/ARR values." Appian Way asserts that using ARR surplus and DA congestion surplus to guarantee FTR funding makes load better off than just returning all surplus to load.

There is no basis for Appian Way's assertion and associated convoluted argument. Load is not made better off by subsidizing FTR payments from unallocated congestion and congestion rights. Appian Way holds out as a positive feature of the design that load is not paid back the full amount of congestion. Load is never better off when funds which belong to load are assigned to others.

The existence of what are euphemistically referred to as ARR and congestion surplus is simply evidence of misallocated and misdefined property rights that prevent load from claiming or directly pricing all congestion paid by load. If the auction were an actual market, there would be no such thing as ARR surplus. Sellers receive what buyers pay in a clearing market. Buyers cannot go back and demand repayment simply because things did not work out as they had hoped. The existence of congestion surplus means that target allocations are incorrectly defined and inconsistent with the actual definition of congestion. If congestion were correctly defined, there could be no congestion surplus, even in the

[2] 16 U.S.C. § 824e.

current design.[3] More generally, in a correctly designed market, there is no such thing as surplus congestion revenue. The rights to all congestion revenue belong to load. In a correctly defined market with a properly defined set of property rights there can be no surplus or shortfall congestion or auction rent.

In the current design, surplus congestion revenue should be allocated to ARR holders because such revenue is part of total congestion revenues.

With properly defined congestion property rights, all congestion is either retained by the owner (the load that paid the congestion) or sold willingly and only at a price defined by the seller (the load that paid the congestion).

B. Congestion Belongs to the Load that Paid It.

Appian Way (at 4) claims that "there are many different ways to allocate FTR auction revenues that would be just and reasonable." Appian Way (*id*.) suggests that the PJM's current ARR/FTR market design is no more or no less just and reasonable as a means of congestion right allocation than a method based on the relative size of load or transmission revenue requirement.

Appian Way's assertion (*id*.) that there are many different but equally just and reasonable ways to distribute congestion revenue back to load is wholly dependent on the incorrect and unsupported assumption that load specific contributions of congestion revenue are not known or knowable. Appian Way is wrong. The return of congestion to load is not subjective or subject to multiple correct approaches. If load is owed $300 million in a year, the only fair and equitable way to return congestion to load is to ensure that load has the rights to 100 percent of $300 million.

Congestion revenue is caused by market power flows over binding constraints that cause LMP differences between load payments and generation revenues. [4] The total amount

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[3] *See* Appendix.

[4] *See* Answer and Motion for Leave to Answer of the Independent Market Monitor for PJM, ER22-797-000 (February 15, 2022) at 9.

of congestion resulting from a binding transmission constraint is equal to the price difference caused by the constraint (the shadow price) times the market power flow on the constraint. So, if, as result of the economic dispatch of the market, 10 MW of power flows on a constraint with a shadow price of a $1, $10 of congestion revenues are collected from the load due to this constraint.

What determines how much congestion any individual load contributes based on a specific constraint is dependent on the proportion of market flow on the constraint from that individual load. This measures how much of the lower cost power is used by each load on the higher price side of the constraint. For example, if there are only two loads, with equal market flow effects on the constraint, then each load contributes 50 percent of the congestion revenue that results from that constraint.

C. The Current Allocation of Congestion Rights Is Not Just and Reasonable.

Appian Way (at 6) asserts, without evidence, that "Dominion's current allocation of ARRs is just and reasonable." Appian Way (at 6) asserts that because Dominion has congestion rights that source to historic generation sources, the current allocation of congestion rights to Dominion is just and reasonable. Appian Way (at 6) asserts that the change in property rights recommended by the Market Monitor would be unfair because it would create winners and losers.

Appian Way is incorrect. The current allocation of congestion rights based on an outdated and inaccurate path based approach in a network model is arbitrary and unreasonable because it cannot and does not calculate the actual congestion payments by load which result from the integrated operation of the PJM grid or network, using locational marginal prices (LMP).

Appian Way is correct that the result of a reasonable reform of the FTR/ARR market design would create winners and losers. Appian Way fails to note the obvious corollary, that the existing design creates winners and losers. The Market Monitor has documented the extent to which load has been a loser in the design and it is significant. Load has been underpaid by $2.7 billion from the 2011/2012 planning period through the first seven

months of the 2021/2022 planning period.[5] The goal should be to reform the FTR/ARR design so that it is consistent with the design of a locational, network market and returns congestion revenues to the load that pays the revenues rather than arbitrarily assigning the revenues to others.

In order to benefit from the competition provided by the LMP market, load needs to have the ability to recover the congestion load pays due to the difference in prices they pay for energy and the prices that the generation receive for that energy. This requires the allocation of a congestion property right to load that allows load to claim all the congestion they pay. The congestion paid by load results from the way in which the network actually prices and delivers power. The current point to point, path based ARR/FTR market is not and cannot be made consistent with the actual prices and power flows on the PJM network and therefore does not allow load to recover the congestion load pays due to the LMP market design.

Table 1 shows the share of ARR MW and auction revenue for ARRs with paths that source inside or outside the zone where the load is located and the proportion of congestion being collected by constraints inside or outside the zone for the first seven months of the 2021/2022 planning period (June 2021 through December 2021). Table 1 shows that 83.2 percent of the ARR MW and 65.0 percent of the ARR revenue are from ARRs sourced from generation inside the zone where the ARR load is located. Table 1 shows that 16.8 percent of the ARR MW and 35.0 percent of the ARR revenue are from ARRs that source from generation outside the zone where the ARR load is located. In contrast, Table 1 shows that only 18.3 percent of actual congestion paid by load is due to constraints located inside the same zone as the load that is paying that congestion. On a zone specific basis, the discrepancy between the identified source and sink points for ARR paths available to load and the location of network constraints causing load to pay congestion revenue varies

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[5] See 2021 State of the Market Report for PJM, Volume II, Section 13: Financial Transmission and Auction Revenue rights.

significantly and arbitrarily. No party has ever explained why this arbitrary pattern across zones makes sense or is reasonable. No party has explained why they think this pattern exists in their preferred design.

Table 1 illustrates one of the fundamental issues with the path based approach, which originated in a cost of service design where most load was served by generation in the same zone as load. In the PJM market, which operates as an integrated network, a significant proportion of congestion is based on constraints that are not in the same zone as load. Due to the misalignment of ARR rights and the sources of network congestion paid by load, the path based approach cannot reflect the actual congestion paid by load and path based rights cannot be used to claim all congestion paid by the load.

Table 1 ARRs MW, revenue and congestion by source point: 2021/2022 planning period

	Proportion of ARR MW by Source		Proportion of ARR Value ($) by Source		Proportion of Congestion Caused by Constraints	
Zone	Out of Zone	In Zone	Out of Zone	In Zone	External to the Zone	Internal to the Zone
ACEC	27.8%	72.2%	51.2%	48.8%	93.5%	6.5%
AEP	10.4%	89.6%	11.2%	88.8%	78.5%	21.5%
APS	10.5%	89.5%	16.1%	83.9%	96.7%	3.3%
ATSI	21.2%	78.8%	96.7%	3.3%	98.0%	2.0%
BGE	44.8%	55.2%	81.3%	18.7%	83.9%	16.1%
COMED	0.0%	100.0%	0.0%	100.0%	79.9%	20.1%
DAY	72.2%	27.8%	99.7%	0.3%	96.1%	3.9%
DOM	0.4%	99.6%	0.8%	99.2%	73.3%	26.7%
DPL	31.7%	68.3%	37.2%	62.8%	34.2%	65.8%
DUKE	29.6%	70.4%	76.0%	24.0%	91.2%	8.8%
DUQ	82.6%	17.4%	93.1%	6.9%	97.9%	2.1%
EKPC	49.5%	50.5%	88.1%	11.9%	99.9%	0.1%
EXT	100.0%	0.0%	100.0%	0.0%	92.3%	7.7%
JCPLC	18.9%	81.1%	84.7%	15.3%	100.0%	0.0%
MEC	30.3%	69.7%	41.0%	59.0%	49.7%	50.3%
OVEC	0.0%	0.0%	0.0%	0.0%	94.7%	5.3%
PE	16.9%	83.1%	38.3%	61.7%	85.1%	14.9%
PECO	10.3%	89.7%	7.1%	92.9%	75.7%	24.3%
PEPCO	22.3%	77.7%	89.6%	10.4%	96.7%	3.3%
PPL	1.3%	98.7%	0.0%	100.0%	70.6%	29.4%
PSEG	34.8%	65.2%	44.9%	55.1%	99.5%	0.5%
REC	100.0%	0.0%	100.0%	0.0%	33.9%	66.1%
Total	16.8%	83.2%	35.0%	65.0%	81.3%	18.7%

D. The January 10th Filing Is Unjust and Reasonable and Should Be Rejected.

PJM argues (1–3) that the Market Monitor's protest (and other protests) really only apply to the existing rules. It is true that the existing PJM ARR/FTR design is deeply flawed, unjust and unreasonable, and requires comprehensive reform. It is for that reason, in response to PJM's misdirected and ineffectual proposals for reform in the June 10th Filing, the Market Monitor recommends that the Commission institute a proceeding to investigate, under Section 206 of the Federal Power Act, whether the PJM ARR/FTR market design is just and reasonable. A Section 206 investigation would allow the Commission to consider multiple proposals for reform, develop its own proposal, and adopt a durable solution that results in true reform.

The need for reform does not excuse the June 10th Filing from review. PJM has not shown that the June 10th Filing constitutes incremental improvement. The June 10th Filing, if accepted, would reaffirm and degrade the current flawed approach. The flawed status quo does not somehow insulate the June 10th Filing from rejection for lack of merit. PJM has not supported the proposed changes as just and reasonable. The June 10th Filing should be rejected.

II. MOTION FOR LEAVE TO ANSWER

The Commission's Rules of Practice and Procedure, 18 CFR § 385.213(a)(2), do not permit answers to answers or protests unless otherwise ordered by the decisional authority. The Commission has made exceptions, however, where an answer clarifies the issues or assists in creating a complete record.[6] In this answer, the Market Monitor provides the

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[6] *See, e.g.*, *PJM Interconne*ction, L.L.C., 119 FERC ¶61,318 at P 36 (2007) (accepted answer to answer that "provided information that assisted … decision-making process"); *California Independent System Operator Corporation*, 110 FERC ¶ 61,007 (2005) (answer to answer permitted to assist Commission in decision-making process); *New Power Company v. PJM Interconnection, L.L.C.*, 98 FERC ¶ 61,208 (2002) (answer accepted to provide new factual and legal material to assist the Commission in decision-making process); *N.Y. Independent System Operator, Inc.*, 121 FERC ¶61,112 at P 4 (2007) (answer to protest accepted because it provided information that assisted the Commission in its decision-making process).

Commission with information useful to the Commission's decision making process and which provides a more complete record. Accordingly, the Market Monitor respectfully requests that this answer be permitted.

III. CONCLUSION

The Market Monitor respectfully requests that the Commission afford due consideration to this pleading as the Commission resolves the issues raised in this proceeding.

Respectfully submitted,

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Dated: March 7, 2022

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Eagleville, Pennsylvania,
this 7th day of March, 2022.

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