

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

PJM Interconnection, L.L.C.)	Docket Nos. EL14-37-001,
)	ER17-1433-000
)	
)	

**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 for PJM² (“Market Monitor”), submits this answer to the protests filed on May 9, 2017, in this proceeding, by each of VECO Power Trading, LLC (“VECO”), Alphataraxia Palladium LLC (“Alpha P”) and XO Energy, LLC (“XO”) (“Protesters”). Protesters raise various arguments against PJM’s compliance filing dated April 18, 2017, to reform its FTR forfeiture rule (“April 18th Filing”) in compliance with the order issued in this proceeding on January 19, 2017 (“January 19th Order”).³ The arguments raised have no merit and should be rejected. The April 18th Filing should be approved without modification.

¹ 18 CFR §§ 385.212 & 385.213 (2015).

² Capitalized terms used herein and not otherwise defined have the meaning used in the PJM Open Access Transmission Tariff (“OATT”) or the PJM Operating Agreement (“OA”).

³ See *PJM Interconnection, L.L.C.*, 158 FERC ¶ 61,038.

I. ANSWER

A. Protesters' Arguments About the \$0.01 Constraint Impact Threshold Test Have No Merit and Should Be Rejected.

1. Protesters Misunderstand the \$0.01 Constraint Impact Threshold Test for a Portfolio Based FTR Forfeiture Test.

Protesters misunderstand the structure of the new FTR forfeiture rule and misunderstand the role of the \$0.01 threshold. Protesters argue that PJM has improperly replaced the 10 percent dfax threshold test that was used to help determine if a constraint had a material effect on an FTR path in PJM's prior FTR forfeiture test with the proposed \$0.01 threshold test in the new FTR forfeiture test.⁴ Protesters argue that the measurement of the effect of triggered constraints on an FTR was outside the scope of the Commission's determination that the PJM's existing FTR forfeiture rule was unjust and unreasonable.⁵ Protesters' assertions are incorrect.

The Commission determined that the prior FTR forfeiture rule was unjust and unreasonable and that a virtual portfolio based approach is better. The Commission recognized that the change in the rule would require modifying the threshold tests used in the forfeiture rule.⁶ The Commission specified that in order to trigger a forfeiture, "the net flow across a given constraint attributable to a participant's portfolio of virtual transactions must meet two criteria: (1) the net flow must be in the direction to increase the value of an FTR; and (2) the net flow must exceed a certain percentage of the physical limit of a binding constraint."⁷

⁴ VECO at 2-4.

⁵ VECO at 2-4.

⁶ January 19th Order at P 60.

⁷ *Id.*

As specified, PJM's proposed approach to implementing the portfolio based FTR forfeiture rule uses a test for direction and a 10 percent threshold limit on a binding constraint. The \$0.01 level is a component of the threshold test that directly determines whether the net flow is in the direction consistent with increasing the value of the FTR. The reason that a de minimis value is added to define the impact of the constraint on the FTR is to ensure that a participant's FTR profits are not subject to forfeiture when there is no measurable impact on the FTR.

2. PJM's \$0.01 Rule Is Reasonable and Prevents Manipulation.

Protesters complain that the \$0.01 rule is too sensitive and will lead to forfeitures due to virtual positions without a clear impact on the FTR path.⁸ Protesters misunderstand the function of the \$0.01 rule. Protesters' assertions are incorrect.

The \$0.01 rule is a reasonable test for whether the constraint, on which the participant has a significant impact as defined by the 10 percent test, has a positive effect on the participant's FTR. The goal of the rule is to ensure that when a participant has a significant impact on a constraint and that constraint makes an FTR more valuable, the resultant FTR profits are forfeited. The goal of the rule is to prevent manipulation. The reason that a de minimis value is added to define the impact of the constraint on the FTR is to ensure that a participant's FTR profits are not subject to forfeiture when there is no measurable impact on the FTR. There is and should be no lower bound on acceptable manipulation. No manipulation is acceptable.

The \$0.01 rule provides a screen based on a clear impact on an FTR path. The \$0.01 rule appropriately includes both the impact of the dfax and the impact of the shadow price on an FTR from a constraint. The dfax is a measure of the direct MW impact of the constraint on the FTR and the shadow price is a measure of the value of the impact.

⁸ VECO at 7-9; XO at 4.

Protesters appear to recognize that a rule is required to determine whether a binding constraint increased the value of an FTR but would use a 10 percent dfax rule rather than the \$0.01 test.⁹ Protesters' dfax only approach would permit an undefined level of manipulation which is clearly not consistent with the purpose of the rule. The 10 percent dfax approach focuses on the MW impact of the constraint on the FTR, but ignores the actual value, the shadow price, of the constraint. Both must be accounted for when measuring financial impact. The FTR forfeiture rule as defined in PJM's April 18th Filing does that. The FTR forfeiture rule is designed to prevent all manipulation of FTR values, not just those FTRs that are close to the constraint. The \$0.01 rule meets that objective.

3. The \$0.01 Rule Is Part of a Framework Designed to Prevent Manipulation.

Protesters complain that the \$0.01 rule will catch virtual activity that is not manipulative.¹⁰ Protesters' assertions are incorrect.

The \$0.01 rule is part of a framework of screens designed to prevent manipulation. All the screens must be failed before a triggering constraint causes a forfeiture of a related FTR's profit. The virtual portfolio must have a significant impact on a constraint, greater than or equal to ten percent. The impact of the portfolio on the constraint must be in the direction that increases the value of the FTR. The value of the FTR in the day-ahead market must be greater than in the real-time market.

4. The Possibility That Profitable Virtual Bids Will Trigger Forfeiture is Irrelevant

The Protesters complain that the \$0.01 rule "increases the likelihood of significantly profitable and convergence-driving virtual trades being penalized for a divergent FTR path

⁹ VECO at 4, 8.

¹⁰ VECO at 7, 10; Alpha P at 5.

which is only incidentally related to the virtual trades.”¹¹ The Protestors concerns are irrelevant. The purpose of the test is to detect and deter manipulation of FTR values through the use of virtual transactions.¹²

The Commission has clearly stated that there should not be an “exemption for virtual transactions that improve day-ahead and real-time market price convergence.”¹³ In addition, the Commission recognized “that the current exemption to forfeitures will be retained for FTRs where the difference in price between the source and sink of the FTR is less in the day-ahead market than the real-time market (i.e., “FTR path convergence”).”¹⁴

5. The \$0.01 Rule Is Not Punitive.

Protesters complain that the \$0.01 rule will cause forfeitures that are punitive and disproportionate to manipulative effect.¹⁵ Protesters’ assertions are incorrect.

The proposed FTR forfeiture rule is not punitive or disproportionate. The FTR forfeiture rule removes the benefits of using virtual trades to manipulate the value of FTRs. The rule thereby removes the incentive to attempt to manipulate. The FTR forfeiture rule avoids the burden of ex post individual investigations of market activity. The rule only requires a participant to forfeit profits, by hour, of affected FTRs. There is no additional penalty. Participants cannot lose money on an FTR as a result of the forfeiture of FTR profits.

¹¹ VECO p. 10

¹² January 19 Order at P 63

¹³ January 19th Order at P 65.

¹⁴ *Id.*

¹⁵ VECO at 9–10.

B. PJM’s Proposed Rule Will Not Discourage Beneficial Transactions.

Protesters claim that the PJM’s proposed rule will discourage participants with FTRs from engaging in beneficial virtual transactions.¹⁶ Protesters’ assertions are incorrect.

The proposed rule is more transparent than the rule it replaces and it will be easier for participants to steer clear of virtual activity that will manipulate the value of their FTR positions while pursuing profitable virtual strategies. As noted by the Commission, a portfolio based FTR forfeiture rule will not “mute price signals associated with the FTR forfeiture rule”, but “will appropriately discourage virtual traders from attempting to use virtual transactions to manipulate their FTR positions.”¹⁷ The Commission notes that a portfolio based FTR forfeiture rule will “also reduce the risk of a virtual traders triggering forfeiture for reasons outside their control.”¹⁸

C. Constraint Specific Forfeiture Is Not Appropriate Under the FTR Forfeiture Rule.

Protesters argue that FTR forfeiture should be based on the impact of the specific constraint that fails the ten percent test on an FTR, rather than the FTR profit. Protesters assert a basis for this position in the CAISO CRR Settlement Rule.¹⁹ Protesters are proposing to change a fundamental part of the FTR forfeiture rule as ordered by the Commission and not objecting to PJM’s compliance filing which is consistent with the order.

The CAISO CRR product and forfeiture rules are very different from the PJM FTR product and forfeiture rules. The Commission did not order PJM to implement CAISO’s CRR product or forfeiture rule. It does not make sense to attempt to graft a portion of the

¹⁶ XO at 6; Alpha P at 5–7, 11–12.

¹⁷ Commission @64.

¹⁸ *Id.*

¹⁹ VECO at 14; Alpha P at 8–9; XO at 11.

CAISO rule onto the PJM rule. Each is a coherent whole and the parts of each rule must work with the other parts to achieve the intended purpose.

Protesters' assertions are incorrect. Protesters' approach would not achieve the Commission's stated goal of detecting and deterring manipulative behavior. Unlike the CAISO's approach which results in the forfeiture of the full CLMP value of the constraint on the FTR, participants under the PJM rule only forfeit their FTR profits under the Commission's order. Under a constraint specific approach, forfeitures can exceed the profits, resulting in a negative net FTR position.

The forfeiture rule, as proposed by PJM, would result in forfeiting only the profit. The entire profit, but only the profit, of the FTR is the appropriate forfeiture amount to deter manipulative behavior.

D. Forfeitures Based on FTR Portfolios Would Treat Individual FTRs Unequally and Would Provide Opportunities to Manipulate the Market.

XO argues (at 3–4) that the FTR's should be treated on a portfolio basis. XO argues (at 4) that FTRs should be evaluated on a portfolio basis rather than on an individual basis, because the participant's virtual position may positively affect the value of one FTR in a portfolio while simultaneously decreasing the value of another FTR position. XO's argument has no merit.

XO's proposal would create opportunities to mask the manipulation of individual FTRs and would result in the discriminatory treatment of specific FTRs paths based on whether or not they were part of a portfolio. Under XO's proposal an FTR in a portfolio could be shielded from forfeiture despite manipulative behavior although the same FTR outside a portfolio would not be.

E. Hourly Forfeitures Are Appropriate.

Protesters argue that FTR forfeiture rule should not be based on hourly results, but across longer periods.²⁰ Protesters' assertions about the nature of PJM markets are incorrect as are the conclusions derived from these incorrect premises.

Protesters' argument is that hourly differences in day-ahead and real-time LMP are irrelevant and that therefore price convergence should not be measured on hourly basis for purposes of determining FTR forfeitures.²¹ This is nonsensical. PJM's day-ahead market is cleared on an hourly basis. FTR target allocations and costs are calculated on an hourly basis.

The value of FTRs can be manipulated in each hour. Using averages could only serve to conceal hourly manipulation.

F. Constraint Limits From Day-Ahead Market Should Be Used As the Basis of FTR Forfeiture Analysis.

Protesters argue that PJM should use the physical limits of binding constraints as the basis for determining whether a market participant accounts for more than ten percent of the flow on a constraint.²² Protesters argue that "[t]he Commission required PJM to use the 'physical limit of a binding constraint' as the denominator in the triggering percentage calculation."²³ Protesters note, however, that PJM proposes to use Firm Flow Entitlements ("FFE") limitations for flowgates that are jointly managed with MISO. The FFE levels can be less than the physical limits of the related constraint.²⁴ Protesters' assertion is incorrect.

²⁰ Alpha P at 6-7; XO at 2.

²¹ Alpha P at 7-8.

²² VECO at 3.

²³ VECO at 18.

²⁴ VECO at 18-19.

The day-ahead market includes line limits as determined by PJM. These may or may not match real time physical limits. As the FTR is evaluated relative to the day-ahead market, the only transmission limits that can be used in the FTR forfeiture rule are those actually used in the day-ahead market. Virtual transactions are valued based on the limits in the day-ahead market. FTRs are valued at hourly nodal prices in the day-ahead market, which are based on the limits in the day-ahead market. The rule is designed to capture the actual impacts of participants' actions in the day-ahead market. As a result, the actual features of the day-ahead market are the only way to evaluate those impacts.

In the actual clearing of the day-ahead market, transmission limits are frequently not equal to the physical or FFE values. The day-ahead limits, as defined and actually used by PJM in clearing the day-ahead market, determine the value of virtual transactions and FTRs and determine the distribution factors that define the impact of constraints on FTRs. As a result, the use of the actual day-ahead limits is the only way to accurately represent the impacts of virtual transactions on a constraint and the impacts of that constraint on FTRs.

E. The Percentage Threshold Should Be Stated in PJM's Tariff.

Protesters suggest that PJM's forfeiture rule thresholds, and exceptions, should be part of the PJM tariff. Protesters argue that participants should be given notice before any changes to these thresholds and there should be rules defining the basis for the exercise of any allowed exceptions to the approved thresholds.²⁵

The Market Monitor agrees. PJM's forfeiture rule thresholds and exceptions (where the threshold tests should be made more sensitive) constitute key terms and conditions and should be part of the PJM tariff so that they are subject to Commission review. Market transparency and efficiency requires clearly defined rules, including any broad basis for applying any increased sensitivity exceptions to those rules.

²⁵ VECO at 15.

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.²⁶ In this answer, the Market Monitor provides the 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.

²⁶ See, e.g., *PJM Interconnection, 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).

III. CONCLUSION

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

Respectfully submitted,



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Dated: May 31, 2017

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 31st day of May, 2017.



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