UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

PJM Interconnection, L.L.C.	)	Docket Nos. EL16-6-001 & ER16-121-001

REPLY COMMENTS OF THE INDEPENDENT MARKET MONITOR FOR PJM

Pursuant to the Notice Inviting Post-Technical Conference Comments issued February 23, 2016, in the above proceeding, Monitoring Analytics, LLC, acting in its capacity as the Independent Market Monitor for PJM[1] ("Market Monitor"), submits these reply comments, which respond to the comments filed by Elliott Bay Energy Trading, LLC, and D.C. Energy LLC et al.[2]

I. COMMENTS

The Market Monitor agrees with Elliott Bay that "FTRs were developed primarily to replace firm or physical transmission rights."[3] These firm, physical transmission rights were held by load and the purpose of the FTR construct was, from the beginning, to return

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1 Capitalized terms used herein and not otherwise defined have the meaning used in the PJM Open Access Transmission Tariff ("OATT"), the PJM Operating Agreement ("OA") or the PJM Reliability Assurance Agreement ("RAA").

2 Post-Technical Conference Comments of Elliott Bay Energy Trading, LLC, Docket Nos. ER16-121-000, EL16-6-000 & EL16-6-001 (March 15, 2016) ("Elliott Bay"), which includes Exhibit A: Affidavit of Dr. Susan L. Pope ("Pope Affidavit"); Post-Technical Conference Comments of DC Energy, LLC; Inertia Power, LP; Saracen Energy East LP; and Vitol Inc., Docket Nos., EL16-6-000 & ER16-121-000 (March 15, 2016) ("DC Energy et al."), which includes Attachment A: Post-Technical Conference Declaration, Roy D. Shanker Ph.D. ("Shanker Declaration").

3 *See* Elliott Bay at 6.

congestion revenues to the loads that pay the congestion revenues and that pay for the transmission system that makes congestion revenues possible.[4] The current market rules and their largely unnecessary complexity have obscured the fact that this goal is not being met.

The purpose of FTRs is to replace physical rights with financial rights. The goal of the Market Monitor's comments is to help ensure that FTRs serve the purpose for which they were intended, regardless of the degree to which the current design has become distorted. Claims that the Market Monitor's comments should be discarded simply for having pointed out that the current FTR construct no longer accomplishes its main goal are a diversionary tactic from those who are benefitting from the current design.[5] There is no reason to avoid dealing with the fundamental issues in this proceeding. The assertion that the Market Monitor's approach looks backward to the old days of vertical integration is ironic given that the current process depends on generation to load paths that date from 1998. The Market Monitor's approach would provide the congestion dollars paid by load back to load which is fully consistent with the goal of FTRs in an LMP market. The Market Monitor's approach is fully consistent with a nodal LMP market rather than based on the atavistic contract path model preferred by Elliot Bay and others who would rely on the generation to load path fiction to assign congestion rights rather than actual congestion revenue that results from the operation of a network with nodal pricing.

If financial participants want to enter into bilateral contracts with other market participants which are not underwritten by load, they are entirely free to do so. That such

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[4] PJM Companies Compliance Filing, Docket No. OA97-261-000 et al. (Dec. 31, 1996) at 7 ("The revenues that the Office of the Interconnection collects as a result of the differences in its receipts and payments constitute congestion cost payments which will be rebated to transmission users who have purchased firm network or point-to-point service.".

[5] *See* Elliott Bay, Pope Affidavit at 23–29.

an approach might be less attractive than a design in which load is required to guarantee the payout is understandable.

The attempt to dismiss the Market Monitor's proposal only because it is inconsistent with the current design is hardly dispositive. The Market Monitor's proposal is intended to be inconsistent with the current approach to ARRs and FTRs and is intended to restore FTRs to their appropriate function. The financial participants are not hedging but are speculating. While speculation is a reasonable market activity, it is not one which should be underwritten by load and it is not an activity in the FTR market that contributes to market efficiency.

The Commission opened this proceeding to a broader consideration of fundamental issues in the Technical Conference than included in PJM's initial filing.[6] The issue of balancing congestion raises fundamental issues of market design. Given that the design has been raised as an issue, it is appropriate to challenge the view of those who assert that FTRs are purely a day-ahead product by thinking carefully about the actual purpose of the FTR construct and how it can be redesigned to meet that actual purpose.

In addition to the broader issues, the Market Monitor addresses the specific issues raised by PJM's filing initiating this proceeding.

For example, the Market Monitor has presented market data and examples to demonstrate the problems caused by portfolio netting, none of which have been refuted or even directly responded to. Eliminating portfolio netting would be one step towards correcting identified issues with the current FTR market design so that participants may receive their proper share of congestion revenue.

Subsidies to financial participants in the FTR market should be eliminated. The FTR design should be modified to meet its fundamental purpose.

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[6] PJM Complaint & Filing, Dockets Nos. EL16-6-000 & ER16-121-000 (Oct. 19, 2015).

A. In the PJM FTR Market Counter Flow FTRs Do Not Depend On the Existence of Willing Counter Parties.

The commenters appear to believe that the existence of counter parties is essential to the legitimacy of counter flow FTRs. The commenters' assertions that counter flow FTRs exist only because there are "willing counter parties" that take the prevailing flow side of the counter flow FTR transactions are incorrect.[7] Dr. Shanker asked the question "who are these mystery buyers?"[8] In many cases, PJM uses FTR auction revenues to pay participants to take counter flow positions without any offsetting position.[9] In these cases, there is no willing participant counterparty.

A recent rule change permits PJM to pay participants to take counter flow FTRs without making the related prevailing flow FTRs available.[10] PJM uses the proceeds from the FTR auction in excess of ARR payments to purchase counter flow FTRs in order to increase within planning period prevailing flow payout ratios. There is no buyer and there is no willing counterparty.

Despite the commenter's assertions that counter flow FTRS are the result of the interaction among willing counter parties, the commenters fail to explain why they do not simply trade as many counter flow FTRs as they like with truly willing counterparties on a private exchange which is not subsidized by load. Asserting that such a private market would not be as attractive to financial participants would be correct because it would not provide automatic counter parties and would not provide guaranteed full funding by load, but that is clearly not a valid counterargument.

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7 *See* Elliott Bay at 9, DC Energy et al. at 13.

8 Roy Shanker affidavit at 12.

9 PJM uses PJM Settlement to handle the mechanics. OA Schedule 1 § 7.11(a) ("PJM Settlement shall be the Counterparty with respect to the contractual rights and obligations of the holders of Auction Revenue Rights, and Financial Transmission Rights.")

10 PJM. "Manual 6: Financial Transmission Rights," Revision 16 (June 1, 2014), p22.

B. The Fungibility of Equivalent FTR Paths Has Nothing to do With Netting.

DC Energy et al. argue that "[u]nder PJM's current netting rules, equivalent FTR paths are mutually interchangeable, or fungible, leading to an efficient FTR market."[11] The fungibility of equivalent FTR paths has nothing to do with netting.

The Market Monitor presented an example (see Table 4 and Table 5 of the Market Monitor's previous comments) that illustrated the mathematical equivalence of a single FTR and a set of constituent FTRs with the same ultimate source and sink point with and without portfolio netting in the day-ahead market.[12] The example shows that a single FTR can be broken into multiple FTRs. The newly formed set of multiple FTRs can have the same net target allocation as long as the start and end points of the constituent FTRs are, in net, the same as the original. Opponents of the elimination of FTR netting have claimed that without netting this would no longer be true. That claim is not correct. That claim fails to account for revenues from negative target allocation FTR paths in the mathematically equivalent set of FTRs. Appropriately including these revenues results in mathematical equivalence between the single FTR and that same FTR broken into a constituent set of FTRs with the same start and end point with or without netting.

C. Equivalent Treatment of FTRs Is a Hallmark of Good Market Design.

The Market Monitor has demonstrated that positive target allocation FTRs are paid at different payout ratios based on their portfolio construction. Proponents of portfolio netting have acknowledged that net negative FTR portfolios are treated differently than net positive FTR portfolios, but argue that this is acceptable since it is a minority of FTR

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11 DC Energy et al. at 6–8.

12 *See* Comments of the Independent Market Monitor for PJM, Docket No. EL16-6-001 et al. (March 15, 2017) at p 12, Tables 4 & 5.

portfolios.[13] A small proportion or not, this is evidence of a flawed market design. There has been no counter argument or evidence that this is not the result.

Without portfolio netting, participants' positive target allocations all receive the same payout ratio and negative target allocations all pay back the same payout ratio. The current netting rules do not properly treat negative target allocations as a source of congestion revenue. With portfolio netting, both the positive and negative target allocations are receiving and paying their target allocation multiplied by the payout ratio. With the removal of portfolio netting, participants appropriately receive the same payout ratio for all of their positive target allocation FTRs and appropriately pay back the same payout ratio for all of their negative target allocations.

The Market Monitor presents Table 1 (Table 2 of the Market Monitor's previous comments) that was used to illustrate the mathematical equivalence of FTRs without portfolio netting in the day-ahead market.[14] This example clearly illustrates the failings of the current portfolio netting rule. This example shows that the portfolio netting rules result in an unequal payment to positive target allocations and demonstrates the impact on the payout ratio to positive target allocation FTRs with and without portfolio netting.

In the example, the total congestion collected is $4,750 and the total net target allocation is $9,500, resulting in a reported payout ratio of 50.0 percent. With portfolio netting, the net target allocation is simply multiplied by the payout ratio to calculate the congestion revenue a participant receives. For Participant 1, this is $250 multiplied by 0.5 for a total revenue received of $125. The revenue to positive TA column is an indication of how much revenue the positive target allocations, which are the only part of a portfolio receiving available revenue, of a participant need to be paid in order to reach the congestion revenue received. For participant 1, they are effectively being paid $875 of their $1,000 so

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[13] *See* DC Energy et al., Shanker Declaration at 8 n4; Elliot Bay, Pope Affidavit at 14.

[14] *See* p. 10, Table 2.

that the congestion revenue received can be $125. The result of this is that Participant 1's positive target allocations are effectively granted a payout ratio of 87.5 percent simply because they hold negative target allocations, while Participant 3, who holds no negative target allocations, is only paid at a 50.0 percent payout ratio.

Table 1 Change in positive target allocation payout ratio given portfolio construction

	1	2	3	4	5	6	7	8	9	10
	Congestion = $4,750 Net TA = $9,500				With Netting			Without Netting		
Participant	Positive Target Allocations	Negative Target Allocations	Net Target Allocations	Reported Payout Ratio	Congestion Revenue Received	Revenue to Positive TA	Calculated Positive TA Payout Ratio	Congestion Revenue Received	Revenue to Positive TA	Calculated Positive TA Payout Ratio
1	$1,000.00	($750.00)	$250.00	50.0%	$125.00	$875.00	87.5%	($204.55)	$545.45	54.5%
2	$750.00	($200.00)	$550.00	50.0%	$275.00	$475.00	63.3%	$209.09	$409.09	54.5%
3	$8,700.00	$0.00	$8,700.00	50.0%	$4,350.00	$4,350.00	50.0%	$4,745.45	$4,745.45	54.5%
Total	$10,450.00	($950.00)	$9,500.00	-	$4,750.00	$5,700.00	-	$4,750.00	$5,700.00	-

The effect of portfolio netting can be interpreted in two ways. One is that, under the same portfolio construction, positive target allocation FTR holders experience a smaller amount of available revenue simply because negative target allocations are not properly accounted for. In this example, with portfolio netting, positive target allocation holders are essentially only receiving $9 in congestion rather than the actual $10.50 with the remaining $1.50 going to negative target allocation holders. The second interpretation is that negative target allocation FTRs are being subsidized by positive target allocation FTRs and only paying their target allocation multiplied by the payout ratio, instead of the largely assumed and claimed 100 percent. Negative target allocation holders paying less than 100 percent is another way to reduce the revenue that should be available to pay positive target allocations and is a flawed result of settlement rules. Under either interpretation, it is evident that positive target allocation holders are not receiving their share of available revenue simply because of portfolio netting. Net negative portfolios are required to pay 100 percent of their net negative target allocations, making them a source of revenue for

prevailing flow FTRs.[15] The elimination of portfolio netting would treat all negatives equally by applying the 100 percent payout to all negatives.

The subsidy presented in the example is clear. If Participant 3 is receiving less than they should, and Participants 1 and 2 are receiving more, Participant 3 is subsidizing Participants 1 and 2. Elliott Bay's own example demonstrates this cross subsidization among portfolios.[16] Assuming portfolios with multiple FTRs, in its example, Participant 1 purchases a $5 prevailing flow FTR, and Participant 2 purchases a $5 counter flow on the same path, with a 70 percent payout ratio. In this scenario, Participant 1 has paid $5 for the FTR, and Participant 2 has been paid $5 to take the FTR. As conceded by Elliott Bay and DC Energy et al., portfolio netting is equivalent to applying the payout ratio to negative target allocations, so Participant 1 is paid $3.50 and Participant 2 pays back $3.50.[17] This results in a loss for Participant 1 of $1.50 and a profit of $1.50 for Participant 2. Had Participant 2's negative target allocations properly been allocated as a source of revenue, without portfolio netting, they would have paid $5 into the FTR revenue stream. This would result in Participants 1 receiving $5, for no loss or profit, and Participant 2 paying $5, for no loss or profit. The subsidy in this example is the $1.50 that Participant 1 lost, which Participant 2 received, simply due to the flawed market design of portfolio netting.

Portfolio netting also causes discriminatory and inappropriate treatment of net negative portfolios, as pointed out by Elliott Bay and DC Energy et al. DC Energy et al. witness Dr. Shanker characterizes the inequalities of portfolio netting in his statement: "To the extent that there are any net negative portfolios, the status quo does discriminate by overcharging the party with the net negative allocation and increases the overall funding

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15 OA Schedule 1 §§ 5.2.2 & 5.2.5(b).

16 *See* Elliott Bay at 10–11.

17 *See* Elliott Bay at 9, DC Energy et al. at 11.

ratio."[18] Elliott Bay characterizes the inequality by saying "[a]s a result, FTRs held in such [net negative] portfolios will have different incremental values than FTRs held in net positive Target Allocation portfolios."[19] The result of both of these inequalities, which is admitted by proponents of portfolio netting, is that under the current rules a class of FTRs exists in which there is unequal treatment. This obvious inequality very clearly illustrates the Market Monitor's and PJM's point that the current portfolio netting rules result in inconsistent treatment of FTRs based on the structure of the portfolio they are in. Elimination of portfolio netting would resolve this disparate treatment, thus treating every FTR equally regardless of portfolio.

D. End of Planning Period Distributions are Simply an Accounting Mechanism.

DC Energy et al. claim, for example, "current netting provisions protect the market from potential manipulation when FTRs are overfunded."[20] The distribution of end of planning period uplift charges or excess revenue is not a valid reason to ignore the issues created through portfolio netting.

The end of planning period distribution is simply an accounting method chosen by PJM and its stakeholders to distribute any excess or shortfall. The method chosen for the end of year allocation of a surplus has no impact on the function of the actual FTR market or how FTRs function during the planning year. Alternative allocation methods could be used without disrupting the FTR market. In fact, two alternative methods of distributing this surplus were proposed by FERC, neither of which would have any impact on the actual FTR market. Any method may be chosen, as this is simply an accounting device intended to fairly distribute the end of planning period excess/deficiency. Assertions that changes in the

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18 DC Energy et al., Shanker Declaration at 8 n4.

19 *See* Elliott Bay at 19.

20 DC Energy et al. at 12.

end of planning period distribution are a valid reason to retain portfolio netting ignore the larger market design issues. The Market Monitor believes that, should the current FTR construct remain, end of year excess or shortfall of congestion revenues should be allocated to FTR holders.

The distribution of excess revenues in the current market design is flawed. ARR holders are entitled to all auction revenues. In the current design, FTR holders are entitled to all congestion revenue (day-ahead and balancing). Both of these include any excess/deficiency in their respective category. There should not be a mix of revenue sources in the ARR/FTR market. Under the current rules, excess auction revenue can first be used to purchase additional counter flow FTRs to reduce revenue inadequacy issues, and second is attributed to FTR holders in the end of planning period excess distribution. ARR holders never receive this additional revenue in any form. PJM recently created a rule allowing the clearing of counter flow FTRs in the monthly auction without clearing the associated prevailing flow using excess auction revenue.[21] This is a direct subsidy from the ARR market to the FTR market.

E. The Current Allocation of Balancing Congestion Is Consistent with the Purpose of the FTR Market Design.

The purpose of the ARR/FTR design is to return congestion revenue to load. As an accounting fact, balancing congestion, either positive or negative, is a component of congestion revenue as defined by PJM.[22] Ignoring losses, congestion is the difference between what load pays for energy and what generation is paid.

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21 *See* PJM Manual 6: Financial Transmission Rights (Rev. 16, June 1, 2014) at 56.

22 The Total Transmission Congestion Charges are the sum of the Day-ahead and Balancing Congestion Charges for all PJM Members, adjusted for the value of day-ahead and balancing congestion revenues due to inadvertent interchange, losses, and the MISO and NYISO joint operating agreement coordination, minus the negatively valued FTR Target Allocations. PJM Manual 28: Operating Agreement Accounting (Rev. 72, Dec. 17, 2015) at 56.

The proposals to pretend that balancing congestion does not exist when assigning revenues to FTRs would ignore reality. If day-ahead congestion is positive $100 and balancing congestion is negative $20, then total congestion is $80. The total congestion revenue available to fund FTRs is $80. Pretending that total available congestion revenues are really $100 requires someone to make up the difference. The proposals all require load to pay the difference while simultaneously stating that this is not the case. Given that load already paid $80 in total congestion, this would require load to arbitrarily pay more than actual congestion. This simple example fully represents the proposals. There is nothing about the fundamental nature of FTRs that requires load to pay more than total congestion.

While it is true that load will always pay for congestion, it is not true or necessary that load must pay more than congestion. Load should not pay more than congestion. There is nothing magical about day-ahead congestion. There is no basis for the assertion that balancing congestion is not a component of congestion.

All alternate proposals include allocating at least some portion of balancing congestion to load, often citing cost causation. Cost causation as used here is a regulatory buzzword without significance. There is no cost causation here; neither FTRs nor ARRs create day ahead or balancing congestion. Balancing congestion is created in large part by modeling differences between the day-ahead and real-time market. DC Energy et al. states, "The occurrence of balancing congestion is a direct result of actions taken by the grid operator…"[23] DC Energy et al. appear to recognize that it is difficult to assign cost causation to load when the differences are attributed to the grid operator.

In the current design, FTR holders remain in the best position to value balancing congestion through their FTR bid prices. FTR holders voluntarily enter the market and set their bid prices based on their expectations of total congestion revenue. In addition, limiting congestion payments to actual congestion revenues provides an incentive to address the

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[23] See DC Energy at 27

sources of negative balancing congestion. If load were required to subsidize FTRs by paying for more than total congestion, there would be no natural checks on the sources and levels of negative balancing congestion.

F. The March 1st Order Regarding Portfolio Netting Was Incorrectly Interpreted Following a Clarification Request.

There is some confusion in the record following the initial decision in 2007 to allow portfolio netting.

In their original February 12, 2007, filing, ODEC protested changes to PJM's uplift/netting proposal, requesting that the Commission clarify how portfolio netting should work:

> Old Dominion requests that if the Commission accepts PJM's filing, the Commission clarify that the full funding uplift allocation for each month's calculation must include all FTRs with a positive target value and that such allocation basis shall not be reduced by negative value or counter-flow FTRs in that month.[24]

In ODEC's approach, positive target allocations should not be reduced by negative target allocations. ODEC opposed portfolio netting.

The order on clarification responding to ODEC's request stated:

> Old Dominion requests that, if the Commission accepts PJM's filing, the Commission should clarify that the uplift allocation for each month must include only positive value FTRs and that *such FTRs must not be reduced by negative value or counter-flow FTRs in that month. Old Dominion states that such negative or counterflow FTRs are fully funded in and of themselves* and, therefore, neither contribute to nor require an uplift mechanism in order to achieve full funding. *We agree. Negative FTRs function to ensure that positive FTRs (target allocations) are fully funded* [emphasis added].[25]

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[24] Protest of Old Dominion Electric Cooperative, Docket No. ER06-1218-000 (Feb. 12, 2007), at 8.

[25] *PJM Interconnection, L.L.C.*, 119 FERC ¶ 61,144 at P 71 (May 17, 2007).

This directive clearly indicates that the Commission did not intend to implement portfolio netting, recognizing that negative target allocations should pay 100 percent of their target allocation, and that their sole function is to provide a source of revenue for positive target allocation FTRs.

The Commission recognized that negative target allocations should be treated as a source of revenue, and that positive target allocations are the only portion of target allocations that should receive congestion revenue.

It has been conceded by protesters, and demonstrated by the Market Monitor, that negative target allocations do not pay 100 percent of their target allocations under the current rules.[26] As a result, the Commission's directive that "negative FTRs function to ensure that positive FTRs (target allocations) are fully funded," is not achieved. The directives from this order would be achieved if portfolio netting were eliminated.

On June 19, 2007, PJM filed a request for clarification from the Commission to clarify these issues. The Commission's order on clarification implemented portfolio netting, although not consistent with the prior order. The order on clarification states:

> After reviewing the examples provided by PJM, the Commission now realizes that it did not state clearly its intent regarding the allocation of uplift payments. The Commission's intent in ruling as it did in the May 17 Order was to ensure that the share of any revenue shortfall allocated to an FTR holder through uplift reflects only its net positive target allocation; that is, the positive target allocation that may remain after subtracting the FTR holder's negative target allocation, if any.[27]

In this proceeding, PJM and the Market Monitor are attempting to correct the rules on portfolio netting in a manner consistent with the Commission's initial directive.

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[26] *See* DC Energy et al., Shanker Declaration at 8 n4; Elliott Bay at 8–11.

[27] *PJM Interconnection, L.L.C.*, 121 FERC ¶ 61,073 at P 16 (Oct. 22, 2007).

II. CONCLUSION

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

Respectfully submitted,

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Dated: March 29, 2016

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 29th day of March, 2016.

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