UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

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

SECOND 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 second reply comments, which respond to the reply comments filed by Elliott Bay Energy Trading, LLC, and D.C. Energy LLC et al.[2] The Market Monitor requests leave to permit these reply second comments because they will help to ensure a complete and accurate record and will facilitate the decision-making process.

I. COMMENTS

The current FTR construct is unnecessarily complex. The Market Monitor agrees with PJM that "congestion revenues should be returned to load…" and with Elliott Bay that

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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 Reply Comments of Elliott Bay Energy Trading, LLC, Docket Nos. ER16-121-000, EL16-6-000 & EL16-6-001 (March 29, 2016) ("Elliott Bay"); Post-Technical Conference Reply Comments of DC Energy, LLC; Inertia Power, LP; Saracen Energy East LP; and Vitol Inc., Docket Nos., EL16-6-001 & ER16-121-000 (March 29, 2016) ("DC Energy et al.").

"FTRs were developed primarily to replace firm or physical transmission rights."[3] The current FTR construct is not meeting these goals at least in part as a result of the unnecessary complexity that has been introduced over time.

This complexity is preventing load from receiving the full payment of congestion revenue, and the elimination of portfolio netting is one step towards rectifying that problem. PJM's proposal to eliminate netting was to eliminate netting in the hourly settlements and at end of planning period uplift and excess calculations.[4] This would properly account for negative target allocations as a source of revenue to pay positive target allocations. This correction would treat FTRs equally, regardless of portfolio structure. This correction would increase the payout to positive target allocation holders, allowing them a greater offset for their congestion costs when there is revenue inadequacy.

Opponents of the proposal to eliminate portfolio netting assert that portfolios, rather than FTRs, should be treated equally, but only in some cases. As even the commenters admit, with portfolio netting, net negative portfolios are not treated the same as net positive portfolios. Without portfolio netting, all FTRs would be treated equally.

Prior attempts to dismiss the Market Monitor's proposal to return congestion directly to load were unconvincing. New arguments that the length of time needed to establish market rules to correctly distribute congestion to load is a reason to dismiss these ideas are equally unconvincing and inconsistent with the history of the lengthy debate regarding the allocation of balancing congestion. [5] The allocation of balancing congestion has been under discussion since December 2011, with multiple attempts to improperly change the allocation by parties filing at FERC and parties, including PJM, raising proposals

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[3] *See* PJM at 6; Elliott Bay at 6.

[4] PJM Interconnection, L.L.C, Proposed Modifications to ARR and FTR Provisions ("PJM Initial Filing") Docket No. EL16-6-00. (October 19, 2015).

[5] *See* Elliott Bay at 16.

in the stakeholder process. All of those efforts have failed to improperly reallocate balancing congestion. It is surprising at best that the alleged length of time required to appropriately resolve the fundamental design issues in the FTR market is suddenly an issue for those who have been attempting for many years to modify the design in negative ways.[6]

The ultimate goal of the ARR and FTR construct is to provide load an offset to their congestion costs in recognition of the fact that load pays for the transmission system and load pays congestion. The current construct is falling far short of this goal.

Claims that eliminating portfolio netting will impact counter flow FTR incentives are accurate. Participants must take into consideration market rules when calculating their bid prices. Speculative participants in the FTR Market can alter their bid strategies to account for anticipated changes in revenue from the rule change. This scenario is no different than it is for revenue adequacy concerns, in that no participant knows what revenue adequacy will be, but must form an opinion when entering a bid price. That is how markets work.

DC Energy et al. and Elliott Bay have both stated that counter flow FTRs reduce FTR auction prices.[7] The direct result of reduced auction prices is reduced ARR value, which hinders the ability of load to offset their congestion costs. Elliott Bay sums up the argument for the elimination of counter flows succinctly by stating, "Without counterflow FTRs, the expected outcome would be prices of prevailing flow FTRs at, or just below, expected liquidation values."[8] That is actually a desirable outcome. In a competitive market, it would be expected that FTR buyers would bid up prices to exactly that point. The fact that this

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6 *See* Docket Nos. EL12-19 and EL13-47.

7 *See* Post-Technical Conference Comments of Elliott Bay Energy Trading, LLC, Docket Nos. ER16-121-000, EL16-6-000 & EL16-6-001 (March 15, 2016) (Elliot Bay March 15th Comments"), Exhibit A: Affidavit of Dr. Susan L. Pope ("Pope Affidavit") at 14; 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."), Attachment A: Post-Technical Conference Declaration, Roy D. Shanker Ph.D. ("Shanker Declaration") at 8 n4.

8 *See* Elliott Bay at 12.

does not occur supports the arguments that the market design is flawed. FTR auction values should match anticipated congestion values, not provide subsidies that ensure that financial participants acting as speculators profit from load overpayments.

The Market Monitor is not attempting to "dramatically restructure" the FTR Market by eliminating counter flow FTRs.[9] Eliminating counter flow FTRs would significantly improve the FTR market design. The sole objective is and should be to improve the design of the ARR and FTR products so that they provide load a full offset to their congestion costs. Counter flow FTRs are not necessary for the ARR/FTR market construct to function properly. Counter flows distort the value of FTRs, do not have a counter party when PJM uses excess ARR revenues to purchase them, can be used for manipulation of the FTR Market and are used to increase FTR revenue adequacy at the expense of ARR holders. The elimination of the counter flow product is appropriate because counter flow FTRs provide no benefit to the FTR Market. The level of vitriol associated with this point is directly correlated with the inappropriate advantage that financial participants receive from counter flow FTRs at the expense of load.

A. Congestion Paid by ARR Holders is Not Offset.

The Market Monitor has been accused of "cherry picking" a data point to construct the argument that load is not receiving a full offset to congestion under the current ARR/FTR market design.[10] The data show that is not correct. The results that were provided were from the latest complete planning period, which is indicative of the functioning of the current FTR Market which includes the increased number of discretionary outages designed to improve the expected funding to FTR target allocations at the expense of

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[9] *See Id*. at 16 ("The IMM makes clear that its goal is to dramatically restructure these markets, and that the de facto impairment of counterflow FTRs through elimination of netting is its desired first step.").

[10] *See* DC Energy at 7

potential ARR allocations. Assertions that the previous planning period, which was revenue adequate, should be discarded because of "unusual" weather events are naive.[11] Similar arguments could be made for every planning period because unique events occur in every planning period. The ARR/FTR market construct should return congestion paid by load to the load. Parties have agreed that load should receive their congestion costs.[12] The data reported by the Market Monitor demonstrate conclusively that this is not happening under the current construct.

DC Energy argues that for the years 2005–2012, FTR auction revenue slightly exceeded net congestion and that this is evidence that load received payments in excess of congestion. This assertion is incorrect and without factual basis.

Table 1 shows the offset provided by ARRs and self scheduled FTRs, by planning period, for the 2010 to 2011 planning period through December 31, 2015, of the 2015 to 2016 planning period. This compares the total offset provided to all ARR holders, including all ARRs converted to self scheduled FTRs, to the total congestion revenues. ARR credits are calculated as the product of the ARR MW and the cleared price of the ARR path from the Annual FTR Auction. The FTR credits represent the total self scheduled FTR target allocations for FTRs held by ARR holders, adjusted by the FTR payout ratio. ARR holders that elect to self schedule FTRs are paid the daily ARR credits for the ARR, and then pay the daily auction price of the self scheduled FTRs, netting the cost of the FTRs to zero. This is accounted for in the ARR credits column by subtracting the cost of the FTR from the ARR credits. The FTR credits column also includes any end of planning period uplift charges or excess distribution received. This is distributed to each participant in proportion to their

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11 *See* Elliott Bay at 17, DC Energy at 7.

12 *See* Reply Comments of PJM Interconnection, L.L.C., Docket Nos. EL16-6-000 et al. (March 29, 2016) at 6; Elliott Bay March 15th Comments at 6

portfolio's self scheduled to non-self scheduled FTR ratio, and not affected by revenue inadequacy.

Table 1 ARR and FTR total congestion offset (in millions) for ARR holders including end of planning period disbursements[13]

Planning Period	ARR Credits	FTR Credits	Total Congestion	Total ARR/FTR Offset	Percent Offset
2010/2011	$155.5	$86.2	$434.1	$241.7	55.7%
2011/2012	$512.2	$124.0	$770.6	$636.2	82.6%
2012/2013	$349.5	$112.6	$575.8	$462.1	80.3%
2013/2014	$337.7	$278.9	$1,777.1	$616.6	34.7%
2014/2015	$482.4	$382.2	$1,390.9	$864.6	62.2%
2015/2016*	$372.3	$128.8	$573.1	$501.1	87.4%

In the Market Monitor's previous filing, it was reported that the 2014/2015 planning period resulted in a congestion offset of 59.8 percent. This congestion offset did not include any end of planning period distributions as was explicitly noted.[14] For the 2014/2015, and thus far in the 2015/2016 planning period, including the end of planning period distribution increased the offset because there was excess revenue to distribute to FTR holders, including self-scheduled FTRs.

Table 1 shows results for the last five complete planning periods and the first seven months of the current planning period. From the 2010/2011 planning period through the 2015/2016 planning period, there have been substantial shortfalls in the return of congestion revenue to load. This clearly demonstrates that the current FTR/ARR construct is consistently failing to return congestion revenues to load.

Elliott Bay referenced an earlier State of the Market Report table that showed that FTRs and ARRs together provided a full offset to congestion revenues.[15] The referenced

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13 *See* 2015 State of the Market Report for PJM, v.2 (Section 13: FTR and ARRs, Table 13-44).

14 *See* Market Monitor, Errata Letter, Docket Nos. EL16-6 & ER16-121 (March 22, 2016).

15 *See* Elliott Bay at 17.

table compared ARR revenues to congestion incurred by participants that hold ARRs rather than total congestion.[16] The Market Monitor agrees that this table does not measure the offset to total congestion paid by load. Table 1 does compare payments to load through ARRs and self scheduled FTRs to total congestion paid by load.

B. Individual FTRs Should Be Treated Equally.

DC Energy et al. and Elliott Bay continue to confuse the issue of equal treatment of individual FTR products with equal treatment of *most* portfolios. Elliott Bay concedes that, with the current netting rules, positive target allocations are paid at different rates depending on portfolio composition.[17] The objective of the portfolio netting elimination proposal is to treat all FTRs equally, regardless of the structure of the portfolio they are in. Supporters of netting assert that netting results in the "equal" treatment of portfolios. Supporters of netting simply ignore that the goal is, and should be, to treat similarly situated FTRs, e.g. positive target allocation FTRs, the same. Netting does not treat similarly situated FTRs the same, but treats them differently based on the nature of a participant's portfolio.

It is appropriate to treat differently situated FTRs differently. Positively valued FTRs are situated differently than negatively valued FTRs. Negatively valued FTRs are explicitly a source of revenue, by design. The supporters of netting would discount the contribution of negatively valued FTRs to revenues. That is inconsistent with the logic and rules of the FTR market.

DC Energy and Elliott Bay have conceded that, with the current portfolio netting rules, holders of net negative portfolios are not treated in the same manner as net positive

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16 *See* 2015 Quarterly State of the Market Report for PJM: January through September (Section 13: FTRs and ARRs) at 471.

17 *See* Elliott Bay at 6.

portfolios in the FTR Market.[18] DC Energy and Elliot Bay assert that the effect on net negative portfolios relative to net positive portfolios is irrelevant due to the small number of net negative portfolios. However this disparity in treatment caused by the netting rules results is not irrelevant; this disparity is illustrative of the flaws in the current netting rules.

Portfolio netting leads to inconsistent results and cross subsidies among portfolios. Portfolio netting causes the disparity in treatment between net positive and net negative portfolios because portfolio netting causes inconsistent treatment and cross subsidy of FTRs within the portfolios themselves. That portfolio netting results in inconsistent treatment of net positive and negative portfolios only illustrates the Market Monitor's and PJM's argument that portfolio netting is causing disparate and unequal treatment of FTRs. Opponents of portfolio netting elimination claim that the proper method applies the same payout ratio to all portfolios. But even that argument is disproven by the case of net negative portfolios. The solution to this market flaw, and to the flawed logic of treating some combination of two different products equally, rather than the individual products, is the elimination of portfolio netting.

C. The Demonstration of Mathematical Equivalence Without Portfolio Netting in the Day-Ahead Market is Sound.

The mathematical equivalence example, originally provided by DC Energy et al. and later corrected by the Market Monitor, demonstrates that, contrary to DC Energy and Dr. Shanker's assertions, FTRs are mathematically equivalent when broken into constituent FTRs, without portfolio netting.[19,20] The corrected example provided by the Market Monitor clearly shows that is the case in the day-ahead market. In their most recent comments,

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[18] *See* Shanker Declaration at 8 n.4; Pope Affidavit at 14.

[19] *See* Protest of DC Energy, LLC; Inertia Power, LP; Saracen Energy East, LP; and Vitol Inc., Docket Nos. EL16-6-000 and ER16-121-000 (November 9, 2015), Stevens Affidavit at 10, Table 1.

[20] *See* Comments of the Independent Market Monitor for PJM, Docket Nos EL16-6-001 and ER16-121-000 (March 15, 2016) at 13, Table 5.

Elliott Bay and DC Energy et al. attempt to discredit the example as evidence that portfolio netting should not be eliminated, by adding "other participants" and making the example about portfolio equivalence rather than FTR equivalence.[21]

DC Energy et al. and Elliott Bay have only demonstrated their confusion between the equality of treatment of net positive portfolios and equality of treatment among individual FTRs.

D. PJM's Original Intent Was Clearly Full Elimination of Portfolio Netting.

DC Energy et al. are attempting to rewrite the narrative and intent behind the original elimination of the portfolio netting proposal.[22] This appears to be an attempt to redefine the argument to better suit their position, and disprove the Market Monitor's examples by proxy.

DC Energy et al.'s newly minted argument is that PJM is only attempting to eliminate portfolio netting for the end of planning period uplift/excess distribution. This is not correct and is not supported by PJM's actions or previous comments. In their original filing, PJM provided the following proposed Tariff language changes:

> (a) PJM will *calculate the total of each FTR holder's positive FTR Target Allocations and the total of each FTR holder's negative FTR Target Allocations for each hour*. For the purposes of these calculations, FTR sales will be netted against FTR purchases within the appropriate positive or negative FTR Target Allocation total. PJM will also calculate the total of all FTR holders' positive FTR Target Allocations in the hour, all negative FTR Target Allocations in the hour, and the total of all Transmission Congestion Charges in the hour, including revenues paid to or received from MISO and NYISO for JOA market-to-market congestion relief measures.
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> (b) *Negative Transmission Congestion Credits will first be allocated to each FTR holder in an amount equal to their total negative hourly FTR*

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21 *See* Elliott Bay at 13-14. DC Energy et al at 1-5.

22 *See* DC Energy et al at 5.

> *Target Allocations*. The sum of all PJM revenues associated with these Transmission Congestion Credits will then be added to the PJM total amount of Transmission Congestion Charges every hour resulting from both the Day ahead Energy Market and the Real-time Energy Market. *These adjusted hourly Transmission Congestion Charges will increase the amount of revenues available to be allocated to the positive FTR Target Allocations*. (emphasis added)[23]

PJM's proposed changes clearly indicate the intention to calculate positive and negative target allocations separately for each hour, and properly treat negative target allocations as a source of revenue to be paid to positive target allocations. PJM's original proposal would also modify the distribution of the end of planning period uplift/excess distribution. This position is further supported by the statement made in PJM's filing: "First, PJM proposed removing the clause 5.2.3 which requires summing the total Target Allocations in each hour associated with the sum of all FTR – in essence, the source of netting."[24] PJM also provides an example of their proposed elimination of portfolio netting that clearly indicates the proposal applies to hourly settlements as well as end of planning period distributions.[25]

E. Balancing Congestion Remains a Part of Congestion.

Congestion is the difference between what load (sinks) pays and what generators (sources) are paid. Day ahead congestion is the difference between what is paid for energy by sinks in the day ahead solution and what is paid to energy sources in the day ahead

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23 PJM Initial Filing, Attachment A at 6–7.

24 PJM Initial Filing at 23.

25 For example, a participant has $200 of positive target allocation FTRs and $100of negative target allocation FTRs and the payout ratio is 80 percent. Under the current method, the positive and negative positions are first netted to $100 and then the payout ratio is applied. In this example, the holder of the portfolio would receive 80 percent of $100, or $80. The correct method would first apply the payout ratio to FTRs with positive target allocations and then net FTRs with negative target allocations. In the example, the 80 percent payout ratio would first be applied to the positive target allocation FTRs, 80 percent of $200 is $160. Then the negative target allocation FTRs would be netted against the positive target allocation FTRs, $160 minus $100, so that the holder of the portfolio would receive $60.

solution, where differences in source and sink prices is caused by transmission constraints. No distinction is made between physical and virtual sinks and sources in the calculation of day ahead congestion. Balancing congestion is congestion caused by real time realized nodal positive and negative MW deviations from day ahead positions by both physical and virtual players multiplied by real time nodal price differences caused by real time transmission constraints. No distinction is made in this calculation between physical and virtual sources of MW deviations in this calculation. The sum of day ahead congestion and balancing congestion is total congestion, whether positive or negative.

PJM now, for the first time in the five year history of these discussions, attempts to rebrand balancing congestion as an accounting "imbalance" in the system created by virtual players. This assertion has no basis in fact. The so called "imbalance" is created by deviations between day ahead and real time positions of both virtual and physical participants and the varying prices paid for those deviations on a nodal basis due to transmission constraints.

It is clear that balancing congestion is a key component of total congestion calculations regardless of the source, and regardless of the term that is used to identify it. While the Tariff does not specifically define the term "balancing congestion" it is clear that the quantity being discussed in the following is what is now termed balancing congestion:

> At the end of each hour during an Operating Day, the Office of the Interconnection shall calculate the *transmission congestion payments* at each Generating Market Buyer's generation bus to be paid at Real-time Congestion Prices, determined by the product of the *hourly Real-time Congestion Price* at the relevant bus times the Generating Market Buyer's megawatts of generation at such generation bus in the hour *in excess of the energy scheduled to be injected at that bus in that hour in the Day-ahead Energy Market*. To the extent that the energy actually injected at the generation bus is *less than the energy scheduled to be injected at that bus in the Day-ahead Energy Market, the Generating Market Buyer shall be debited for the*

> *difference at the Real-time Congestion Price* for the generation bus at the time of the shortfall [emphasis added].[26]

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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[26] OA Schedule 1 § 5.1.3(g).

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 8th day of April, 2016.

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