

175 FERC ¶ 61,137  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Richard Glick, Chairman;  
Neil Chatterjee, James P. Danly,  
Allison Clements, and Mark C. Christie.

PJM Interconnection, L.L.C.

Docket Nos. ER17-1433-001

XO Energy, LLC, XO Energy MA, LP, and XO Energy  
MA2, LP v. PJM Interconnection, L.L.C.

EL20-41-000  
(Not Consolidated)

ORDER REJECTING COMPLIANCE FILING, DIRECTING FURTHER  
COMPLIANCE, AND DISMISSING COMPLAINT

(Issued May 20, 2021)

1. On April 18, 2017, as amended June 2, 2017, and in compliance with the Commission's January 19, 2017 Order,<sup>1</sup> which found that PJM Interconnection, L.L.C.'s (PJM) application of its Financial Transmission Rights (FTR)<sup>2</sup> forfeiture rule (FTR Forfeiture Rule) to virtual transactions<sup>3</sup> was no longer just and reasonable, PJM submitted modifications to its Amended and Restated Operating Agreement (Operating

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<sup>1</sup> *PJM Interconnection, L.L.C.*, 158 FERC ¶ 61,038 (2017) (January 2017 Order).

<sup>2</sup> An FTR is a financial instrument that entitles the holder to receive compensation for Transmission Congestion Charges that arise when the transmission grid is congested in the Day-ahead Market and differences in Day-ahead Congestion Prices result from the dispatch of generators out of merit order to relieve the congestion. Each FTR is defined from a point of receipt (where the power is injected onto the PJM grid) to a point of delivery (where the power is withdrawn from the PJM grid). For each hour in which congestion exists on the Transmission System between the receipt and delivery points specified in the FTR, the holder of the FTR is awarded a share of the Transmission Congestion Charges collected from the Market Participants. *See* PJM Manual 6 (Financial Transmission Rights), § 1.1.

<sup>3</sup> As described below, there are three types of virtual transactions in PJM: Incremental Offers (INCs), Decrement Bids (DECs), and Up-To Congestion transactions (UTCs).

Agreement) and its Open Access Transmission Tariff (Tariff or OATT) (Compliance Filing and Amended Compliance Filing, respectively) (together, Compliance Filings).<sup>4</sup>

2. On April 8, 2020, XO Energy LLC (with XO Energy MA, LP and XO Energy MA2, LP) (together, XO Energy), pursuant to sections 206 and 306 of the Federal Power Act (FPA),<sup>5</sup> filed a complaint (Complaint) against PJM contending that: (1) the FTR Forfeiture Rule, as implemented, is so broad that it captures competitive market conduct and leads to less efficient market outcomes; and (2) cannot detect financial leverage or assess intent to profit from illegitimate trading activity, and, as a result, the FTR Forfeiture Rule is unjust and unreasonable. As relief, XO Energy seeks refunds dating back to the FTR Forfeiture Rule's implementation.<sup>6</sup>

3. As discussed below, we reject PJM's Compliance Filings, finding that a component of PJM's proposed FTR Forfeiture Rule trigger mechanism is unjust and unreasonable. We thus direct PJM to submit a compliance filing within 60 days of the date of this order to establish a just and reasonable replacement rate that proposes either a different threshold, or an alternative approach to triggering forfeiture, that strikes a more appropriate balance between deterring manipulative behavior and not burdening legitimate hedging activity. We also require PJM to include in its compliance filing information to enable the Commission to determine whether the equities warrant refunds and surcharges as a result of implementing the FTR Forfeiture Rule modified as of January 2017.

4. In addition, because we reject the Compliance Filings, we find that the Complaint is moot as it challenges a rate that is not in effect.

## **I. Background**

### **A. PJM's FTR Forfeiture Rule**

5. In 2000, PJM established the FTR Forfeiture Rule for INCs and DEC<sup>7</sup> in order to prevent market participants from using virtual transactions to create congestion that

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<sup>4</sup> PJM proposes identical revisions to its Operating Agreement, Sched. 1 and Tariff, Attach. K-App.

<sup>5</sup> 16 U.S.C. §§ 824e, 825e (respectively).

<sup>6</sup> XO Energy states that beginning in September 2017, PJM retroactively billed forfeitures from January 2017 in accordance with the Compliance Filing. Compl. at 9.

<sup>7</sup> An INC is a virtual offer to sell energy at a specified source location in the day-ahead market. A cleared INC results in scheduled generation at the specified location in the day-ahead market. A DEC is defined as a bid to purchase energy at a specified sink

benefits their related FTR positions. Under the FTR Forfeiture Rule, an FTR holder forfeits the profit from its FTR when it submits a virtual transaction at or near the source or sink location of the FTR that results in a higher locational marginal price (LMP) spread in the day-ahead energy market than in the real-time energy market.<sup>8</sup>

6. In order to evaluate whether a market participant's virtual transaction affects its FTRs, PJM estimates how energy injected (or withdrawn) for the virtual transaction impacts the system as it is withdrawn (or injected) elsewhere on the system. For INCs and DEC's, PJM selects the corresponding location that it deems to be the worst-case scenario, i.e., the corresponding location that results in the highest percentage of the transaction's total energy flowing over the constraint related to the FTR path.

7. The FTR Forfeiture Rule has a 75% trigger threshold; that is, the rule is triggered if the net distribution factor (dFAX) between the transaction bus and the worst-case scenario bus is at least 0.75 (i.e., at least 75% of the energy flowing between those two points is reflected in the constrained FTR path).<sup>9</sup>

**PJM's Filing in Docket No. ER13-1654-000 and the Section 206 Investigation in Docket No. EL14-37-000**

8. On June 10, 2013, in Docket No. ER13-1654-000, PJM filed revisions to its Tariff and Operating Agreement to define UTCs as virtual transactions and to clarify the rules concerning the use of such transactions.<sup>10</sup> PJM also proposed to extend the application of the FTR Forfeiture Rule from INCs and DEC's to also apply to UTCs. On August 9, 2013, the Commission accepted PJM's proposal on condition that PJM submit a

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location in the PJM day-ahead market. A cleared DEC results in scheduled load at the specified location in the day-ahead market. PJM, Intra-PJM Tariffs, Operating Agreement, Sched. 1, §§ 1.3.1E, 1.3.9A. At the time, UTCs were not defined as virtual transactions in PJM and thus were not covered under the FTR Forfeiture Rule.

<sup>8</sup> See PJM, Intra-PJM Tariffs, OA Sched 1 Sec 5.2, OA Sched 1 Sec 5.2 Transmission Congestion Credit Cal (11.1.3), § 5.2.1(b).

<sup>9</sup> See January 2017 Order, 158 FERC ¶ 61,038 at P 27.

<sup>10</sup> A UTC is a bid in the day-ahead market to buy congestion and losses between two points. PJM defines a UTC as a virtual transaction that combines an offer to simultaneously sell energy at a specified source with a bid to buy the same megawatt quantity of energy at a specified sink in the day-ahead market, where such transaction specifies the maximum difference between the LMPs at the source and sink that the market participant is willing to pay. PJM, Intra-PJM Tariffs, OATT ATT K APP Sec 1.10, OATT Attach K App Sec 1.10 - Scheduling (36.0.0), § 1.10.1A(c-1).

compliance filing setting forth, among other things, an explanation of how it intended to apply the FTR Forfeiture Rule to UTC transactions.<sup>11</sup> PJM submitted the compliance filing on September 6, 2013. On December 18, 2013, Commission staff issued a data request seeking further information regarding the application of the FTR Forfeiture Rule. On January 16, 2014, PJM submitted its answers to the request.

9. On August 29, 2014, in Docket No. EL14-37-000, the Commission found that PJM's filings in Docket No. ER13-1654 raised, but did not resolve, issues concerning its proposed treatment of UTCs as virtual transactions and, in particular, its proposal to apply the FTR Forfeiture Rule differently to UTCs and to INCs and DECs. The Commission instituted an investigation, pursuant to FPA section 206,<sup>12</sup> into the justness and reasonableness of provisions in PJM's Tariff and Operating Agreement relating to the application of the FTR Forfeiture Rule to UTC transactions.<sup>13</sup> As part of the FPA section 206 investigation, the Commission convened a technical conference on January 7, 2015, to explore the issue further. The technical conference sought input from parties on every major aspect of the FTR Forfeiture Rule's design, including: (1) whether to review individual virtual transactions or portfolios of virtual transactions; (2) which virtual transactions may instigate FTR forfeiture, or be part of a portfolio; (3) whether the FTR Forfeiture Rule should continue to look at the worst-case scenario bus used to determine the impact of a virtual transaction on an FTR path;<sup>14</sup> and (4) at what level the trigger threshold for FTR forfeiture should be set.

### C. January 2017 Order

10. After reviewing the information received from interested parties, the Commission issued its January 2017 Order, which found that PJM's application of the FTR Forfeiture

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<sup>11</sup> *PJM Interconnection, L.L.C.*, 144 FERC ¶ 61,121 (2013).

<sup>12</sup> 16 U.S.C. § 824e.

<sup>13</sup> *PJM Interconnection, L.L.C.*, 148 FERC ¶ 61,144 (2014).

<sup>14</sup> As noted above, under the current FTR Forfeiture Rule, since INCs and DECs are transacted at a single location, PJM selects the corresponding location deemed to be the worst-case scenario to evaluate whether a market participant's virtual transaction affects its FTRs. However, under PJM's proposal to extend the rule to UTCs, PJM proposed to not apply this requirement to UTCs since, by definition, UTCs consist of two points, i.e., an injection point (source) and a withdrawal point (sink). Accordingly, PJM proposed to consider the path of the transaction itself to determine whether the 75% threshold is triggered. *See* January 2017 Order, 158 FERC ¶ 61,038 at PP 26, 28.

Rule to virtual transactions was no longer just and reasonable.<sup>15</sup> To establish the just and reasonable replacement rate, the Commission directed PJM to make several revisions to its Tariff and Operating Agreement within 90 days of the January 2017 Order, to be made effective as of the date of the January 2017 Order (i.e., January 19, 2017).<sup>16</sup>

11. First, the Commission stated that the net effect of a participant's entire portfolio – including INCs, DECs, and UTCs – accurately represents the effect of a market participant's virtual transactions on a constraint related to an FTR position. Therefore, the Commission directed PJM to revise its Tariff to evaluate the net impact of a market participant's entire portfolio of virtual transactions on its FTR positions.<sup>17</sup>

12. Second, the January 2017 Order directed PJM to include virtual transactions and FTRs sinking or sourcing at Zones, Hubs and Interfaces in its evaluation of whether to trigger the FTR Forfeiture Rule. The January 2017 Order also directed PJM to apply the FTR Forfeiture Rule to counterflow FTRs<sup>18</sup> and include them in a portfolio's evaluation because their value can be increased by virtual transactions.<sup>19</sup>

13. Third, the Commission found that the load-weighted reference bus is an appropriate and accurate reference to use in calculating power flows across constraints because PJM's day-ahead market optimization calculates system energy components and

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<sup>15</sup> In a concurrently issued order, the Commission accepted PJM's compliance filing relating to its proposal in Docket No. ER13-1654 to clarify the use of UTCs as virtual transactions and extend the FTR forfeiture rule to UTCs, effective August 9, 2013. *PJM Interconnection, L.L.C.*, 158 FERC ¶ 61,039 (2017).

<sup>16</sup> January 2017 Order, 158 FERC ¶ 61,038 at P 4.

<sup>17</sup> *Id.* PP 57-58.

<sup>18</sup> An FTR that provides a right to a stream of revenues to the holder based on the value of congestion across a defined pathway is described as a prevailing flow FTR, whereas a holder of a counterflow FTR assumes the obligation to pay actual congestion costs on a defined pathway. The holder of a counterflow FTR assumes the risk that the delivered price of electricity at the sink point of the pathway might be higher than the price at the source point of the pathway and is paid an amount out of the FTR auction for taking on the congestion risk. Thus, a counterflow FTR typically has a negative financial value, meaning that a party who acquires a counterflow FTR is paid a price out of the auction for assuming the congestion risk associated with the counterflow position. Holders of counterflow FTRs earn revenue when congestion flows in the opposite direction of the prevailing flow. *Id.* P 68.

<sup>19</sup> *Id.* PP 63, 73.

congestion components of LMP relative to a load-weighted reference bus. The Commission stated that using the load-weighted reference bus for the FTR Forfeiture Rule is consistent with how power flows across the system each hour.<sup>20</sup> Accordingly, the Commission directed PJM to revise its Tariff to measure the portfolio's net impact using the load-weighted reference bus, as opposed to the worst-case scenario bus.

14. Fourth, the January 2017 Order directed PJM to implement a trigger threshold based on the total MW limit of a binding constraint related to the FTR path. Specifically, the Commission found that, 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.<sup>21</sup>

15. Finally, the January 2017 Order found that PJM should consider all virtual transactions held by entities that share common ownership as part of the same portfolio.<sup>22</sup>

## II. PJM's Compliance Filings

16. PJM proposes to implement a portfolio approach and apply the FTR Forfeiture Rule to all FTRs.<sup>23</sup> Specifically, proposed section 5.2.1(b) states:

If an Effective FTR Holder between specified delivery and receipt buses acquired the Financial Transmission Right in a Financial Transmission Rights auction (the procedures for which are set forth in Section 7 of this Schedule 1) and had a Virtual Transaction portfolio which includes Increment Offer(s), Decrement Bid(s) and/or Up-to Congestion Transaction(s) that was accepted by the Office of the Interconnection for an applicable hour in the Day-ahead Energy Market, whereby the *Effective FTR Holder's Virtual Transaction portfolio* resulted in (i) a difference in Locational Marginal Prices in the Day-ahead Energy Market between such delivery and receipt buses which is greater than the difference in Locational Marginal Prices between such delivery and receipt buses in the Real-time Energy Market,

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<sup>20</sup> *Id.* P 59.

<sup>21</sup> *Id.* P 60.

<sup>22</sup> *Id.* P 61.

<sup>23</sup> Compliance Filing at 4 (citing proposed sections 5.2.1(b) and (c)).

and (ii) an increase in value between such delivery and receipt buses, then the Market Participant shall not receive any Transmission Congestion Credit, associated with such Financial Transmission Right in such hour, in excess of one divided by the number of hours in the applicable month multiplied by the amount that the Market Participant paid for the Financial Transmission Right in the Financial Transmission Rights auction. *For the purposes of this calculation, all Financial Transmission Rights of an Effective FTR Holder shall be considered.*<sup>24</sup>

17. PJM also proposes to use a load-weighted average reference bus for determining power flows.<sup>25</sup> In response to the directive that the rule must apply to entities that share common ownership, PJM states that it made that change as part of a Tariff, Operating Agreement, and Reliability Assurance Agreement cleanup and clarification filing, which was accepted by the Commission, during the pendency of the Commission's FPA section 206 investigation.<sup>26</sup> Specifically, PJM states that, for purposes of the FTR Forfeiture Rule, PJM added a new term, "Effective FTR Holder," to ensure all entities under common ownership or control will be monitored for purposes of the FTR Forfeiture Rule.<sup>27</sup>

18. With respect to the trigger for FTR forfeiture, PJM proposes a two-step process (FTR Trigger Threshold).<sup>28</sup> First, PJM states that it will look to see if the net flow of an Effective FTR Holder's portfolio of virtual transactions has an "appreciable impact" on the physical limit of any binding constraint (Constraint Impact Test). PJM proposes to

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<sup>24</sup> PJM, Intra-PJM Tariffs, OA Sched 1 Sec 5.2, OA Sched 1 Sec 5.2 Transmission Congestion Credit Cal (11.1.3), § 5.2.1(b) (Transmission Congestion Credit Calculation) (11.1.3); PJM, Intra-PJM Tariffs, OATT ATT K APP Sec 5.2, OATT Attach K App Sec 5.2 Transmission Congestion (11.1.3), § 5.2.1(b) (emphasis added).

<sup>25</sup> Compliance Filing at 4 (citing proposed sections 5.2.1(b) and (c)).

<sup>26</sup> *Id.* at 5 (citing *PJM Interconnection, L.L.C.*, 155 FERC ¶ 61,303 (2016)).

<sup>27</sup> *Id.* at 5-6.

<sup>28</sup> PJM does not propose to modify the requirement under the existing tariff that an FTR holder forfeits the profit from its FTR when it submits a virtual transaction at or near the source or sink location of the FTR that results in a higher LMP spread in the day-ahead energy market than in the real-time energy market. *See* PJM, Intra-PJM Tariffs, OA Sched 1 Sec 5.2, OA Sched 1 Sec 5.2 Transmission Congestion Credit Cal (11.1.3), § 5.2.1(b).

define “appreciable impact” in PJM Manual 6 to mean, in most circumstances, 10%. However, PJM states that it may define a different value under certain circumstances such as where there may be constraint voltage levels or outage conditions that may isolate an FTR path (i.e., a radial path).<sup>29</sup> Second, PJM states that once it determines that a binding constraint is appreciably impacted by the net flow of an Effective FTR Holder’s portfolio of virtual transactions, it will determine if the net flow increases the value of an FTR by one cent (\$0.01) or greater (FTR Impact Test).<sup>30</sup> PJM states that any FTR profits associated with inefficient virtual trading, i.e., those FTR paths for which the day-ahead energy market value of the path diverges from real-time energy market congestion, should be forfeited because in such a case an inefficient arbitrage directly resulted in FTR profits.<sup>31</sup> Specifically, PJM proposes the following language in sections 5.2.1(c)-(d):

(c) For purposes of Section 5.2.1(b) an Effective FTR Holder’s Virtual Transaction portfolio shall be considered if the absolute value of the attributable net flow across a Day-ahead Energy Market binding constraint *relative to the Day-ahead Energy Market load weighted reference bus* between the Financial Transmission Right delivery and receipt buses exceeds an *appreciable percentage, as defined in the PJM Manuals, of the physical limit of such binding constraint* [i.e., the Constraint Impact Test].<sup>32</sup>

(d) For purposes of Section 5.2.1(c) a binding constraint shall be considered if the binding constraint has a [*one cent*] *or greater impact* on the absolute value of the difference between the Financial Transmission Right delivery and receipt buses [i.e., the FTR Impact Test].<sup>33</sup>

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<sup>29</sup> Compliance Filing at 4 (citing proposed section 5.2.1(c)).

<sup>30</sup> *Id.* at 5 (citing proposed section 5.2.1(d)).

<sup>31</sup> *Id.*

<sup>32</sup> PJM, Intra-PJM Tariffs, OA Sched 1 Sec 5.2, OA Sched 1 Sec 5.2 Transmission Congestion Credit Cal (11.1.3), § 5.2.1(c); PJM, Intra-PJM Tariffs, OATT, Attach. K-App., § 5.2.1(c) (Transmission Congestion Credit Calculation) (11.1.3) (emphasis added).

<sup>33</sup> PJM, Intra-PJM Tariffs, OA Sched 1 Sec 5.2, OA Sched 1 Sec 5.2 Transmission Congestion Credit Cal (11.1.3), § 5.2.1(d); PJM, Intra-PJM Tariffs, OATT, Attach. K-App., § 5.2.1(d) (Transmission Congestion Credit Calculation) (11.1.3) (emphasis added).



19. On June 2, 2017, PJM submitted the Amended Compliance Filing to revise only the Constraint Impact Test to add further definition around “appreciable impact,” proposing the trigger to be the greater of 0.1 MW or 10% (or such other amount necessary as defined further in the manuals).<sup>34</sup> PJM proposes to amend section 5.2.1(c) in its initial proposed Tariff language as follows:

For purposes of Section 5.2.1(b), an Effective FTR Holder’s Virtual Transaction portfolio shall be considered if the absolute value of the attributable net flow across a Day-ahead Energy Market binding constraint relative to the Day-ahead Energy Market load weighted reference bus between the Financial Transmission Right delivery and receipt buses exceeds ~~an appreciable percentage, as defined in the PJM Manuals, of the physical limit of such binding constraint~~ the physical limit of such binding constraint by the greater of 0.1 MW or ten percent, or such other percentage under certain circumstances further defined in the PJM Manuals.<sup>35</sup>

20. PJM requests an effective date of January 19, 2017, consistent with the January 2017 Order.<sup>36</sup>

**A. Notice, Interventions, and Pleadings**

21. Notice of the Compliance Filing was published in the *Federal Register*, 82 Fed. Reg. 19,037 (Apr. 25, 2017), with interventions and protests due on or before May 9, 2017. Buckeye Power, Inc., American Municipal Power, Inc., Exelon Corporation, and North Carolina Electric Membership Corporation filed timely motions to intervene. VECO Power Trading, LLC (VECO), XO Energy, and Alphataraxia Palladium LLC (Alphataraxia) filed timely motions to intervene and protests. Monitoring Analytics, LLC, acting in its capacity as PJM’s Independent Market Monitor (Market Monitor) submitted a timely motion to intervene and comments. The Market Monitor, PJM, and VECO filed answers.

22. Notice of the Amended Compliance Filing was published in the *Federal Register*, 82 Fed. Reg. 26,677 (June 8, 2017), with interventions and protests due on or before

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<sup>34</sup> Amended Compliance Filing at 2-3.

<sup>35</sup> PJM, Intra-PJM Tariffs, OA Sched 1 Sec 5.2, OA Sched 1 Sec 5.2 Transmission Congestion Credit Cal (11.1.3), § 5.2.1(c); PJM, Intra-PJM Tariffs, OATT, Attach. K-App., § 5.2.1(c) (Transmission Congestion Credit Calculation) (11.1.3) (emphasis added).

<sup>36</sup> Amended Compliance Filing at 4.

June 23, 2017. The Financial Marketers Coalition submitted a timely motion to intervene and protest. XO Energy and VECO submitted protests. The Market Monitor submitted an answer. PJM submitted a statement of support of the Market Monitor's answer.

**B. Motion to Lodge**

23. On July 1, 2019, Exelon and NextEra (Exelon/NextEra) submitted a joint motion to lodge information in the record of the Compliance Filings, which included: (1) an analysis by PJM in January 2018 that showed that, for all 11 months in 2017 after implementation of the rule, forfeiture dollars increased with monthly differences between 2016 and 2017 ranging from \$223,799 to \$1,813,434, and, in total, forfeitures increased by \$9,106,767; (2) a sensitivity analysis by PJM in June 2018 that Exelon/NextEra argue demonstrated that the FTR Impact Test was capturing far more transactions than the prior test and creating significant increases in forfeitures and affected market participants; and (3) examples presented by Exelon/NextEra in PJM's stakeholder process where revenues associated with legitimate transactions were forfeited under the new rule because a virtual transaction located far from the constraint created one cent or more in increased value on multiple FTR paths. XO Energy, VECO, the Market Monitor, and Exelon/NextEra filed answers.

**C. Discussion**

**1. Procedural Matters**

24. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2020), the timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding.

25. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2020), prohibits an answer to a protest or answer unless otherwise ordered by the decisional authority. We accept all parties' answers and Exelon/NextEra's motion to lodge because they have provided information that assisted us in our decision-making process.

**2. Substantive Matters**

26. In requiring PJM to submit a filing in compliance with the Commission's January 19, 2017 Order, the Commission was determining the second component of a section 206 investigation: by determining the just and reasonable rate "to be thereafter observed."<sup>37</sup> As discussed below, we find that PJM's Compliance Filings generally comply with the January 2017 Order's directives to: (1) to use a portfolio approach when determining a

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<sup>37</sup> 16 U.S.C. § 824e(a).

market participant's virtual transactions' net impact on constraints related to its FTR positions; (2) apply the FTR Forfeiture Rule to all FTRs, including FTR counterflows; (3) use the load-weighted reference bus; and (4) consider all virtual transactions held by entities that share common ownership as part of the same portfolio, and are generally just and reasonable.

27. While we find certain aspects of PJM's proposed revisions are generally just and reasonable, we cannot accept PJM's Compliance Filings as the just and reasonable replacement rate because the one-cent FTR Impact Test, a major component of the Compliance Filings, is unjust and unreasonable as it fails to strike a reasonable balance between deterring manipulative behavior and not burdening legitimate hedging activity. We thus reject PJM's Compliance Filings and direct PJM to propose, within 60 days of the date of this order, a just and reasonable replacement rate that uses either a reasonable threshold for the FTR Impact Test or an alternative approach to triggering forfeiture that strikes a more appropriate balance between deterring manipulative behavior and not burdening legitimate hedging activity.

28. Because we reject the Compliance Filings, as discussed below, we find that the Complaint is moot as it challenges a rate that is not in effect.

**a. Portfolio Approach for Virtual Transactions**

29. We find that PJM's proposed Tariff revisions to apply the FTR Forfeiture Rule to a market participant's virtual transaction portfolio, including INCs, DECs, and UTCs, generally are consistent with the Commission's January 2017 Order's directive to use a portfolio approach when determining a market participant's virtual transactions' net impact on constraints related to its FTR positions and, with the exception of the FTR Impact Test, are generally just and reasonable. As we stated in the January 2017 Order, considering a market participant's entire virtual transaction portfolio accurately represents the effect of a market participant's virtual transactions on a constraint related to its FTR position and will take into consideration all of a market participant's virtual transactions, which may ultimately have offsetting positions.<sup>38</sup> Moreover, the use of a portfolio approach will have an additive nature when multiple virtual transactions impact the same constraint. We find that PJM's proposed portfolio approach appropriately takes into consideration all virtual transactions in a market participant's portfolio when determining whether FTR forfeiture is needed.

**b. Application of FTR Forfeiture Rule to all FTRs**

30. We also find that PJM's proposed Tariff revision stating that "[f]or purposes of this calculation, all Financial Transmission Rights of an Effective FTR Holder shall be

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<sup>38</sup> January 2017 Order, 158 FERC ¶ 61,038 at PP 57-58.

considered,” generally complies with the January 2017 Order’s directive to apply the FTR Forfeiture Rule to all FTRs, including FTR counterflows, and is generally just and reasonable. The January 2017 Order required PJM to modify its Tariff to include virtual transactions and FTRs sinking or sourcing at Zones, Hubs and Interfaces in its evaluation of whether to trigger the FTR Forfeiture Rule.<sup>39</sup> The January 2017 Order also required PJM to submit Tariff revisions to apply the FTR Forfeiture Rule to counterflow FTRs.<sup>40</sup> We find that PJM’s proposed Tariff language is inclusive of virtual transactions and FTRs sinking or sourcing at Zones, Hubs and Interfaces, as well as counterflow FTRs.

**c. Load-Weighted Reference Bus**

31. We find that PJM’s proposed Tariff revisions generally comply with the January 2017 Order’s directive to use the load-weighted reference bus in calculating power flows across constraints and are generally just and reasonable. As noted in the January 2017 Order, given that PJM’s day-ahead market optimization calculates system energy components and congestion components of LMP relative to a load-weighted reference bus, the load-weighted reference bus is an accurate reference to use in calculating power flows across constraints.<sup>41</sup> Accordingly, we find that PJM’s proposed use of the load-weighted reference bus for calculating power flows across a binding constraint is appropriate and consistent with how power flows across the PJM system each hour.

**d. Common Ownership**

32. With regard to the requirement in the January 2017 Order to apply the forfeiture rule to entities that share common ownership, we agree that PJM implemented, and the Commission accepted, that change as part of a clean-up Tariff filing,<sup>42</sup> and that no further Tariff changes are required.

**e. FTR Trigger Threshold**

33. PJM proposes a two-part FTR Trigger Threshold. As revised in its Amended Compliance Filing, first, PJM will look to see if the absolute value of the net flow attributed to an Effective FTR Holder’s portfolio of virtual transactions exceeds the physical limit of a day-ahead energy market binding constraint between the FTR delivery and receipt buses by the greater of 0.1 MW or 10%, or such other percentage under

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<sup>39</sup> *Id.* P 63.

<sup>40</sup> *Id.* P 73.

<sup>41</sup> *Id.* P 59.

<sup>42</sup> *PJM Interconnection, L.L.C.*, 155 FERC ¶ 61,303 (2016).

certain circumstances further defined in PJM Manual 6 (i.e., Constraint Impact Test).<sup>43</sup> Second, if PJM determines that the absolute value of the net flow exceeds the physical limit of the binding constraint by the greater of 0.1 MW or 10%, it will determine whether the net flow impacts the absolute value of an FTR (between the FTR delivery and receipt buses) by one cent or greater (i.e., FTR Impact Test).<sup>44</sup> If both conditions are met, then the Effective FTR Holder's portfolio of virtual transactions will be considered for purposes of determining whether the market participant must forfeit profit from its FTR.

34. We find that the Constraint Impact Test — a test to determine whether the absolute value of net flow attributed to a portfolio of virtual transactions exceeds the physical limit of a binding constraint by the greater of 0.1 MW or 10% — satisfies the requirement in the January 2017 Order that the trigger threshold must be based on the total MW limit of a binding constraint related to the FTR path, as well as the second criterion of the directive that the net flow must exceed a certain percentage of the physical limit of a binding constraint.

35. However, we find that the FTR Impact Test — a test to determine whether the net flow impacts the absolute value of an FTR by one-cent or greater — is not just and reasonable as it does not always reflect a material or significant increase in the value of an FTR to justify forfeiture of FTR profits. As we discuss further below in our response to specific protests, the FTR Impact Test is not just and reasonable because it includes a *de minimis* one-cent threshold that would likely result in an overly broad application of the FTR Forfeiture Rule, which may penalize holders of FTRs that are only incidentally affected by a virtual energy portfolio, including those engaged in legitimate hedging activity.

**i. FTR Impact Test**

**(a) Protests**

36. Protesters argue that PJM's proposed FTR Impact Test is unjust and unreasonable because it goes beyond the scope of the Commission's directives in the January 2017 Order and is vague, overly broad, and unduly punitive.<sup>45</sup> VECO contends that the FTR Impact Test is outside the scope of the Compliance Filing because the January 2017 Order makes no mention of this test, nor of any other criterion for the identification of

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<sup>43</sup> Compliance Filing at 4 (citing proposed section 5.2.1(c)).

<sup>44</sup> *Id.* at 5 (citing proposed section 5.2.1(d)).

<sup>45</sup> See XO Energy May 9, 2017 Protest at 1; Alphataraxia May 9, 2017 Protest at 1-3; VECO May 9, 2017 Protest at 1.

related FTR paths that would require forfeiture, and does not find the existing 10% test<sup>46</sup> to be unjust and unreasonable.<sup>47</sup> Therefore, VECO requests that the Commission direct PJM to continue to apply the existing 10% test for determining whether a binding constraint sufficiently influences an FTR path in order to be subject to forfeiture.<sup>48</sup> VECO notes that while no single threshold can anticipate every possible circumstance of whether a path is or is not related to a constraint, the existing 10% test provides reasonable assurance that the binding constraint has contributed materially to the path's value.<sup>49</sup>

37. XO Energy argues that PJM's description of a binding constraint and its impact on an FTR is vague and clarification is needed.<sup>50</sup> XO Energy explains that PJM uses the absolute value of attributable flow in the Constraint Impact Test and absolute value of dollar differences between an FTR source and sink in the FTR Impact Test, but, in so doing, does not accurately describe what constitutes a prevailing flow or counterflow position. For example, XO Energy states that if the percentage of attributable flow is 10% in the prevailing direction, but the FTR value decreased by one cent, PJM's use of absolute values would incorrectly pair these activities together.<sup>51</sup>

38. XO Energy, Alphataraxia, and VECO argue that use of both the Constraint Impact Test's 10% threshold and FTR Impact Test's one-cent valuation is an overly broad, stringent application of the rule that does not consider the real-world interactions of everyday transactions in the market.<sup>52</sup> VECO contends that a one-cent impact cannot

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<sup>46</sup> VECO clarifies that it refers not to the 10% threshold included in PJM's proposed Constraint Impact Test, but to an existing mechanism that is not in the Tariff but that is used by PJM to establish whether a binding constraint is between the source and sink of an FTR for purposes of determining which FTRs are candidates for forfeiture on a given constraint. According to VECO, under this rule, if the FTR path impacts the constraint by 10% or more, the FTR would be a candidate for forfeiture. VECO May 9, 2017 Protest at 4-5 & n.5.

<sup>47</sup> *Id.* at 4.

<sup>48</sup> *Id.* at 6.

<sup>49</sup> *Id.* at 8.

<sup>50</sup> XO Energy May 9, 2017 Protest at 8-9.

<sup>51</sup> *Id.* at 8.

<sup>52</sup> *Id.* at 4, 6-7; Alphataraxia May 9, 2017 Protest at 5; VECO May 9, 2017 Protest at 6; XO Energy June 23, 2017 Protest at 6.

reasonably be deemed to be a “clear impact” on an FTR path, but instead reflects only the most incidental and *de minimis* connection between a constraint and an FTR path.<sup>53</sup> VECO contends that the majority of incidental, indirect overlaps between a virtual energy portfolio and an FTR position, where the former could be seen as very slightly increasing the value of the latter, do not amount to cross-product manipulation.<sup>54</sup> VECO argues that the dramatic increase in forfeitures resulting from the proposed FTR Impact Test would expand the scope of the FTR Forfeiture Rule beyond the Commission’s intent and would penalize FTRs that are only incidentally affected by a virtual energy position due to the networked nature of the transmission system.<sup>55</sup> VECO argues that bright-line tests with criteria as low as the 0.1 MW trigger result in outcomes governed by vagaries of the load-weighted reference bus rather than actual market impacts. VECO argues that forfeitures should be triggered by the actual impact a virtual energy portfolio has on the value of a related FTR, not by system “noise.”<sup>56</sup> The Financial Marketers Coalition similarly argues that PJM’s proposal conflicts with the finding in the January 2017 Order that “forfeits should be limited to those who actually increase the value of their FTR positions.”<sup>57</sup>

39. Protesters also argue that PJM’s proposal would result in high forfeiture amounts that are unjust and unreasonable and unduly punitive. For instance, XO Energy claims that FTRs are impacted by all binding constraints in the day-ahead market and the value is derived from all of the constraints. XO Energy states that the proposed Tariff revisions would result in an FTR participant forfeiting the entire value of an FTR, given that one of the contributing constraints increased the value by one cent or more.<sup>58</sup> Protesters further argue that market participants should not be required to forfeit the entire value of the FTR

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<sup>53</sup> VECO May 9, 2017 Protest at 6, 13.

<sup>54</sup> VECO June 23, 2017 Answer at 6.

<sup>55</sup> VECO May 9, 2017 Protest at 13; VECO June 23, 2017 Answer at 6.

<sup>56</sup> VECO June 23, 2017 Answer at 8.

<sup>57</sup> Financial Marketers Coalition June 23, 2017 Protest at 3 (citing January 2017 Order, 158 FERC ¶ 61,038 at P 58).

<sup>58</sup> XO Energy May 9, 2017 Protest at 9. *See also* VECO June 23, 2017 Answer at 9-10.

path but should be limited to forfeiting only the amount that a day-ahead binding constraint impacts a participant's FTR portfolio.<sup>59</sup>

40. XO Energy, Alphataraxia, and VECO argue that PJM's proposal discourages market participants from engaging in both FTRs and virtual transactions, which could reduce liquidity and competition in PJM's market.<sup>60</sup>

**(b) Answers**

41. The Market Monitor disagrees that the proposed FTR Trigger Threshold is outside the scope of the Compliance Filing, arguing that PJM's proposed approach uses a test for direction and a 10% threshold limit on a binding constraint, consistent with the directives of the January 2017 Order.<sup>61</sup> The Market Monitor notes that the one-cent 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.<sup>62</sup>

42. The Market Monitor explains that VECO's proposed use of the existing 10% dFAX approach focuses on the MW impact of the constraint on the FTR, but ignores the actual value, i.e., the shadow price, of the constraint. The Market Monitor argues that account must be taken of both aspects when measuring financial impact. The Market Monitor states that the one-cent value defines the impact of the constraint on the FTR to ensure that a market participant's FTR profits are not subject to forfeiture when there is no measurable impact on the FTR.<sup>63</sup> PJM contends that utilizing the one-cent threshold for this test ensures that any manipulation is captured.<sup>64</sup>

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<sup>59</sup> XO Energy May 9, 2017 Protest at 9; VECO May 9, 2017 Protest at 14; VECO June 23, 2017 Answer at 8; Alphataraxia May 9, 2017 Protest at 9; Financial Marketers Coalition June 23, 2017 Protest at 3.

<sup>60</sup> XO Energy May 9, 2017 Protest at 8; Alphataraxia May 9, 2017 Protest at 11; VECO May 9, 2017 Protest at 10; XO Energy June 23, 2017 Protest at 10-11; VECO June 23, 2017 Protest at 4, 7.

<sup>61</sup> Market Monitor May 31 Answer at 2 (citing January 2017 Order, 158 FERC ¶ 61,038 at P 60).

<sup>62</sup> *Id.* at 3; Market Monitor July 10, 2017 Answer at 2.

<sup>63</sup> Market Monitor July 10, 2017 Answer at 2, 4.

<sup>64</sup> PJM June 2, 2017 Answer at 4.



43. The Market Monitor states that the FTR Impact Test is just one part of several screens designed to prevent manipulation and all screens must be failed before a triggering constraint causes a forfeiture of a related FTR's profit. PJM similarly states that the proposed thresholds work together as a narrowly focused test and any one trigger cannot be isolated for scrutiny.<sup>65</sup> PJM and the Market Monitor argue that, to result in a forfeiture: (1) an Effective FTR Holder's virtual portfolio must have a significant impact on a day-ahead constraint, greater than or equal to 10%; (2) the impact of the virtual portfolio's net flow on the constraint must be in the direction that increases the value of the FTR by one cent or more; and (3) the value of the FTR in the day-ahead market must be greater than in the real-time market (as required under the existing Tariff).<sup>66</sup>

44. The Market Monitor disagrees with arguments that the proposed rules are not transparent and the thresholds are not appropriate. The Market Monitor contends that both the Constraint Impact Test and FTR Impact Test provide clear and transparent metrics for participants to gauge their own risks when assessing their virtual and FTR portfolios and to monitor their transactions. The Market Monitor states that PJM's proposal eliminates FTRs that may have benefited less than one cent from consideration, thus significantly reducing the quantity of potential FTR forfeitures. The Market Monitor further states that the 0.1 MW threshold also may eliminate very small net virtual impacts on constraints, again reducing the quantity of potential FTR forfeitures.<sup>67</sup>

45. The Market Monitor states that the FTR Impact Test is not punitive and only requires a participant to forfeit profits, by hour, of affected FTRs. The Market Monitor states that participants cannot lose money on an FTR as a result of the forfeiture of the FTR profits. Further, the Market Monitor states that PJM's proposed rule will not discourage beneficial transactions because it is more transparent than the rule it replaces. Participants will more easily steer clear of virtual activity that will manipulate the value of their FTR positions while pursuing profitable virtual strategies. The Market Monitor also states that the proposed forfeiture rule would result in forfeiting the entire profit, by hour, of the affected FTR, which is the appropriate forfeiture amount to deter manipulative behavior.<sup>68</sup>

46. The Market Monitor contends that the revisions are not seeking to limit virtual trading or FTR trading. The Market Monitor explains that the FTR Forfeiture Rule is designed to eliminate manipulation of FTRs via a participant's virtual portfolio, by

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<sup>65</sup> *Id.* at 2.

<sup>66</sup> Market Monitor May 31, 2017 Answer at 4; PJM June 2, 2017 Answer at 3-4.

<sup>67</sup> Market Monitor July 10, 2017 Answer at 2.

<sup>68</sup> Market Monitor May 31, 2017 Answer at 5-7.

removing the incentive to manipulate, and avoids the burden of *ex post* individual investigations of market activity.<sup>69</sup> The Market Monitor states that it is up to participants to determine their market strategy for participating in PJM's FTR and day-ahead market based on available information.<sup>70</sup>

**(c) Motion to Lodge Supplemental Comments**

47. Noting that PJM has been applying its proposed FTR Forfeiture Rule retroactive to January 19, 2017, Exelon/NextEra submitted a motion to lodge information on July 1, 2019. The information shows that, in January 2018, PJM presented an analysis, based on data for the 11-month implementation period in 2017, that showed an increase of total forfeiture dollars of \$9,106,767 from 2016 to 2017, ranging from a monthly difference of \$223,799 to \$1,813,434. Exelon/NextEra also present information that, in June 2018, PJM presented a sensitivity analysis that demonstrated that the proposed FTR Impact Test was capturing far more transactions than the prior test and creating significant increases in forfeitures. Finally, Exelon/NextEra note that during a PJM stakeholder process, they provided examples of instances in which revenues associated with legitimate transactions were forfeited under the new rule because a virtual transaction located far from the constraint created one cent or more in increased value on multiple FTR paths.<sup>71</sup>

48. Exelon/NextEra, XO Energy, and VECO state that this information supports arguments that the proposed FTR Forfeiture Rule goes beyond the January 2017 Order's directives in a manner that overly restricts legitimate transactions, causes severe increases in the level of forfeitures, and sets an unreasonably low threshold that is broadly capturing transactions that do not raise manipulation concerns. Exelon/NextEra state that they have ceased using virtual activity to mitigate risks associated with serving load because their simultaneous use of FTRs to hedge the congestion risk makes it easy for the virtual transactions to trigger the FTR Forfeiture Rule, resulting in significant unforeseen revenue forfeitures. VECO argues that market participants must curtail their virtual

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<sup>69</sup> *Id.* at 5.

<sup>70</sup> Market Monitor July 10, 2017 Answer at 4.

<sup>71</sup> Exelon/NextEra July 1, 2019 Mot. to Lodge at 6-10. Exelon/NextEra describe one example where Exelon made a 200 MW virtual trade at West hub, and the constraint was on the Roxana – Praxair 138 kV line for loss of the Wilton Center – Dumont 765 kV line. Exelon/NextEra state that the virtual trade created more than 3.7 MWs of additional flow on the constraint (10% of the day-ahead constraint limit) and increased the target allocations on multiple FTR paths by one cent or more, which resulted in a forfeiture of revenues of \$47,000 from FTRs that Exelon had used to hedge congestion from its generation assets. *Id.* at 9.

energy trading in order to avoid triggering the greater of 0.1 MW or 10% test on any constraint, because if a constraint is triggered, the one-cent FTR Impact Test is so sensitive that it can lead to forfeitures on many distant FTR paths that are difficult to predict prior to submitting virtual bids and offers.<sup>72</sup>

49. The Market Monitor answers that there is no basis for Exelon/NextEra's assertion that the proposed FTR Forfeiture Rule is discouraging market participants from engaging in legitimate and beneficial transactions. The Market Monitor states that FTRs are used by both physical and financial companies for a variety of reasons, but, market participants must also recognize that, regardless of motives, virtual transactions can and do have an impact on the value of FTRs.<sup>73</sup> The Market Monitor states that Exelon/NextEra base their argument that the proposed FTR Impact Test is too sensitive by comparing the magnitude of FTR forfeitures under the proposed rule to what FTR forfeitures would have been under the prior rule, which has been found to be unjust and unreasonable, between January and September 2017. The Market Monitor argues that a change in the level of forfeitures should be expected in the transition from the old to the new rule.<sup>74</sup> Further, the Market Monitor states that PJM retroactively billed forfeitures back to January 2017 but the forfeiture rule was unknown in the period of January to September 2017, and participants could not modify their past behavior for this period to avoid triggering the rule, thus resulting in higher forfeiture totals. The Market Monitor argues that after PJM started billing based on the new rule, there was a steady decline in monthly FTR forfeiture amounts due to participants appropriately modifying their market behavior to avoid triggering the FTR Forfeiture Rule.<sup>75</sup> The Market Monitor also states that the FTR Forfeiture Rule is based solely on dFAX values, which are an objective and direct measure of electrical distance on the transmission system, and that the geographical distance is irrelevant.<sup>76</sup>

**(d) Determination**

50. We find that PJM's proposed Tariff revisions to implement the FTR Trigger Threshold are unjust and unreasonable because the one-cent threshold is in an overly

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<sup>72</sup> *Id.* at 1-2, 10-11; Exelon/NextEra August 2, 2019 Answer at 2-9; XO Energy July 16, 2019 Answer at 3-4; VECO July 19, 2019 Answer at 5-8.

<sup>73</sup> Market Monitor July 18, 2019 Answer at 3-6.

<sup>74</sup> *Id.* at 6-9.

<sup>75</sup> *Id.* at 9-10.

<sup>76</sup> Market Monitor August 20, 2019 Answer at 1-8.

broad application of the FTR Forfeiture Rule that is likely to disrupt legitimate hedging activity without providing an increased level of deterrence of manipulative activity.

51. Protesters argue that PJM's proposed FTR Trigger Threshold is overly broad because the FTR Impact Test establishes a threshold that is too low and penalizes *de minimis*, incidental effects between a virtual energy portfolio and FTR position. We agree. The one-cent threshold under the proposed FTR Impact Test represents only an immaterial, *de minimis* increase in the value of the FTR, rather than any measure of meaningful increase in FTR value as was contemplated in the January 2017 Order. While market actors in this context would likely have little incentive to manipulate the market to yield such a *de minimis* increase in value, data on market forfeitures since the adoption of this threshold suggests that it will cause market participants to either pay forfeitures even when engaging in legitimate transactions, or else forego market activity that may be beneficial to customers. Protesters provide evidence that the one-cent threshold in the FTR Impact Test has significantly increased the level of forfeitures and can broadly capture transactions that may not raise manipulation concerns. For instance, protesters note that, from 2016 to 2017, after PJM implemented the proposed FTR Trigger Threshold, forfeitures under the FTR Forfeiture Rule increased by \$9,106,767. Evidence of significant forfeiture increases is further corroborated by PJM's sensitivity analysis presented in June 2018 that demonstrated that the proposed FTR Impact Test was capturing far more transactions than the prior test and creating significant increases in forfeitures.<sup>77</sup> Several protesters also argue that market participants must curtail their virtual energy trading in order to avoid triggering the Constraint Impact Test because if a constraint is triggered, the FTR Impact Test is so sensitive that it can lead to forfeitures on many electrically distant FTR paths that are difficult to predict prior to submitting virtual bids and offers.<sup>78</sup>

52. Based on this evidence, we find that PJM's proposed FTR Impact Test is unjust and unreasonable because it would likely result in an overly broad application of the FTR Forfeiture Rule. The *de minimis* one-cent threshold may result in forfeitures from incidental overlaps between a virtual energy portfolio and FTR position that would not amount to cross-product manipulation. PJM offers no support for a finding that such a *de minimis* impact creates the appropriate balance between identifying potential manipulation and not disrupting legitimate hedging activity. We recognize that it may be

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<sup>77</sup> Exelon/NextEra also note instances in which revenues associated with legitimate transactions were forfeited under the proposed rule because a virtual transaction located far from the constraint created a one cent or more increase in value on multiple FTR paths. See Exelon/NextEra July 1, 2019 Mot. to Lodge at 6-10

<sup>78</sup> *Id.* at 1-2, 10-11; Exelon/NextEra August 2, 2019 Answer at 2-9; XO Energy July 16, 2019 Answer at 3-4; VECO July 19, 2019 Answer at 5-8.

difficult to design a test that avoids triggering any forfeitures due to legitimate hedging activity. But while an appropriate balance may trigger some forfeiture due to potentially legitimate conduct, the record indicates that PJM's method could be adjusted to affect significantly less legitimate conduct while at the same time still providing deterrence to manipulative conduct. Thus, we direct PJM to propose within 60 days of the date of this order either a different threshold than the current *de minimis* one-cent threshold for the FTR Impact Test, or an alternative approach to triggering forfeiture that, like PJM's proposed FTR Impact Test, sufficiently deters manipulative behavior, but unlike PJM's proposal, does so without so significantly burdening legitimate hedging activity.

53. We disagree, generally, with arguments that the FTR Impact Test is outside the scope of the Compliance Filings because the January 2017 Order made no mention of such a criterion and did not require a change from the 10% threshold in the existing forfeiture rule. The "existing 10% threshold" that VECO references appears to refer to a practice by PJM, not within its Tariff, to identify FTR paths subject to forfeiture (i.e., Candidate FTRs) if the FTR path impacts the constraint by 10% or more, i.e., the absolute value of the difference of dFAX value from source to sink is 10% or greater (10% dFAX threshold).<sup>79</sup> We note that VECO states that such a threshold is not included in the PJM Tariff or Operating Agreement and, accordingly, there was no finding or requirement related to any such threshold in the January 2017 Order. PJM's proposed FTR Impact Test presumably replaces use of the 10% dFAX threshold to identify those FTR paths subject to forfeiture with a financial valuation test, i.e., one cent increase in value. Thus, we reject the argument that the FTR Impact Test is outside the scope of the compliance filing, as it was submitted to comply with the Commission's directive that, to trigger a forfeiture, the net flow across a given constraint attributable to a participant's portfolio must be in the direction consistent with *increasing the value* of the FTR.<sup>80</sup>

54. While the Market Monitor and PJM explain that several screens must be triggered before forfeiture can occur, we do not agree that this addresses the concern that the one-cent threshold likely will result in an overly broad application of the FTR Forfeiture Rule. Despite the series of screens, the FTR Impact Test still broadly captures transactions that may result in immaterial, *de minimis* increases in the value of an FTR. We disagree with PJM's conclusion that the one-cent FTR Impact Test, as part of several screens that narrowly apply forfeiture, cannot be isolated for scrutiny. The fact that other screens narrow the number of transactions subject to forfeiture does not negate the fact that an

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<sup>79</sup> See VECO May 9, 2017 Protest at 4-5 & n.5 (citing Monitoring Analytics, *FTR Forfeiture Educ.*, at 17 (Jan 28, 2014), [http://www.monitoringanalytics.com/reports/Presentations/2014/IMM\\_FTR\\_Forfeiture\\_Education\\_MIC\\_20140128.pdf](http://www.monitoringanalytics.com/reports/Presentations/2014/IMM_FTR_Forfeiture_Education_MIC_20140128.pdf))).

<sup>80</sup> See January 2017 Order, 158 FERC ¶ 61,038 at P 60.

overly broad FTR Impact Test still may erroneously capture significant legitimate hedging activity.

55. The Market Monitor argues that an FTR Forfeiture Rule can provide transparency if it establishes thresholds that allow market participants to understand how forfeiture may apply prior to participating in the PJM markets. Contrary to the Market Monitor, however, we find that clear rules alone do not necessarily allow market participants to easily predict what FTRs may be forfeited due to a virtual transaction. The evidence in the record demonstrates that the FTR Impact Test can result in forfeitures from FTR positions that are electrically distant from a market participant's virtual transactions, which creates scenarios where there is little transparency into how a market participant's virtual transactions may impact FTR positions. Further, we find this lack of transparency can discourage legitimate transactions because a market participant may be unable to determine whether its electrically distant FTR positions would be impacted by its virtual transactions.

56. In response to the Market Monitor, we find that while the FTR Forfeiture Rule, as proposed by PJM on compliance, may reduce the need for *ex post* individual investigations of market activity as the Market Monitor states, it does so by restricting legitimate market activity that provides value to market participants and ultimately to customers. A targeted FTR Forfeiture Rule would help deter manipulative activity without so significantly deterring legitimate hedging activity.

57. The Market Monitor states that the increase in FTR forfeitures, which results from comparing the difference in forfeitures under the proposed rule to forfeitures under the prior, unjust and unreasonable rule, should be expected in the transition from the old to the new rule. The Market Monitor also states that the significant increases in FTR forfeitures that protestors rely on are only due to the retroactive billing during January to September 2017, where participants could not modify their past behavior to avoid triggering the rule.

58. Simply because parties may adapt to a rule does not establish that the rule is just and reasonable. They may instead begin incurring less forfeiture because they have foregone legitimate hedging transactions that would have been beneficial. Moreover, while some level of change in forfeitures could be anticipated from a transition from an old rule to a new one, we find that the increase in magnitude of total forfeiture dollars here of \$9,106,767 to be a significant increase that cannot simply be explained by the transition. Of note, based on the data provided by PJM and included in the Motion to Lodge, forfeitures were higher under the proposed rule in November and December 2017, by \$315,977 and \$241,008 as compared with the comparable months prior to the initiation of the revised forfeiture rule, respectively. Because these two months occurred after the retroactive billing period, market participants were then on notice of the implementation of the proposed rule. We find that these increases provide persuasive

evidence that the one-cent threshold of the FTR Impact Test is likely overbroad in application. Regardless of whether market participants adjusted behavior, we cannot, based on the evidence, find the *de minimis* impact on FTR positions measured by the one-cent FTR Impact Test reasonably supports significant increases in forfeitures. Further, the increases in forfeitures support the conclusion that even when parties are aware of the rule, they may not be able to predict when such forfeitures would occur, a conclusion corroborated by the evidence noted above that forfeitures occur on FTR positions that are electrically distant from virtual transactions.

59. Protesters express concern about the use of absolute value of attributable flow and absolute value of dollar differences between an FTR source and sink because, when taken together, they do not accurately describe a prevailing flow or counterflow position. We disagree, finding that PJM's proposed language in section 5.2.1(b), which states that FTR forfeiture will result from "an increase in value between such delivery and receipt buses,"<sup>81</sup> makes clear that the virtual transaction portfolio and FTR would need to be in the same direction for forfeiture to occur.<sup>82</sup>

60. We also deny protesters' arguments that market participants should not forfeit all FTR profits when a forfeiture is triggered as an improper request for rehearing of the January 2017 Order. In the January 2017 Order, the Commission responded to these same arguments and found forfeiture of all FTR profits to be just and reasonable.<sup>83</sup> Although we provided PJM and its stakeholders with latitude in considering alternative forfeiture levels, PJM's proposal to forfeit all profits remains consistent with the January 2017 Order.<sup>84</sup>

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<sup>81</sup> PJM, Intra-PJM Tariffs, OA Sched 1 Sec 5.2, OA Sched 1 Sec 5.2 Transmission Congestion Credit Cal (11.1.3), § 5.2.1(b); PJM, Intra-PJM Tariffs, OATT, Attach. K-App., § 5.2.1(b) (Transmission Congestion Credit Calculation) (11.1.3) (emphasis added).

<sup>82</sup> Section 5.2.1(c) describes an initial screen to determine which portfolios will then be subject to the FTR Impact Test. PJM's proposed Tariff language in section 5.2.1(b) specifies that forfeiture would apply to "an increase in value," which would not apply to XO Energy's example, when a market participant's attributable flow that is 10% in the prevailing flow direction correlates with a decrease in the FTR value.

<sup>83</sup> January 2017 Order, 158 FERC ¶ 61,038 at P 82.

<sup>84</sup> *Id.*

**f. Constraint Impact Test**

**i. Protests**

61. Regarding the Constraint Impact Test, XO Energy, Alphataraxia, and VECO argue that PJM must include any and all changes to the FTR Forfeiture Rule in the proposed Tariff, which PJM is bound by, instead of a business practice manual, which it is not.<sup>85</sup> With respect to PJM's initial Compliance Filing outlining the Constraint Impact Test,<sup>86</sup> XO Energy and VECO argue that PJM failed to adequately define the percentage of the physical limit of a binding constraint that the net flow of a market participant's virtual energy portfolio position must equal or exceed in order to potentially trigger a forfeiture, as the Tariff only defines it as an "appreciable percentage" to be further defined in the business practice manual.<sup>87</sup> XO Energy argues, given the lack of clarity, it would be difficult, if not impossible, for market participants to avoid transactions that would trigger the proposed flow limit rule.<sup>88</sup> VECO contends that the absence of transparency allows PJM unfettered discretion to change the default percentage threshold or grant sweeping exceptions without Commission review.<sup>89</sup>

62. In its protest to PJM's Amended Compliance Filing,<sup>90</sup> the Financial Marketers Coalition notes that while PJM has incorporated language into its Tariff in response to

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<sup>85</sup> XO Energy May 9, 2017 Protest at 3; Alphataraxia May 9, 2017 Protest at 4-5; VECO May 9, 2017 Protest at 2.

<sup>86</sup> In the initial Compliance Filing, PJM proposed that it would determine whether the net flow of an Effective FTR Holder's portfolio of virtual transactions had an appreciable impact on the physical limit of any binding constraint. PJM proposed to define appreciable impact in PJM Manual 6 to mean, in most circumstances, 10%, but noted that it may define a different value under certain circumstances such as where there may be constraint voltage levels or outage conditions that may isolate an FTR path. Compliance Filing at 4.

<sup>87</sup> XO Energy May 9, 2017 Protest at 10; VECO May 9, 2017 Protest at 15 (citing January 2017 Order, 158 FERC ¶ 61,038 at P 60).

<sup>88</sup> XO Energy May 9, 2017 Protest at 10.

<sup>89</sup> VECO May 9, 2017 Protest at 16.

<sup>90</sup> In the Amended Compliance Filing, PJM proposes to further define "appreciable impact" in the Constraint Impact Test, such that PJM will determine whether the net flow of an Effective FTR Holder's portfolio of virtual transactions exceeds the physical limit of the binding constraint "by the greater of 0.1 MW or ten



arguments that key language should be contained in the Tariff and not the business practice manual, the amended Tariff language remains unduly vague and gives too much discretion to PJM. The Financial Marketers Coalition contends that both the “other such percentage” and the “certain circumstances” of PJM’s proposed Constraint Impact Test should be clearly set forth in PJM’s Tariff.<sup>91</sup>

63. VECO states that PJM proposes in its manual language to provide notice of exceptions to the default percentage threshold at the “earliest possible opportunity” but does not guarantee that such notice will occur before applicable bid deadlines. Therefore, VECO requests that, if the Commission allows PJM discretion to grant exceptions to the default percentage threshold of the Constraint Impact Test, PJM should be required to file Tariff language requiring it to: (1) post all exceptions at least one business day before the day-ahead market bidding deadline for a given operating day; and (2) provide specific information regarding the reason for the exception, location, duration, and the applicable lower threshold in such advance notice.<sup>92</sup>

64. The Market Monitor agrees that PJM’s forfeiture rule thresholds, and exceptions, should be part of the PJM Tariff because they constitute key terms and conditions that should be subject to Commission review.<sup>93</sup>

## ii. Answers

65. PJM disagrees with assertions that its proposal to provide PJM with the ability to determine an alternate threshold under some circumstances is vague and gives PJM too much discretion. PJM notes that, where virtual transactions increase the value of an FTR path on a radial line, it is likely an increase of net flow of much less than 10%, and possibly as little as 1%, could have an appreciable impact. PJM states that it is developing manual language to provide examples of the circumstances that could trigger the need for a lower percentage and, in such circumstances, PJM may confer with the Market Monitor and use the appropriate percentage threshold to mitigate the ability for Effective FTR Holders to engage in virtual transactions in a manner that results in cross-product manipulation. PJM contends that it is appropriate and consistent with the

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percent, or such other percentage under certain circumstances further defined in the PJM Manuals.” Amended Compliance Filing at 3 (emphasis added).

<sup>91</sup> Financial Marketers Coalition June 23, 2017 Protest at 2-3.

<sup>92</sup> VECO May 9, 2017 Protest at 17-18.

<sup>93</sup> Market Monitor May 31, 2017 Answer at 9.

Commission's policy regarding FTR forfeiture that PJM's rules allow for flexibility under certain circumstances.<sup>94</sup>

### iii. Determination

66. PJM amended its Tariff language to provide that, under the Constraint Impact Test, to potentially trigger a forfeiture, the net flow of a market participant's virtual energy portfolio position must exceed the physical limit of a binding constraint by greater than 0.1 MW or 10%, "or such other percentage under certain circumstances further defined in the PJM Manuals."<sup>95</sup> PJM amended this Tariff language in response to protests that PJM's proposal under its initial Compliance Filing (i.e., the net flow must exceed an "appreciable percentage" to be defined in a PJM business practice manual) failed to adequately define a percentage. Thus, we dismiss such protests as moot because PJM has specifically defined "appreciable percentage" in its Amended Compliance Filing as being the "greater of 0.1 MW or 10 percent."

67. We turn to remaining arguments that, even as amended, the proposed Tariff revisions provide too much discretion to PJM and that both the "such other percentage" and the "certain circumstances" detailing the exceptions should be clearly set forth in PJM's Tariff. We find that because the "such other percentage" and "certain circumstances" would be exceptions from the default "0.1 MW or 10 percent" trigger threshold that could result in the application of the FTR Forfeiture Rule, these provisions significantly affect the rates, terms, and conditions of FTRs and are key provisions that are subject to Commission review.<sup>96</sup> PJM states that its manuals will contain "examples"

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<sup>94</sup> PJM June 2, 2017 Answer at 6-7.

<sup>95</sup> PJM, Intra-PJM Tariffs, OA Sched 1 Sec 5.2, OA Sched 1 Sec 5.2 Transmission Congestion Credit Cal (11.1.3), § 5.2.1(c); PJM, Intra-PJM Tariffs, OATT, Attach. K-App., § 5.2.1(c) (Transmission Congestion Credit Calculation) (11.1.3).

<sup>96</sup> See, e.g., *Midcontinent Indep. Sys. Operator, Inc.*, 158 FERC ¶ 61,003, at P 69 (2017) (citing *PacifiCorp*, 127 FERC ¶ 61,144, at P 11 (2009); *City of Cleveland v. FERC*, 773 F.2d 1368, 1376 (D.C. Cir. 1985) (finding that utilities must file "only those practices that affect rates and service significantly, that are reasonably susceptible of specification, and that are not so generally understood in any contractual arrangement as to render recitation superfluous"); *Pub. Serv. Comm'n of N.Y. v. FERC*, 813 F.2d 448, 454 (D.C. Cir. 1987) (holding that the Commission properly excused utilities from filing policies or practices that dealt with only matters of "practical insignificance" to serving customers)); see also *Midwest Indep. Trans. Sys. Operator, Inc.*, 98 FERC ¶ 61,137, at 61,401, *clarification granted*, 100 FERC ¶ 61,262 (2002) ("It appears that the proposed Operating Protocols could significantly affect certain rates and services and as such are required to be filed pursuant to Section 205.").

of scenarios where an exception from the default trigger threshold will apply and, in such cases, it will confer with the Market Monitor to determine the appropriate percentage threshold. We disagree that PJM's request for flexibility is appropriate in this regard. For example, PJM could detail circumstances in its manuals imposing a more restrictive trigger threshold that results in forfeiture, which may be unknown to an Effective FTR Holder at the time when it develops its FTR position. Accordingly, to the extent that PJM proposes the Constraint Impact Test or a similar construct in its future compliance filing, we direct PJM to specify any "certain circumstances" and "such other percentage" that would be exceptions from the "0.1 MW or 10 percent" trigger threshold as part of its proposed Operating Agreement or Tariff revisions.<sup>97</sup> Finally, because we are requiring PJM to include these provisions in its Tariff on compliance, we deny as moot VECO's alternative request to impose advance notice and posting requirements for exceptions to the default percentage threshold.

**g. Proposed Revisions to the FTR Trigger Threshold**

**i. Protests**

68. Alphataraxia suggests that PJM revise its proposal to include a *de minimis* capacity test that looks at the amount of FTR exposure on the particular constraint, as well as a similar *de minimis* capacity test for virtual transactions on a particular constraint, to avoid forfeitures based on a *de minimis* position. Alphataraxia proposes that where FTR positions account for 10% or less, and virtual positions account for 5% percent or less of a constraint's capacity, these positions should be exempted from forfeiture as having a *de minimis* impact. Further, Alphataraxia proposes that where an Effective FTR Holder's average virtual transaction position exposure over the relevant holding period is greater than its FTR exposure, the positions should be exempt from forfeiture, given that market losses will self-correct the situation.<sup>98</sup>

69. Alphataraxia also argues that forfeitures should be considered each day by the holding period of the FTR, whether that be on-peak, off-peak or another period. Alphataraxia suggests readjusting the proposed 10% threshold that is applied on an hourly basis such that PJM would instead look at the average across the binding intervals of the constraint in question, potentially with a threshold set at a lower level.<sup>99</sup> Alphataraxia states that the solution to avoid punishing market-converging transactions is

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<sup>97</sup> We note that we direct PJM to submit either a revised FTR Impact Test or an alternative approach to triggering forfeiture (that may not include the Constraint Impact Test).

<sup>98</sup> Alphataraxia May 9, 2017 Protest at 12-13.

<sup>99</sup> *Id.* at 8.

to test whether the megawatts associated with the virtual transaction contributing positively to the net flow were independently profitable.<sup>100</sup>

**ii. Determination**

70. We do not require PJM to implement Alphataraxia's proposal to include a *de minimis* capacity test that looks at the amount of FTR exposure on the particular constraint or a similar *de minimis* capacity test for virtual transactions on a particular constraint. We also do not require PJM to exempt from forfeiture an Effective FTR Holder's positions where its virtual transaction position exposure is greater than its FTR exposure. We are not persuaded that these proposals are, at this time, necessary elements of the just and reasonable replacement rate. However, we will consider any such proposals that PJM, in consultation with stakeholders, may propose in its future compliance filing.

71. We continue to find that the hourly assessment of the FTR Forfeiture Rule is just and reasonable. This assessment is consistent with other relevant aspects of PJM's markets that are calculated on an hourly basis, including both the clearing of the day-ahead market and FTR target allocations and costs. Thus, we deny Alphataraxia's argument that we require forfeiture to be calculated on a peak, off-peak, or other period basis.

72. We reject Alphataraxia's argument that the FTR Forfeiture Rule should test for the independent profitability of virtual transactions as an improper request for rehearing of the January 2017 Order. This proposal was already contemplated in the January 2017 Order, which found that there should not be an exemption for virtual transactions that improve day-ahead and real-time market price convergence. Instead, the Commission found that the current exemption 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 should be preserved.<sup>101</sup>

**h. Other Protests**

**i. Net Effect on Entire FTR Portfolio**

**(a) Protest**

73. XO Energy states that while the proposed Tariff will result in the evaluation of a market participant's FTR portfolio on an individual FTR basis, it should consider the net

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<sup>100</sup> *Id.* at 6.

<sup>101</sup> January 2017 Order, 158 FERC ¶ 61,038 at P 65.

effect of the entire FTR portfolio. XO Energy argues that the proposed approach does not differentiate between leveraged FTR positions and those that are not leveraged. Stating that the purpose and intent of the FTR Forfeiture Rule is to prohibit cross-product manipulation by using virtual transactions to increase the value of the FTR, XO Energy asserts that if a participant's FTR portfolio position is less than a participant's day-ahead portfolio position, it is not possible for the unprofitable activity in the day-ahead market coupled with the FTR position to be profitable. XO Energy claims that only in the cases where an FTR position exceeds the day-ahead position can the FTR Forfeiture Rule be applied in a just and reasonable manner. XO Energy contends that failing to apply a portfolio approach to FTRs is unjust and unreasonable for the same reasons it was for virtual transactions in PJM's original rule.<sup>102</sup>

**(b) Answer**

74. PJM contends that the proposal to review an Effective FTR Holder's FTRs on a portfolio basis for the FTR Forfeiture Rule should be rejected as beyond the scope of the January 2017 Order. PJM argues that this proposal would not be consistent with the goals of the FTR Forfeiture Rule, which supports market power mitigation that must be performed at an individual FTR level to ensure each FTR is treated equally. PJM contends that FTR portfolios cannot be treated equally as they are built with prevailing flow and counterflow FTRs differently by each market participant and each FTR represents a unique constraint path that may be misrepresented by netting across a portfolio. PJM argues that applying the FTR Forfeiture Rule to an entire portfolio of FTR paths would cause incentives for members to build portfolios so virtual transactions could increase the value of certain paths while not increasing the value of the portfolio overall, which defeats the purpose of the FTR Forfeiture Rule.<sup>103</sup>

75. The Market Monitor similarly argues that forfeitures based on FTR portfolios 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.<sup>104</sup> The Market Monitor argues that an FTR in a portfolio could be shielded from forfeiture despite manipulative behavior although the same FTR outside a portfolio would not be.<sup>105</sup> The Market Monitor explains that, unlike virtual transactions, FTRs have no impact on the flow of energy or dispatch of the system. The Market

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<sup>102</sup> XO Energy May 9, 2017 Protest at 3-4.

<sup>103</sup> PJM June 2, 2017 Answer at 7-8.

<sup>104</sup> Market Monitor May 31, 2017 Answer at 7; Market Monitor July 10, 2017 Answer at 6.

<sup>105</sup> Market Monitor May 31, 2017 Answer at 7.

Monitor says there is no reason to consider virtual transactions individually for the FTR forfeiture calculation whose purpose is to evaluate manipulative increases in FTR value.<sup>106</sup>

**(c) Determination**

76. We reject the request to require PJM to evaluate the net effect of an Effective FTR Holder's FTR portfolio as an improper request for rehearing of the January 2017 Order. The January 2017 Order specifically directed PJM to evaluate the net impact of an Effective FTR Holder's portfolio of virtual transactions on its FTR positions, and it did not require PJM to evaluate the net effect of an Effective FTR Holder's portfolio of FTRs.<sup>107</sup> Moreover, as noted by the Market Monitor, FTRs have no impact on the dispatch or energy flow on the system either individually or cumulatively. By contrast, virtual transactions do impact dispatch and energy flow (and FTR values), and that impact is the result of the virtual transactions' cumulative effects. Additionally, we agree with the Market Monitor that using an FTR portfolio when determining FTR forfeitures would create opportunities to mask the manipulation of individual FTRs. As the Commission has previously stated, "leverage may play a part in a cross-product manipulation but it is not a necessary condition."<sup>108</sup> Thus, it is just and reasonable for PJM to evaluate the effects of virtual transactions as a portfolio, while evaluating the profitability of each FTR individually.

**ii. Firm Flow Entitlements**

**(a) Protest**

77. VECO argues that the Commission required PJM to use the "physical limit of a binding constraint" as the denominator in the triggering percentage calculation.<sup>109</sup> However, VECO states that, for purposes of the Constraint Impact Test, PJM intends to use Firm Flow Entitlements for market-to-market flowgates that are jointly managed

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<sup>106</sup> Market Monitor July 10, 2017 Answer at 7.

<sup>107</sup> January 2017 Order, 158 FERC ¶ 61,038 at PP 57-58.

<sup>108</sup> *Id.* P 80.

<sup>109</sup> VECO May 9, 2017 Protest at 18 (citing January 2017 Order, 158 FERC ¶ 61,038 at P 60).

between PJM and Midcontinent Independent System Operator (MISO).<sup>110</sup> VECO states that, currently, PJM subtracts capacity on flow gate constraints administratively allocated to MISO flows or “loop flows,” which can drop the capacity deemed to be allocated to PJM flows to 0 MW or even negative values.<sup>111</sup> VECO contends that Firm Flow Entitlements place limitations on capacity that can be far below the physical limits of a constraint, resulting in unjust and unreasonable forfeitures.<sup>112</sup>

78. VECO requests clarification that Firm Flow Entitlements are not an appropriate basis for calculating the Constraint Impact Test on jointly-managed facilities, but rather the full physical capacity rating of the facility should be used.<sup>113</sup> VECO argues that the true physical limit of a facility corresponds to the depth of the market at the flowgate, as the larger the limit, the larger the connections are to points where virtual and physical market participants can place bids and offers. VECO also contends that it is the physical limit of the facility that corresponds best to the liquidity and, hence, the degree of impact that a virtual energy position is likely to have on a constraint.<sup>114</sup>

79. VECO asserts that market participants have no way of determining the Firm Flow Entitlement projections that will be applied in the day-ahead market.<sup>115</sup> Thus, VECO and XO Energy request that, if Firm Flow Entitlement values are to be used to determine the constraint threshold for jointly-managed constraints, the Commission should require PJM to publish its day-ahead market constraint limits each day prior to the deadline for submitting bids into the day-ahead market so that market participants may avoid triggering forfeitures.<sup>116</sup> Alternatively, VECO contends that the floor value should be raised from 0.1 MW to at least 5 MW so that the constraint threshold is triggered by the

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<sup>110</sup> *Id.* at 18 & n.52. Firm Flow Entitlements are an accounting mechanism used to allocate charges and credits for joint congestion management between PJM and MISO. *See* PJM-MISO Joint Operating Agreement, attach. 3, § 3.2.

<sup>111</sup> VECO July 19, 2019 Answer to Mot. at 12.

<sup>112</sup> VECO May 9, 2017 Protest at 18-19.

<sup>113</sup> *Id.* at 20; VECO June 23, 2017 Protest at 11.

<sup>114</sup> VECO June 23, 2017 Protest at 9-10.

<sup>115</sup> *Id.* at 11.

<sup>116</sup> *Id.* at 12; XO Energy June 23, 2017 Protest at 13-14.

greater of 10% of the physical limit of the constraint or 5 MW, in order to better avoid triggering excessive unrelated forfeitures.<sup>117</sup>

**(b) Motion to Lodge Supplemental Comments**

80. VECO argues that PJM's proposed rule triggers flow gate constraints based on virtual flows with exceedingly small impacts when Firm Flow Entitlements drop to 0 MW.<sup>118</sup> VECO states that the example provided in Exelon/NextEra's motion to lodge<sup>119</sup> demonstrates that the use of Firm Flow Entitlements has led to forfeitures caused by modest virtual energy positions with small impacts on flow gate constraints. VECO argues that the apparent use of a 37 MW constraint limit rather than the actual physical constraint limit of 158 MW shows that the Constraint Impact Test on this market-to-market flow gate was more than four times as sensitive as it should have been.<sup>120</sup>

81. VECO argues that PJM has found that "[r]oughly 58% of total forfeitures are related to coordinated market-to-market flow gates," and just "three flow gates account for 32.1% of total forfeitures since the new rules were implemented."<sup>121</sup> Additionally, VECO states that PJM has stated in a stakeholder process that the modeling of loop flow impacts for coordinated market-to-market flow gates created a potential inconsistency in the FTR Forfeiture Rule and proposed to revise the FTR forfeiture calculation in its business practice manual to specify that the 10% threshold in the Constraint Threshold Test is "10% of the physical limit of the Day-ahead binding constraint."<sup>122</sup> However, VECO states that it is concerned that PJM will not implement this reform without a directive from the Commission.<sup>123</sup>

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<sup>117</sup> VECO June 23, 2017 Protest at 13.

<sup>118</sup> VECO states that when a Firm Flow Entitlement is zero or negative, that does not mean that any virtual energy position will have an extreme impact on that flow gate constraint, because low Firm Flow Entitlement does not mean there is lack of market depth at the constraint. *See* VECO July 19, 2019 Answer at 12-13 & n.43.

<sup>119</sup> *See supra* n.71.

<sup>120</sup> VECO July 19, 2019 Answer at 13-14.

<sup>121</sup> *Id.* at 11-12 & Attach. B at 1-2.

<sup>122</sup> *Id.* at 11-12 & Attach. B at 1.

<sup>123</sup> *Id.* at 12 n.38.



**(c) Determination**

82. We find that the use of Firm Flow Entitlements for evaluation of the FTR Forfeiture Rule for jointly-managed facilities is just and reasonable. The prices and binding constraints established in the day-ahead market are used in evaluating the FTR Forfeiture Rule. When modeling and running the day-ahead market, PJM may model the capabilities of jointly-managed facilities using Firm Flow Entitlements in place of physical limitations. Therefore, it is just and reasonable for PJM to use Firm Flow Entitlements in evaluating the rule. However, we direct PJM to explain in its future compliance filing, within 60 days of the date of this order, whether it is feasible for PJM to publish its day-ahead market constraint limits each day prior to the deadline for submitting bids into the day-ahead market so that market participants may avoid triggering forfeitures.

**iii. Test to Calculate Difference in LMP**

**(a) Protest**

83. XO Energy argues that PJM's proposal is contradictory because the proposed Tariff language in section 5.2.1(b) applies forfeitures to virtual portfolios that "result in the Day Ahead LMP being greater than the Real Time LMP," but does not implement a test to determine whether the virtual portfolio caused the difference in LMP to occur. As proposed, XO Energy contends that PJM is attempting to attribute all constraint differences only to virtual transactions, even if the virtual transaction had no impact on those differences. XO Energy argues that any number of events can cause a constraint to become more congested in the day-ahead energy market than in the real-time energy market.<sup>124</sup>

**(b) Answer**

84. PJM agrees with protesters' assertion that any number of events can cause a constraint to become more congested in the day-ahead energy market than in the real-time energy market. However, PJM argues that this has always been the case and the FTR Forfeiture Rule is designed to identify virtual flow consistent with such events. PJM contends that it would be impractical to attempt to attribute any constraint value to any one event.<sup>125</sup>

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<sup>124</sup> XO Energy June 23, 2017 Protest at 5.

<sup>125</sup> PJM June 2, 2017 Answer at 5.

(c) **Determination**

85. We disagree with XO Energy's argument that PJM's filing is unjust and unreasonable because the amended language does not implement a test to determine whether the virtual portfolio caused the day-ahead LMP to be greater than the real-time LMP for the FTR path. We note that XO Energy is referring to proposed section 5.2.1(b), in relevant part:

If an Effective FTR Holder between specified delivery and receipt buses acquired the Financial Transmission Right...and had a Virtual Transaction portfolio... for an applicable hour in the Day-ahead Energy Market,... whereby the Effective FTR Holder's Virtual Transaction portfolio resulted in (i) *a difference in Locational Marginal Prices in the Day-ahead Energy Market between such delivery and receipt buses which is greater than the difference in Locational Marginal Prices between such delivery and receipt buses in the Real-time Energy Market,* and (ii) an increase in value between such delivery and receipt buses, then the Market Participant shall not receive any Transmission Congestion Credit, associated with such Financial Transmission Right in such hour." (emphasis added).

86. We dismiss XO Energy's argument as beyond the scope of the compliance required in this proceeding. Under its existing Tariff, PJM determines whether the portfolio results in an increased LMP spread in the day-ahead market versus the real-time market between the delivery and receipt buses of an FTR. XO Energy is challenging Tariff language that the Commission previously has accepted, was not required to be revised by the January 2017 Order, and is not related to the changes that were required.

iv. **Discriminatory in Favor of Implicit Virtual Bidding**

(a) **Protest**

87. XO Energy argues that the proposed FTR Forfeiture Rule is discriminatory because it requires forfeiture from only explicit virtual transactions, not implicit virtual transactions. However, XO Energy argues, both explicit and implicit virtual transactions can affect constraints and FTRs in the same manner, but only a subset of market participants can engage in implicit virtual transactions. Thus, XO Energy argues, the rule is discriminatory against those that can only use explicit virtual transactions.<sup>126</sup>

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<sup>126</sup> XO Energy June 23, 2017 Protest at 12.

(b) **Determination**

88. We reject this argument as unsupported and beyond the scope of the compliance required in this proceeding. Implicit virtual bidding occurs when a resource offers into a market with no intention (or perhaps capability) of physically fulfilling the transaction. Protesters are concerned that the FTR Forfeiture rule is unduly discriminatory because it is only applied to explicit virtual bidding, but there is no evidence that implicit virtual bidding is a problem in PJM, and so we find such concerns to be purely speculative.

v. **Manipulation**

(a) **Protest**

89. XO Energy argues that the proposed rule allows some forms of manipulation because it causes forfeiture of only FTR profits (day-ahead position greater than hourly cost incurred). XO Energy states that this would allow market participants that own unprofitable FTRs to use virtual transactions to increase the value of their FTRs so long as they do not generate a profit. As an example, XO Energy provides that if a market participant purchased an FTR with an hourly cost of \$10/MWh, but in the day-ahead market, the path has been settling at \$1/MWh, the participant is able to use virtual transactions to increase the price of the path by \$9/MWh without triggering the FTR Forfeiture Rule.<sup>127</sup>

(b) **Determination**

90. We reject this argument as beyond the scope of the compliance required in this proceeding. The January 2017 Order found that a version of PJM's FTR Forfeiture Rule, which requires forfeiture of a market participant's FTR profits resulting from use of its virtual transactions to create congestion that benefits its related FTR positions, with certain revisions, was a just and reasonable way of addressing concerns that a market participant's virtual transactions will benefit its FTRs.<sup>128</sup> The instant filing is consistent with this finding. However, if it becomes clear that the manipulation XO Energy describes is harming PJM's markets, then PJM or other parties may raise that issue at the Commission in a future proceeding.

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<sup>127</sup> *Id.*

<sup>128</sup> January 2017 Order, 158 FERC ¶ 61,038 at P 33.

vi. **Alignment between Virtual Products and FTR Locations**

(a) **Protest**

91. XO Energy contends that all virtual products and FTR locations should be aligned in order to justify the equitable treatment of UTCs as well as INCs and DECAs in the FTR Forfeiture Rule. XO Energy states that virtual transactions are not treated equitably from a physical locational or transactional standpoint. For instance, XO Energy states that UTCs are severely restricted by physical location and, in the context of the FTR Forfeiture Rule, are subject to PJM's narrowly defined proposed threshold, which significantly disadvantages market participants with both UTC and FTR portfolios. XO Energy contends that a participant with a UTC portfolio is much more likely to be caught up in the "grey" area of the test due to PJM's use of the proposed FTR Impact Test.<sup>129</sup>

(b) **Determination**

92. We reject requests to align FTR locations with UTCs and INCs/DECAs as beyond the scope of the Compliance Filing. This proceeding focused on deterring manipulative bidding. PJM's filing is just and reasonable insofar as it applies to all virtual transactions, as discussed above, without such a requirement.

**D. Compliance Directive**

93. We direct PJM to make a compliance filing, within 60 days of the date of this order, consistent with the determinations in this order. While the January 2017 Order set an effective date of January 19, 2017 for PJM's compliance filing, when the Commission acts under section 206 of the FPA, it cannot make the rate effective under the filed rate doctrine until it sets out the just and reasonable rate with the "necessary predictability" so that the "numerical rate is specified clearly enough that customers know what the utility or pipeline will do."<sup>130</sup> As discussed further below, we find that the January 2017 Order did not provide PJM market participants with sufficient detail on each element of the

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<sup>129</sup> XO Energy June 23, 2017 Protest at 15.

<sup>130</sup> See *Aera Energy LLC v. FERC*, 789 F.3d 184, 190-92 (D.C. Cir. 2015) (affirming the Commission, finding "FERC's conditional acceptance . . . simply required Kern River to substitute one number for another when allocating costs to the rolled-in shippers . . . . Because this mechanical change gave Kern River no discretion to adjust its rate models, FERC provided sufficient notice to ratepayers.") (citing *Elec. Dist. No. 1 v. FERC*, 774 F.2d 490, 493 (D.C. Cir. 1985) (vacating when the "effective date of an order set[] forth no more than the basic principles pursuant to which the new rates are to be calculated.")).

replacement rate such that they could reasonably determine when their transactions would be subject to forfeiture.<sup>131</sup> Accordingly, under FPA section 206, we will establish the effective date of the just and reasonable FTR Forfeiture Rule replacement rate in a subsequent order.<sup>132</sup>

### **III. XO Energy Complaint**

94. XO Energy's Complaint contends that the FTR Forfeiture Rule: (1) cannot detect financial leverage or assess intent to profit from illegitimate trading activity; and (2) as implemented, is too broad, erroneously capturing competitive transactions and legitimate hedging activity.<sup>133</sup> XO Energy alleges seven defects in the FTR Forfeiture Rule.

95. In particular, XO Energy contends that the current implementation is unjust and unreasonable because it fails to check for leverage and the possibility that a position could, in fact, benefit from its virtual activity.<sup>134</sup> XO Energy further contends that PJM modified the FTR Forfeiture Rule to include all virtual transactions and to evaluate the net impact of a virtual portfolio on a binding constraint in its Compliance Filings, but did not apply the same approach in order to measure the net impact (i.e., benefit or harm) on a participant's portfolio of FTRs with respect to a binding constraint. XO Energy maintains that without applying a portfolio approach to both virtual transactions and FTRs, it is impossible to check for the existence of leverage and the actual profits that result from a constraint.<sup>135</sup>

96. XO Energy further argues that the FTR impact test is inherently flawed because the implementation of the FTR Impact Test no longer ensures that clear benefits to FTR paths are captured, but rather captures any benefit (or increase in value).<sup>136</sup> XO Energy

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<sup>131</sup> See *infra* P 110.

<sup>132</sup> We note that PJM has incorporated the rejected tariff provisions from the Compliance Filings in subsequent tariff filings, which will require PJM to submit a "clean up" tariff filing to correct the succeeding tariff records. We are not requiring such a clean-up filing at this time, but PJM will need to submit a clean up filing once this order is no longer subject to rehearing and we have finished processing PJM's future FPA section 206 compliance filing.

<sup>133</sup> Compl. at 2, 6.

<sup>134</sup> *Id.* at 22.

<sup>135</sup> *Id.* at 25.

<sup>136</sup> *Id.* at 27-28, 30.

states that the total day-ahead Marginal Congestion Component (MCC) and total FTR cost are no longer just and reasonable grounds for forfeitures, and that while PJM can quantify the impact of a constraint on the day-ahead MCC and FTR target allocations with precision, a constraint's contribution to the FTR auction prices (i.e., cost or credit) can also be quantified using auction shadow prices and dFAX. XO Energy states that PJM does not quantify either of these, and that by ignoring the actual profits associated with a constraint, PJM subjects participants to an unjust volume of forfeitures based on the one-cent threshold.<sup>137</sup>

97. XO Energy contends that the FTR Forfeiture Rule's counterflow FTR implementation violates the January 2017 Order's compliance directives and is significantly flawed because PJM confuses auction revenues from counterflow FTRs with Transmission Congestion Credits. XO Energy states that regardless of whether or not PJM intended to include counterflow FTRs in the forfeiture calculation, PJM has failed to adequately describe the counterflow FTR eligibility provisions in order to retain the revenues received from an FTR auction.<sup>138</sup> XO Energy also argues that PJM's application of the virtual portfolio test has significant inconsistencies in the modeling of physical transmission limits for internal constraints and market-to-market constraints are modeled in the day-ahead market, and that this results in significant forfeitures related to Market 2 Market constraints for virtual activity that does not exceed 10% of the physical limit.<sup>139</sup>

98. Finally, XO Energy contends that the lack of data transparency prevents a market participant from responding to FTR forfeitures. XO Energy states that in order to quantify the impact of market participants' activities, the FTR Forfeiture Rule relies heavily upon dFAX analysis, and the transmission limits that are used are never made available to participants. XO Energy maintains that without these critical data points, participants cannot monitor or respond to the activity that is subject to forfeiture.<sup>140</sup>

99. XO Energy requests that the Commission direct PJM to replace the FTR Forfeiture Rule with a structured market monitoring approach.<sup>141</sup> Alternatively, XO Energy requests that the FTR Forfeiture Rule should be amended so that it tests for financial leverage, and that the Commission should require PJM to develop a structured market

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<sup>137</sup> *Id.* at 36.

<sup>138</sup> *Id.* at 39-40.

<sup>139</sup> *Id.* at 45.

<sup>140</sup> *Id.* at 49.

<sup>141</sup> *Id.* at 11.

monitoring function that is capable of assessing a participant's behavior for sufficient credible evidence of intent in order to determine whether a potential violation occurred.<sup>142</sup> XO Energy states that determination of intent cannot be automated and PJM and the Market Monitor should be tasked with the development of a market monitoring function that scrutinizes participants' behavior.<sup>143</sup>

100. Moreover, XO Energy asserts that the Commission should require PJM to reimburse market participants for forfeitures based on a compliance filing that had not been accepted by the Commission, contending that "since the Commission found PJM's FTR Forfeiture Rule to be unjust and unreasonable, but did not yet set a just and reasonable rate since the Commission has not yet acted on the Compliance Filing, the filed rate doctrine has not attached to any rate associated with the FTR Forfeiture Rule."<sup>144</sup>

#### **A. Notice, Interventions, and Pleadings**

101. Notice of the Complaint was published in the *Federal Register*, 85 Fed. Reg. 21,226 (April 16, 2020), with interventions and protests due on or before May 1, 2020, and a motion to extend the filing date for interventions and protests to June 1, 2020 was granted.

102. Timely motions to intervene were filed by the Market Monitor; Mercuria Energy America, LLC and Mercuria SJAK Trading, LLC; Public Citizen, Inc.; Public Service Enterprise Group Incorporated (PSEG Companies);<sup>145</sup> Exelon Corporation (Exelon); PJM Power Providers Group; Elliott Bay Energy Trading, LLC; Calpine Corporation; VECO; Appian Way Energy Partners (Appian Way); NRG Power Marketing LLC; PJM Industrial Customer Coalition; American Municipal Power, Inc.; Dominion Energy Services, Inc.; FirstEnergy Companies;<sup>146</sup> Old Dominion Electric Cooperative; NextEra

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<sup>142</sup> *Id.* at 11-12.

<sup>143</sup> *Id.* at 56-57 (citing *PJM Interconnection, L.L.C.*, Docket No. EL14-37-000, Technical Conference Tr. at 63-65: 7-5 (Jan. 7, 2015)).

<sup>144</sup> XO Energy Answer at 9.

<sup>145</sup> The PSEG Companies included PSEG Energy Resources & Trade LLC, PSEG Power LLC, and Public Service Electric and Gas Company.

<sup>146</sup> The FirstEnergy Companies include FirstEnergy Service Company, Ohio Edison Company, The Cleveland Electric Illuminating Company, The Toledo Edison Company, Pennsylvania Power Company, Pennsylvania Electric Company, Metropolitan

Energy Marketing, LLC (NextEra); Hartree Partners, LP; Energy Trading Institute; Boston Energy Trading and Marketing LLC; American Electric Power Service Corporation (AEP); EDF Trading North America, LLC (with EDF Energy Services, LLC); Financial Marketers Coalition; and North Carolina Electric Membership Corporation.

103. PJM filed an answer to the Complaint. The Market Monitor filed comments opposing the Complaint and supporting the FTR Forfeiture Rule established in the 2017 Compliance Filing. Comments supporting the Complaint were filed by VECO, Exelon/NextEra Energy,<sup>147</sup> AEP, and Appian Way. XO Energy filed a response to the answers and comments, and the Market Monitor filed a response.

## **B. Motion to Consolidate**

104. Exelon/NextEra and AEP submit that consolidation of the Compliance Filings and Complaint proceedings allows for the development of a single, comprehensive record, avoids redundancies and promotes administrative efficiency.<sup>148</sup> XO Energy supports the motions to consolidate the Complaint proceeding with the Compliance Filings proceeding.<sup>149</sup> The Market Monitor contends that the motions to consolidate should be denied.<sup>150</sup>

## **C. Discussion**

### **1. Procedural Matters**

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

106. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2), prohibits an answer to a protest or answer unless otherwise ordered by

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Edison Company, West Penn Power Company, Jersey Central Power & Light Company, Monongahela Power Company, and The Potomac Edison Company.

<sup>147</sup> Exelon/NextEra Energy also filed a motion to consolidate the Complaint with the 2017 Compliance Filing implementing the FTR Forfeiture Rule.

<sup>148</sup> Exelon/NextEra Comments at 17-18, AEP Comments at 3.

<sup>149</sup> XO Energy Answer at 3.

<sup>150</sup> Market Monitor Answer at 2-3.



the decisional authority. We accept the answers because they have provided information that assisted us in our decision-making process.

107. We deny the motion to consolidate this Complaint proceeding with the Compliance Filings proceeding. The Commission generally considers consolidation only when a trial-type evidentiary hearing is instituted to resolve common issues of law and fact, and where consolidation will ultimately result in greater administrative efficiency.<sup>151</sup> The issues in this Complaint proceeding relate to whether the FTR Forfeiture Rule is just and reasonable. Here, the Commission finds that a hearing is not required and that consolidation with the Compliance Filings proceeding is not necessary to resolve the issues in this Complaint proceeding. Accordingly, the motion to consolidate is denied.

## 2. Substantive Matters

108. XO Energy's Complaint contends that the FTR Forfeiture Rule, as implemented by PJM since January 2017, is unjust and unreasonable because it captures competitive transactions and legitimate hedging activity.<sup>152</sup> As discussed above, we find that the FTR Impact Test that was proposed in the Compliance Filings is not a just and reasonable replacement rate and direct PJM to propose either a different threshold for the FTR Impact Test or an alternative approach to triggering forfeiture that strikes a more appropriate balance between deterring manipulative behavior and not burdening legitimate hedging activity. Because we reject the Compliance Filings, the tariff provisions challenged in the Complaint are not part of the rate on file. Accordingly, we dismiss the Complaint as moot as it challenges a rate that is not in effect.<sup>153</sup>

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<sup>151</sup> See *Startrans IO, L.L.C.*, 122 FERC ¶ 61,253, at P 25 (2008); *Midcontinent Indep. Sys. Operator, Inc.*, 170 FERC ¶ 61,241, at P 43 (2020).

<sup>152</sup> Compl. at 2, 6.

<sup>153</sup> To the extent the Complaint raises specific issues with the FTR Forfeiture Rule as revised in 2017, those issues are premature as such concerns may not exist after the Commission determines the just and reasonable rate.

#### IV. Refund Request

##### a. XO Energy Request

109. As previously noted, XO Energy states that beginning in September 2017, PJM retroactively billed forfeitures in accordance with the Compliance Filings.<sup>154</sup> PJM acknowledges that it implemented the revisions in the Compliance Filings and began invoicing market participants in September 2017 for FTR forfeitures under the FTR Forfeiture Rule since January 19, 2017.<sup>155</sup> In its Complaint, XO Energy asserts that “since the Commission found PJM’s FTR Forfeiture Rule to be unjust and unreasonable, but did not yet set a just and reasonable rate since the Commission has not yet acted on the Compliance Filings, the filed rate doctrine has not attached to any rate associated with the FTR Forfeiture Rule.”<sup>156</sup> XO Energy asserts that the Commission should require PJM to reimburse market participants for forfeitures under the FTR Forfeiture Rule that PJM began implementing prior to Commission action. XO Energy and Exelon/NextEra argue, therefore, that the Commission must grant refunds back to January 19, 2017 due to PJM’s unjust and unreasonable implementation of its interpretation of the January 2017 Order.<sup>157</sup>

##### b. Determination

110. When the Commission acts under section 206 of the FPA, it cannot make the rate effective under the filed rate doctrine until it sets out the just and reasonable rate with the “necessary predictability” so that the “numerical rate is specified clearly enough that customers know what the utility or pipeline will do.”<sup>158</sup> While in the January 2017 Order the Commission ostensibly set an effective date of January 19, 2017, it stated only that:

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<sup>154</sup> Compl. at 9. The January 2017 Order directed PJM to file a compliance filing with an effective date of January 19, 2017. January 2017 Order, 158 FERC ¶ 61,038 at P 61.

<sup>155</sup> PJM Answer at 11.

<sup>156</sup> XO Energy June 15, 2020 Answer at 9.

<sup>157</sup> *Id.*; Exelon/NextEra Energy Protest at 18-19.

<sup>158</sup> *See Aera Energy LLC v. FERC*, 789 F.3d at 190-92 (affirming the Commission, finding “FERC’s conditional acceptance ... simply required Kern River to substitute one number for another when allocating costs to the rolled-in shippers.... Because this mechanical change gave Kern River no discretion to adjust its rate models, FERC provided sufficient notice to ratepayers.”) (citing *Elec. Dist. No. 1 v. FERC*, 774 F.2d at

we direct PJM to submit a compliance filing within 90 days of the date of this order to modify section 5.2.1(c) of its Tariff to: (1) evaluate the net impact of a market participant's entire portfolio of virtual transactions on its FTR positions; (2) measure the portfolio's net impact using the load-weighted reference bus; (3) revise the threshold for triggering forfeiture to reflect the previous two changes; and (4) consider all virtual transactions held by entities that share common ownership as part of the same portfolio.<sup>159</sup>

Although this direction prescribed the elements of a forfeiture rule, it did not provide PJM market participants with sufficient detail on each element that they could determine when their transactions would be subject to forfeiture.<sup>160</sup> Where, as here, the January 2017 Order did not set forth the details of the replacement rate with sufficient specificity, and the Commission did not act on the Compliance Filings, we find that PJM began implementing its Compliance Filings prematurely, in violation of the filed rate doctrine.<sup>161</sup>

111. The Commission has broad authority to determine whether remedies are appropriate for a filed rate violation.<sup>162</sup> We therefore require PJM to include in its compliance filing the following information to enable the Commission to determine whether the equities warrant refunds and surcharges: the method by which PJM would calculate refunds and surcharges based on the prior rate on file,<sup>163</sup> details of the parties who would receive refunds or be charged surcharges with the associated debits and

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493 (vacating when the “effective date of an order set[] forth no more than the basic principles pursuant to which the new rates are to be calculated.”)).

<sup>159</sup> January 2017 Order, 158 FERC ¶ 61,038 at P 62.

<sup>160</sup> See *Elec. Dist. No. 1*, 774 F.2d at 493 (purchasers of electricity cannot plan their activities unless they know the cost of what they are receiving, “providing the necessary predictability is the whole purpose of the well-established ‘filed rate’ doctrine”) (citing *Ark. La. Gas Co. v. Hall*, 453 U.S. 571, 577 (1981)).

<sup>161</sup> See *Ark. La. Gas Co.*, 453 U.S. 577 (a public utility may not charge any rate other than what has been filed by the Commission and allowed to go into effect).

<sup>162</sup> See 16 U.S.C. §§ 825h; *Verso Corp. v. FERC*, 898 F.3d 1, 10 (D.C. Cir. 2018); *Columbia Gas Transmission Corp. v. FERC*, 750 F.2d 105, 109 (D.C. Cir. 1984).

<sup>163</sup> PJM should indicate any concerns with the availability of information necessary to calculate the refunds and surcharges.

credits for each party, and information on the magnitude of the refunds and surcharges. We are reserving judgment as to whether or not to impose refunds; that decision will be informed by PJM's subsequent filing.

The Commission orders:

(A) PJM's Compliance Filings are hereby rejected, as discussed in the body of this order.

(B) PJM is hereby directed to submit a compliance filing, within 60 days of the date of this order, to establish a just and reasonable replacement rate that proposes either a different threshold for the FTR Impact Test, or an alternative approach to triggering forfeiture, that strikes a more appropriate balance between deterring manipulative behavior and not burdening legitimate hedging activity, as discussed in the body of this order.

(C) PJM is hereby directed to include in its compliance filing, information to enable the Commission to determine whether the equities warrant refunds and surcharges, as discussed in the body of this order.

(D) XO Energy's Complaint is hereby dismissed as moot, as discussed in the body of this order.

By the Commission. Commissioner Christie is concurring in part and dissenting in part with a separate statement attached.

( S E A L )

Debbie-Anne A. Reese,  
Deputy Secretary.

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

PJM Interconnection, L.L.C.	Docket Nos.	ER17-1433-001
XO Energy, LLC, XO Energy MA, LP, and XO Energy MA2, LP v. PJM Interconnection, L.L.C.		EL20-41-000 (Not Consolidated)

(Issued May 20, 2021)

CHRISTIE, Commissioner, *concurring in part and dissenting in part*:

1. I agree with the parts of this order accepting PJM’s compliance filing. I dissent in part because I would also have accepted PJM’s “FTR Impact Test” that today’s order rejects.<sup>1</sup>

2. PJM’s FTR Impact Test limits FTR forfeitures to transactions resulting in an increase to FTR value of at least \$0.01. The order rejects the one-cent FTR Impact Test on the theory that it “represents only an immaterial, *de minimis* increase in the value of the FTR, rather than any measure of meaningful increase in FTR value as was contemplated in the January 2017 Order.”<sup>2</sup> The January 2017 Order, however, did not direct PJM to test for a “*meaningful* increase” in FTR value, but rather for trades in the “*direction*” of increasing FTR value.<sup>3</sup> In my view, PJM’s one-cent FTR Impact Test complies with this Commission’s original directive and should be approved for that reason.

3. Moreover, as PJM’s Independent Market Monitor explains it:

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

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<sup>1</sup> See Order at P 27 (“we cannot accept PJM’s Compliance Filing as the just and reasonable replacement rate because the one-cent FTR Impact Test, a major component of the Compliance Filings, is unjust and unreasonable as it fails to strike a reasonable balance between deterring manipulative behavior and not burdening legitimate hedging activity.”)

<sup>2</sup> Order at P 51.

<sup>3</sup> *PJM Interconnection, L.L.C.*, 158 FERC ¶ 61,038 at P 60 (January 2017 Order) (“the net flow must be *in the direction* to increase the value of an FTR”) (emphasis added).

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 [i.e., the one-cent FTR Impact Test] 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.<sup>4</sup>

4. The one-cent FTR Impact Test is one part of a rule that is prophylactic in nature. This is one more aspect of the complex balancing act PJM must undertake to manage its markets.

5. PJM developed and implemented a test compliant with the directive in the January 2017 Order and which it reasonably thought struck an appropriate balance between the relevant interests. It may be appropriate for PJM to continue to refine this particular instrument, but I would not have found it unjust or unreasonable at this time and would instead have asked PJM to seek to make further refinements to the test.

For these reasons, I respectfully dissent in part.

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Mark C. Christie  
Commissioner

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<sup>4</sup> Independent Market Monitor May 31, 2017 Answer at 3-4.