168 FERC ¶ 61,119
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Neil Chatterjee, Chairman;
Cheryl A. LaFleur and Richard Glick.

TranSource, LLC Docket No. EL15-79-001

v.

PJM Interconnection, L.L.C.

Opinion No. 566

ORDER ON INITIAL DECISION

(Issued August 26, 2019)

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1. This case is before the Commission on exceptions to an Initial Decision issued on January 19, 2018.[1] On September 24, 2015 and May 10, 2016, respectively, the Commission issued orders setting a complaint (Initial Complaint)[2] and an amended complaint (Amended Complaint, together with the Initial Complaint and its supplements, the Complaints)[3] filed by TranSource, LLC (TranSource)[4] against PJM Interconnection, L.L.C. (PJM) for hearing and settlement judge procedures.[5] The TranSource Complaints, filed pursuant to section 206 of the Federal Power Act (FPA), alleged that PJM violated the FPA and the PJM Open Access Transmission Tariff (OATT or Tariff) while processing three requests by TranSource to build network transmission upgrades on the PJM transmission system to obtain Incremental Auction Revenue Rights (IARRs). At the core of the Complaints were allegations that PJM's IARR study process was flawed, nontransparent and discriminatory, and that PJM and the affected PJM transmission owners inflated the scope of the system upgrades needed to accommodate TranSource's requested IARRs.

2. In the Initial Decision, Presiding Administrative Law Judge Philip C. Baten (Presiding Judge) found that PJM's practices during the System Impact Study phase of processing TranSource's merchant transmission upgrade requests pursuant to Attachment EE of the PJM Tariff (Upgrade Requests), were nontransparent and unduly discriminatory, and therefore unjust and unreasonable.[6] The Presiding Judge granted TranSource the limited relief of restoring the original queue positions for its Upgrade Requests and ordering PJM to refund the System Impact Study deposits paid by

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[1] *TranSource, LLC v. PJM Interconnection, L.L.C.*, 162 FERC ¶ 63,007 (2018) (Initial Decision).

[2] TranSource, LLC, Complaint, Docket No. EL15-79-000 (filed June 23, 2015) (Initial Complaint).

[3] TranSource, LLC, Amended and Restated Complaint and Request for Fast Track Processing of TranSource, LLC, Docket No. EL15-79-000 (filed Feb. 10, 2016) (Amended Complaint).

[4] The Initial Complaint listed "TransSource" as the complainant. The Amended Complaint and everything filed thereafter refer to "TranSource" as the complainant. We use the latter spelling throughout this order.

[5] *TransSource, LLC v. PJM Interconnection, LLC*, 152 FERC ¶ 61,229, at PP 2, 29 (2015) (September 2015 Hearing Order); *TranSource, LLC v. PJM Interconnection, L.L.C.*, 155 FERC ¶ 61,154, at PP 1, 37 (2016) (May 2016 Hearing Order).

[6] Initial Decision, 162 FERC ¶ 63,007 at P 1.

TranSource.[7] In this order, we reverse the Presiding Judge's findings that PJM's processing of the TranSource System Impact Studies was nontransparent and unduly discriminatory. We do, however, find that PJM's Tariff omits material terms about how it processes System Impact Studies for Attachment EE upgrade requests and direct PJM to make a compliance filing, within 45 days of the issuance of this order, proposing modifications to its Tariff. We also find that PJM made errors in processing the TranSource System Impact Studies, in violation of its Tariff and Commission orders, but find that all such errors were immaterial, and therefore we order no remedies.

I. Background

A. TranSource's Attachment EE Upgrade Requests for IARRs

3. On March 28, 2014 and April 22, 2014, TranSource submitted three applications to PJM pursuant to Attachment S of the PJM Tariff proposing incremental transmission upgrades to obtain IARRs.[8] At that time, Attachment S permitted a merchant transmission developer to submit a transmission interconnection request for merchant network upgrades and required the developer to identify the upgrades it would be willing to finance, or to pay a transmission owner to construct, in order to obtain a specified amount of rights created by the new incremental power flow, including IARRs.[9] After some discussion with PJM, TranSource determined that it would not obtain its desired amount of IARRs through the Attachment S process,[10] and, with PJM's guidance, sought from the Commission a limited waiver of the PJM Tariff to allow its Attachment S requests to be converted to Attachment EE requests.[11] Pursuant to Attachment EE, PJM

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[7] *Id*.

[8] *Id*. P 3. TranSource was assigned the queue position of Z2-053 on March 28, 2014 and the queue positions of Z2-069 and Z2-072 on April 22, 2014.

[9] *Id*. P 4. PJM has since modified its Tariff such that all requests to finance an upgrade to a transmission owner's facilities are submitted with an Attachment EE request, rather than an Attachment S request. *Id*. P 4 n.4 (citing Ex. PJM-0002A at 21 n.4 (Prepared Answering Testimony of David M. Egan)).

[10] Pursuant to Attachment S, TranSource had the burden of identifying all the transmission facility upgrades required to accommodate the amount of IARRs requested. If TranSource failed to identify all the necessary upgrades, it would have received no IARRs. *Id*. P 4.

[11] TranSource, LLC, Unopposed Request for Limited Waiver of Part VI of the PJM Open Access Transmission Tariff to Allow the Conversion of Attachment SS

has the burden of identifying all the upgrades necessary to accommodate the amount of IARRs requested by the developer.[12] The Commission granted the waiver on November 25, 2014, allowing TranSource to convert its Attachment S requests to Attachment EE requests, while maintaining the original queue positions and priority dates.[13]

4. Proceeding pursuant to Attachment EE, TranSource signed a System Impact Study Agreement and paid a $50,000 deposit for each of three queue positions.[14] On March 31, 2015, PJM issued the three TranSource System Impact Studies, which TranSource challenged as having material defects.[15] PJM subsequently rescinded those studies and issued revised, final studies on June 10, 2015, estimating that the necessary upgrades to accommodate TranSource's Upgrade Requests for IARRs would cost approximately $1.7 billion.[16] TranSource again contested the results and claimed it lost its financing as a result of what it claimed were grossly inflated cost estimates.[17] TranSource did not sign a Facilities Study Agreement or pay the deposits necessary to move its Upgrade Requests forward to the next phase of the Attachment EE process because, TranSource claimed, doing so would have bound TranSource "to the inflated and unexplained scope

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Interconnection Requests to Attachment EE Upgrade Requests Without Loss of Queue Priority, Docket No. ER14-2985-000 (filed Sept. 30, 2014).

[12] The Attachment EE process places less risk on the developer, because PJM determines the necessary upgrades and guarantees the developer 80 percent to 100 percent of the requested IARRs. Initial Decision, 162 FERC ¶ 63,007 at P 6.

[13] *Transource, LLC*, 149 FERC ¶ 61,169 at P 1 (2014) (Order Granting Waiver).

[14] Initial Decision, 162 FERC ¶ 63,007 at P 7; *see also* Ex. PJM-0040 (TranSource System Impact Study Agreements).

[15] Initial Complaint at P 3; *see also* Ex. PJM-0006 (March 2015 System Impact Study for Z2-053), Ex. PJM-0007 (March 2015 System Impact Study for Z2-069), Ex. PJM-0008 (March 2015 System Impact Study for Z2-072).

[16] Initial Decision, 162 FERC ¶ 63,007 at P 7; Ex. PJM-0010 ("With this notification, PJM rescinds the S[ystem] I[mpact] S[tudies]. . . for each of the Z2-053, Z2-069, & Z2-072 Upgrade Requests. You are no longer on a 30 day clock. We will re-issue the studies . . . ."); *see also* Ex. PJM-0011A (June 2015 System Impact Study for Z2-053); Ex. PJM-0012A (June 2015 System Impact Study for Z2-069); Ex. PJM-0013 (June 2015 System Impact Study for Z2-072).

[17] Initial Decision, 162 FERC ¶ 63,007 at P 8.

of work identified in the [System Impact Studies]."[18] As a result, PJM terminated the TranSource queue positions in July 2015, in accordance with section 206.2 of the Tariff.[19]

B. Complaints

5. On June 23, 2015, shortly after PJM issued the final TranSource System Impact Studies and before PJM terminated TranSource's queue positions, TranSource filed its Initial Complaint against PJM, pursuant to section 206 of the FPA, alleging that PJM violated section 213(b) of the FPA and sections 205.4.2 and 210 of the PJM Tariff.[20] TranSource's Initial Complaint, as supplemented, alleged that PJM repeatedly refused to provide requested data and work papers underlying the TranSource System Impact Studies and, as a result, PJM failed to provide a transparent process for evaluating the TranSource Upgrade Requests.[21] Further, TranSource alleged that PJM used inaccurate data, without independent analysis, to develop the TranSource System Impact Study cost estimates, and failed to use existing studies to calculate the necessary upgrades, in violation of its Tariff.[22] Also, TranSource asserted that PJM and the affected PJM Transmission Owners[23] inflated the scope of the necessary upgrades, causing TranSource

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[18] Amended Complaint at PP 29-31.

[19] Initial Decision, 162 FERC ¶ 63,007 at P 8; PJM Interconnection, L.L.C., Motion for Leave to Respond and Limited Response, Docket No. EL15-79-000, at 1-2 (filed July 20, 2015) (PJM Limited Response) ("Pursuant to section 206.2 of the Tariff, PJM was required to withdraw the [TranSource] projects on July 13, 2015 once [TranSource] failed to submit its executed Facilities Study Agreements and study deposits in compliance with the Tariff milestone.").

[20] Initial Complaint at 1. TranSource supplemented the complaint on June 29, 2015, and July 7, 2015. *See* TranSource, LLC, Motion to Supplement June 23, 2015 Complaint, Docket No. EL15-79-000 (filed June 29, 2015) (Motion to Supplement Initial Complaint); TranSource, LLC, Request for an Immediate Waiver of Tariff Deadlines and Second Motion to Supplement Complaint and Supplement, Docket No. EL15-79-000 (filed July 7, 2015) (Second Motion to Supplement Initial Complaint).

[21] Initial Complaint at 1-6.

[22] *Id*. at 3; Motion to Supplement Initial Complaint at 3; Second Motion to Supplement Initial Complaint at 2-3.

[23] For purposes of this proceeding, unless otherwise noted, the affected PJM Transmission Owners include Delmarva Power & Light Company (Delmarva), Jersey Central Power & Light Company (a FirstEnergy company) (FirstEnergy), PPL Electric

to lose its financing and to be unable to move forward with the queue positions.[24] As relief, TranSource requested that the Commission order PJM to provide all the requested data and work papers, suspend all applicable Tariff deadlines to allow it to retain its queue positions, and grant waiver of the Tariff deadlines for executing the Facilities Study Agreements and posting the Facilities Study deposits.[25]

6. On February 10, 2016, TranSource filed its Amended Complaint against PJM, significantly expanding upon the issues raised and the relief requested in the Initial Complaint.[26] In the Amended Complaint, TranSource listed four claims against PJM: (1) failure to use a transparent and replicable process to model the TranSource Upgrade Requests, as required by FPA section 213(b), FERC Form No. 715-Annual Transmission Planning and Evaluation Report (Form 715), and section 205.4 of the PJM Tariff; (2) violation of section 206.2 of the Tariff, by demanding that TranSource commit to upgrades identified in the System Impact Studies that were not physically or electrically necessary;[27] (3) violation of the Commission's Order Granting Waiver by modeling TranSource's queue positions as of the date of the waiver order, rather than as of the original Attachment S queue priority dates; and (4) undue discrimination, as TranSource was not provided equal and open access by PJM to the expansion, planning, and construction of the PJM transmission system or to IARRs.[28]

7. TranSource requested the Commission grant the following additional relief: (1) find PJM incorrectly modeled the TranSource Upgrade Requests in violation of 16 U.S.C. § 824*l*(b) and the Commission's Order Granting Waiver; (2) find the TranSource System Impact Studies were not properly performed and timely delivered as required by section 205 of the PJM Tariff and direct PJM to withdraw them; (3) direct

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Utilities Corporation (PPL), and Public Service Electric and Gas Company (PSE&G). TranSource did not name any of the PJM Transmission Owners as respondents to the Initial Complaint, but the PJM Transmission Owners all intervened and are parties to the proceeding.

[24] Initial Complaint at 1, 4.

[25] *Id*. at 5-6; Second Motion to Supplement Initial Complaint at 4.

[26] *See generally* Amended Complaint.

[27] As part of this claim, TranSource alleged that PJM failed to prepare accurate and timely System Impact Studies, including by failing to use correct facility ratings, by using an infeasible base case, and by using worst-case rather than optimized assumptions. *Id*. at 10-11.

[28] *Id*. at 9-12.

PJM to reinstate TranSource's original queue positions; (4) direct PJM to issue new, expedited System Impact Studies on a nondiscriminatory basis, consistent with data reported in Form 715 and the 2018 Regional Transmission Expansion Plan (RTEP) base case, using a consistent, non-discriminatory, and transparent process; (5) order PJM to write and provide a process specifying the steps taken to evaluate the TranSource Upgrade Requests; (6) order PJM to commission a neutral third-party expert to review and replicate the process documented pursuant to request five; (7) direct PJM to contract with a qualified, independent third party to provide new cost estimates of the upgrades found to be necessary to support the TranSource Upgrade Requests; (8) direct PJM to develop written procedures identifying the specific steps PJM takes to evaluate Attachment EE upgrade requests and submit the procedures to stakeholder vote for incorporation in the PJM Tariff; (9) direct PJM to develop and submit to stakeholders a proposal to include a two-phase System Impact Study for Attachment EE Requests, prior to the Facilities Study, so that merchant developer requests are handled the same way that generation interconnection requests are handled; (10) require PJM to award TranSource every Auction Revenue Right (ARR) made feasible by its investment in upgrades, regardless of whether the upgrades were determined to be physically and electrically necessary to accommodate the IARRs TranSource requested; (11) award any monetary relief available, including disgorgement of monies obtained by any participant in the proceeding[29] that would not have been obtained but for PJM's improper conduct; and (12) award all other relief the Commission deems appropriate.[30]

8. PJM opposed both the Initial and Amended Complaints and sought rejection, arguing that TranSource failed to satisfy the basic requirements of section 206 of the FPA, requested relief based on inaccurate and unsubstantiated facts and allegations, and requested premature relief without availing itself of the PJM Tariff processes.[31]

9. The PJM Transmission Owners also opposed the Amended Complaint, arguing that the new allegations raised were unsupported by new facts and evidence and many of

[29] As noted above, TranSource did not name any of the PJM Transmission Owners as respondents to the Amended Complaint.

[30] *Id*. at 12-14.

[31] PJM Interconnection, L.L.C., Motion to Dismiss Complaint and Answer to Complaint, Docket No. EL15-79-000, at 2 (filed July 10, 2015) (PJM Answer); PJM Interconnection, L.L.C., Motion to Dismiss Amendment to Complaint or, in the Alternative, Answer to the Amended Complaint, and Recommendation of Procedures for Prompt Disposition of This Proceeding, Docket No. EL15-79-000, at 4 (filed Mar. 1, 2016).

the allegations were better addressed in the PJM stakeholder process.[32] Further, the PJM Transmission Owners argued that the Commission should reject the Amended Complaint because it sought monetary relief from entities, such as the PJM Transmission Owners, whom TranSource did not name as respondents in either the Initial or Amended Complaint, in violation of their due process rights.[33]

C. Commission Hearing Orders

10. On September 24, 2015, the Commission set TranSource's Initial Complaint for hearing to address all the issues raised, including, but not limited to, "how the cost estimates for the project were developed, and whether PJM undertook an independent analysis of these costs."[34] The Commission stated that the "central issue is whether the facilities identified in the System Impact Studies, for which [TranSource] would be required to pay, are necessary to accommodate [TranSource]'s interconnection request," because under "Order No. 2003 and PJM's 'but for' test in its Tariff, interconnecting customers may only be assessed the costs of those facilities necessary to accommodate their project."[35] The Commission stated that TranSource raised material issues of fact as to whether the facilities identified in the TranSource System Impact Studies met that definition and whether TranSource had the necessary data to evaluate whether the identified facilities were necessary to accommodate its Upgrade Requests.[36] The Commission noted that it would address TranSource's request for waiver of the deadlines

[32] PJM Transmission Owners, Protest to Amended and Restated Complaint of TranSource, LLC, Docket No. EL15-79-000, at 2 (filed Mar. 1, 2016) (PJM Transmission Owners Protest) (for purposes of the PJM Transmission Owners Protest, the PJM Transmission Owners were FirstEnergy Service Company on behalf of its affiliates American Transmission Systems, Incorporated, Pennsylvania Electric Company, Metropolitan Edison Company, Jersey Central Power & Light Company, Monongahela Power Company, West Penn Power Company, The Potomac Edison Company, and Trans-Allegheny Interstate Line Company; Pepco Holdings, Inc.; Potomac Electric Power Company; Delmarva; Atlantic City Electric Company; PPL, and PSE&G).

[33] *Id*.

[34] September 2015 Hearing Order, 152 FERC ¶ 61,229 at PP 2, 29.

[35] *Id*. P 30.

[36] *Id*.

in the PJM Tariff following completion of the hearing.[37]

11. On May 10, 2016, the Commission determined that the issues raised in TranSource's Amended Complaint should be addressed at the hearing already established by the September 2015 Hearing Order, excluding the issue of whether PJM should be ordered to initiate a stakeholder process to consider changes to Attachment EE upgrade requests.[38] The Commission noted that the Presiding Judge should consider whether PJM's current Attachment EE process is unjust and unreasonable and needs to be revised, and should "consider remedies that will have the least effect on the predictability of PJM's interconnection process."[39]

D. Market Monitor Intervention

12. Shortly after TranSource filed its Initial Complaint, Monitoring Analytics, LLC, acting in its capacity as the PJM Independent Market Monitor (Market Monitor), submitted a motion to intervene.[40] The Market Monitor then filed a Motion for Investigative Process, requesting that the Commission establish an investigative process to obtain "full information about the facts and circumstances" related to TranSource's Initial Complaint, as the "positions taken by PJM and [TranSource] [were] difficult to reconcile."[41] The Market Monitor did not take a position on whether the TranSource System Impact Study cost estimates were justified, but rather noted that the TranSource Initial Complaint and PJM's response were sufficient to raise concerns about whether sufficient information about decision making and transparency exist in the process.[42]

13. After intervening in the Initial Complaint proceeding and filing the Motion for Investigative Process, the Market Monitor worked with PJM to produce a detailed description of PJM's processes and methods for evaluating IARR requests. On June 6,

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[37] *Id*. P 29.

[38] May 2016 Hearing Order, 155 FERC ¶ 61,154 at PP 1, 39.

[39] *Id*. PP 38-39.

[40] Monitoring Analytics, LLC, acting in its capacity as the Independent Market Monitor for PJM, Motion to Intervene, Docket No. EL15-79-000 (filed June 30, 2015).

[41] Monitoring Analytics, LLC, acting in its capacity as the Independent Market Monitor for PJM, Motion for Investigative Process, Docket Nos. EL15-79-000, at 1 (filed Aug. 6, 2015) (Motion for Investigative Process).

[42] *Id*. at 2.

2017, the Market Monitor and PJM made a joint filing, explaining that they had reached a partial settlement agreement on a detailed IARR process description, in the form of a whitepaper (June 2017 Whitepaper), which was filed in the instant record as Ex. PJM-0033 and was posted on PJM's website.[43] The Market Monitor explained that the June 2017 Whitepaper "resolve[d], going forward, the transparency concerns the Market Monitor raised in its pleadings filed in this docket."[44]

II. The Initial Decision

14. In the Initial Decision, the Presiding Judge found that PJM's practices while processing TranSource's Upgrade Requests were nontransparent and discriminatory and therefore unjust and unreasonable.[45] The Presiding Judge granted TranSource limited relief in the form of restoration of its original queue positions and a refund of all monies paid to PJM for the System Impact Study phase of the Attachment EE process.[46] The Presiding Judge denied all other requests for relief, finding that TranSource either failed to meet its burden of proof to support findings justifying such relief or that such relief was not available pursuant to the FPA.[47]

15. In response to the Commission's Hearing Orders, the Presiding Judge found that the question of whether the upgrades PJM identified were necessary to accommodate TranSource's Upgrade Requests could not be answered, as the litigation solely involved the System Impact Study phase of the Attachment EE process, which is only meant to represent a good faith, non-binding, preliminary estimate of the necessary upgrades and their anticipated costs.[48] The Presiding Judge further found that the question of whether the Attachment EE process is unjust and unreasonable could not be answered, as the litigation only considered the System Impact Study phase of the Attachment EE

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[43] PJM Interconnection, L.L.C. and Monitoring Analytics, LLC, Joint Filing Giving Notice of Partial Settlement, Docket Nos. EL15-79-000 and EL15-79-001 (filed June 6, 2017) (Notice of Partial Settlement); *see also* Ex. PJM-0033 (June 2017 Whitepaper). The partial settlement was only between the Market Monitor and PJM—TranSource was not a party to the agreement.

[44] Notice of Partial Settlement at 1.

[45] Initial Decision, 162 FERC ¶ 63,007 at P 1.

[46] *Id*.

[47] *Id*. PP 1, 73-81.

[48] *Id*. PP 83-85.

process.[49] But, the Presiding Judge stated the Commission might consider whether a new pre-System Impact Study phase should be added to the Attachment EE process.[50]

16. Finally, the Presiding Judge stated that the Commission should consider the June 2017 Whitepaper and potentially order PJM to vet it through a stakeholder process.[51]

17. TranSource, PJM, the PJM Transmission Owners, and Commission Trial Staff (Trial Staff) filed timely briefs on exceptions to the Initial Decision. TranSource, PJM, the PJM Transmission Owners, and Trial Staff filed briefs opposing exceptions on March 12, 2018.

III. Discussion

18. At its most basic level, this opinion addresses a dispute between TranSource and PJM regarding the outcome of three System Impact Studies for three Attachment EE upgrade requests that TranSource made in 2014. TranSource is a merchant transmission developer, whose business model centered upon identifying and developing upgrades to the transmission system to relieve congestion, in exchange for the financial rights (i.e., IARRs), and potential revenues associated with those rights.[52] In processing the System Impact Studies for TranSource's Upgrade Requests, PJM implemented a two-part analysis. First, PJM utilized what it calls the "market model"—a financial model that ensures that new IARRs are consistent with existing ARR rights.[53] PJM then considered the physical planning model, which determines the physical upgrades necessary to accommodate the requested IARRs.[54]

19. After PJM completed TranSource's System Impact Studies, which estimated total upgrade costs of approximately $1.7 billion, TranSource presented to the Commission a significant number of allegations in its Initial Complaint, which was later supplemented by its Amended Complaint. The litigation before the Presiding Judge addressed a number of complex and technical issues related to PJM's Attachment EE upgrade

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[49] *Id*. P 88.

[50] *Id*. P 80(k).

[51] *Id*. PP 80(j), 86-87.

[52] Ex. TS-001A at 4:5-10 (Prepared Direct Testimony of Adam Rousselle).

[53] Ex. PJM-0001A at 6:11-16 (Prepared Answering Testimony of Timothy J. Horger).

[54] *Id*. at 6:16-18.

process. The issues raised by TranSource, and addressed herein, include the manner in which PJM processed TranSource's Upgrade Requests, how transparent that process was, and whether that process unduly discriminated against TranSource.

20. As mentioned previously, the Initial Decision found that PJM's practices while processing TranSource's Upgrade Requests were nontransparent and discriminatory and therefore unjust and unreasonable, granting TranSource limited relief in the form of restoration of its original queue positions and a refund of all monies paid to PJM for the System Impact Studies.[55]

21. Below, we address the exceptions taken to the Initial Decision. First, in section III.A, we address two of the issues set for hearing that the Presiding Judge determined could not be answered based on this record alone—whether Attachment EE as a whole is just and reasonable and whether the upgrades identified by PJM were necessary to accommodate TranSource's Upgrade Requests. We affirm the Presiding Judge's finding that these two questions cannot be answered on the record before us. We next address, in section III.B, TranSource's contention that the Initial Decision applied the wrong burden of proof. We find that the Presiding Judge correctly applied the burden of proof pursuant to FPA section 206.

22. In sections III.C-III.J, we address the substantive exceptions taken to the Presiding Judge's findings in the Initial Decision. With regard to the transparency of PJM's System Impact Study process for Attachment EE upgrade requests, in section III.C, we determine that PJM provided TranSource with adequate transparency regarding the System Impact Study process. However, notwithstanding our finding that PJM provided sufficient transparency to TranSource, we find that PJM's Tariff does not contain sufficient detail regarding the System Impact Study process for Attachment EE upgrade requests and direct PJM to make a compliance filing proposing revisions to the Tariff to detail practices that materially affect how PJM implements such studies.

23. In sections III.D-III.F, we address three aspects of the TranSource System Impact Studies that the Presiding Judge found were inadequately transparent—the desk-side nature of the study conducted in the System Impact Study phase, the facility ratings used, and the condition of the Readington-Roseland circuit. We reverse the Presiding Judge's findings with regard to the transparency of these aspects of the System Impact Study process. As to each of these issues, we also address the parties' other arguments regarding whether PJM's actions were just and reasonable. We find that a desk-side study is appropriate for the System Impact Study phase of the Attachment EE process and can comply with the Tariff's requirement that System Impact Studies be refined and comprehensive. However, we find that the evidence in this case shows that the TranSource System Impact Studies, while appropriately desk-side studies, were

[55] Initial Decision, 162 FERC ¶ 63,007 at P 1.

insufficiently refined and comprehensive and therefore violated the Tariff. With regard to the facility ratings used, we find that PJM's use of RTEP ratings, rather than Form 715 ratings, was appropriate. Further, we find that a wreck and rebuild of the Readington-Roseland circuit was a reasonable assumption to include in the TranSource System Impact Studies and is unrelated to the condition of the circuit as reported in Form 715.

24. In sections III.G-III.H, we address two alleged errors in how PJM processed the TranSource System Impact Studies. We find that PJM violated the Commission's Order Granting Waiver by improperly prioritizing certain Delmarva supplemental projects ahead of TranSource's queue positions. We also find that TranSource has not met its burden to prove that PJM's implementation of the simultaneous feasibility test, as part of the System Impact Study analysis for Attachment EE requests for IARRs, was unjust and unreasonable.

25. In section III.I, we reverse the Presiding Judge's finding that PJM's processing of the TranSource System Impact Studies was unduly discriminatory. We find that the Presiding Judge's finding of undue discrimination is unsupported by the facts and inconsistent with the Commission's legal standard for claims of undue discrimination, which requires a showing that entities are similarly situated.

26. Finally, in section III.J, we address the remedies granted by the Presiding Judge, as well as TranSource's requests on exceptions for additional remedies. Ultimately, aside from ordering PJM to modify its Tariff to include material details about the System Impact Study process, we grant no remedies, as TranSource has failed to show that any of the errors in the processing of the TranSource System Impact Studies materially affected the results of those studies, such that the outcome of TranSource's requests for IARRs would have been materially different had the errors not occurred.

A. Whether Attachment EE is Just and Reasonable and Whether the Upgrades Identified by PJM Were Necessary to Accommodate TranSource's Upgrade Requests

1. Initial Decision

27. The Presiding Judge acknowledged that in the May 2016 Hearing Order, the Commission asked the Presiding Judge to consider "'whether PJM's current planning process with respect to Attachment EE, Upgrade Requests is unjust or unreasonable and needs to be revised.'"[56] The Presiding Judge ultimately found, however, that no determination could be made on the record regarding whether the Attachment EE process is just and reasonable as a whole, since only the System Impact Study phase of the

[56] *Id*. P 88 (quoting May 2016 Hearing Order, 155 FERC ¶ 61,154 at P 39).

Attachment EE process was litigated.[57] Further, the Presiding Judge found that TranSource's request that PJM be directed to develop and submit to stakeholders a new study phase prior to the System Impact Study for Attachment EE upgrade requests was beyond the scope of the matters set for hearing, but that the Commission could consider the request.[58]

28. In addition, the Presiding Judge acknowledged that, in the September 2015 Hearing Order, the Commission stated that the central issue in the case was "'whether the facilities identified in the System Impact Studies, for which [TranSource] would be required to pay, are necessary to accommodate [TranSource's] interconnection request.'"[59] The Presiding Judge found that it was premature to apply the "but for" and "necessary to physically and electrically interconnect" standards to the TranSource System Impact Studies with respect to determining whether the upgrades identified were required and the cost estimates were accurate prior to completion of the Facilities Study, as the System Impact Study merely represents a good faith, non-binding attempt to determine the upgrades and their costs.[60] The Presiding Judge noted that the Facilities Study phase provides a "more refined analysis" that "may produce narrower results than the impact study."[61] Therefore, the Presiding Judge concluded that, whether the upgrades were necessary to accommodate TranSource's Upgrade Requests could not be determined based on the existing record.[62]

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[57] *Id*. P 88 ("[O]nly the [System Impact Study] phase of the Attachment EE process was litigated by the parties in this case. . . . [O]ther constituent parts of Attachment EE were not litigated.").

[58] *Id*. P 80(k) (citing PJM Initial Br. at 94, nn.414-15) (noting that at the time the Initial Decision was issued, PJM was undergoing stakeholder evaluations of whether an additional study phase for Attachment EE requests was necessary).

[59] *Id*. P 82 (quoting September 2015 Hearing Order, 152 FERC ¶ 61,229 at P 30).

[60] *Id*. P 83 (quoting Ex. PJM-0040 at 3, 9, 15 (TranSource System Impact Study Agreements)).

[61] *Id*. PP 83, 85(a)-(d) (quoting *Chesapeake Transmission, L.L.C. v. PJM Interconnection, L.L.C.*, 116 FERC ¶ 61,234, at P 53 (2006) (*Chesapeake Transmission*)) (internal quotations omitted).

[62] *Id*. P 83.

2. Briefs on Exceptions

a. TranSource

29. TranSource argues that the Presiding Judge committed legal error by failing to resolve the "central issue" the Commission set for hearing—whether the upgrades identified by PJM were necessary—based on the rationale that TranSource did not proceed to the Facilities Study phase of the Attachment EE process.[63] Further, TranSource alleges that the Initial Decision does not resolve TranSource's claim that the TranSource System Impact Studies identify upgrades and costs that are not physically and electrically necessary.[64]

30. TranSource argues that its decision not to sign a Facilities Study Agreement is irrelevant to a determination as to whether the upgrades identified by PJM in the TranSource System Impact Studies are physically and electrically necessary to accommodate its IARR requests.[65] TranSource contends that the Initial Decision in effect punishes TranSource for not executing the Facilities Study Agreement and submitting the necessary payment, and that the 30-day deadline for signing that agreement prevented TranSource from resolving the issues with the System Impact Studies with PJM and reassuring its investors.[66]

31. Further, TranSource states that there is no evidence that proceeding to the Facilities Study phase would have produced a just and reasonable outcome.[67] More specifically, TranSource argues that the Initial Decision's cite to *Chesapeake Transmission* merely establishes that the Facilities Study phase is a "more refined analysis" but does not suggest that any of the material problems with the System Impact

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[63] TranSource Brief on Exceptions at 44.

[64] *Id*. at 14 ("The Initial Decision does not directly resolve TranSource's second claim that PJM's [System Impact Study] reports assigned upgrades and costs to TranSource that were neither physically nor electrically necessary to accommodate TranSource's new service requests.").

[65] *Id*. at 44.

[66] *Id*. at 45 (citing TranSource Post-Hearing Reply Brief at 81-82; PJM, Intra-PJM Tariffs, OATT, Part VI, Subpart A System Impact Studies and Facilities Studies § 206.3 (Deposit) (hereinafter "PJM Tariff"); Ex. TS-084A at 38:3-11 (Prepared Rebuttal Testimony of Adam Rousselle)).

[67] *Id*. at 44.

Study process would have been completely cured in that phase.[68] TranSource also notes that Trial Staff witness Norman concluded that the Facilities Study cost estimates Trial Staff reviewed "'[did] not diverge significantly'" from the associated System Impact Study estimates, which, TranSource argues, does not support the contention that the defects in the System Impact Studies would have been cured or that the upgrade determinations would have been narrowed at the Facilities Study phase.[69]

32. TranSource asserts that, unless the Commission clarifies that PJM must apply the correct modeling methodology, use accurate facility ratings, and employ refined and comprehensive cost estimates, PJM's System Impact Study process will not properly identify only physically and electrically necessary upgrades, which would make any relief granted insufficient.[70]

b. PJM

33. PJM states that the Initial Decision correctly found that a final determination of the upgrades required to accommodate TranSource's Upgrade Requests could not be made until after completion of the Facilities Study phase.[71] However, PJM argues that the Initial Decision erred in stating that the "necessary to physically and electrically interconnect" standard may apply in determining upgrades to accommodate an Attachment EE request for IARRs.[72] PJM asserts that the "necessary to physically and electrically interconnect" standard is applied to determine upgrades required to ensure reliable operations as a result of requests to interconnect and obtain physical rights on the transmission system—as opposed to Attachment EE upgrade requests for financial rights (i.e., IARRs).[73]

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[68] *Id*. at 46 (citing *Chesapeake Transmission*, 116 FERC ¶ 61,234 at P 53).

[69] *Id*. (quoting Ex. S-038 at 25:1-10 (Prepared Direct and Answering Testimony of C. Shelley Norman, Ph.D)).

[70] *Id*. at 47.

[71] PJM Brief on Exceptions at 57 (citing Initial Decision, 162 FERC ¶ 63,007 at P 85(a)-(d)).

[72] *Id*. at 57-60.

[73] *Id*. at 57-58 (citing *Am. Elec. Power Serv. Corp.*, 91 FERC ¶ 61,308, at 62,050-51 (2000); *see also S. Co. Servs., Inc.*, 94 FERC ¶ 61,131, at 61,503 (2001)). PJM explains that the Commission subsequently used the "physically and electrically necessary" standard to define "Interconnection Facilities" in the *pro forma* Large

34. In contrast, PJM states that Attachment EE upgrade requests result in IARRs, which are financial rights, not physical rights, and therefore the primary consideration in determining what upgrades are necessary to accommodate those financial rights, as previously recognized by the Commission, is simultaneous feasibility.[74] PJM argues that the Initial Decision recognizes that PJM relies on the simultaneous feasibility test to identify necessary upgrades in the Attachment EE context, which is consistent with Order No. 681 and section 7.8 of Schedule 1 of the PJM Operating Agreement,[75] and that the Commission should clarify that the appropriate standard for determining the upgrades required for an Attachment EE upgrade request is "whether the upgrades are needed to ensure that 'incremental rights awarded by directly funded upgrades must be feasible' with all other ARRs."[76] PJM asserts that applying the "physically and electrically necessary" standard to IARR requests would create a new standard, highly favorable to IARR requestors, at the expense of millions of customers that have long paid for the existing facilities needed to ensure their firm service.[77]

Generator Interconnection Procedures adopted in Order No. 2003. *Id*. at 58 (citing *Standardization of Generator Interconnection Agreements and Procedures*, Order No. 2003, 104 FERC ¶ 61,103, at Appendix C § 1, Definitions (2003)).

[74] *Id*. (citing *PJM Interconnection, L.L.C.*, 117 FERC ¶ 61,220, at P 46 (2006) (*PJM*) ("[I]ncremental rights awarded by directly funded upgrades must be [simultaneously] feasible.")). PJM explains that in approving PJM's Attachment EE process, the Commission found that "if requests were granted that could not be supported by the capacity of the system, the market would be undermined since they could not be *financially supported* by congestion revenues." *Id*. (citing *PJM Interconnection, L.L.C.*, 119 FERC ¶ 61,144, at P 19, *order on clarification & denying reh'g*, 121 FERC ¶ 61,073; *see also PJM Interconnection, LLC*, 121 FERC ¶ 61,073, at P 22 (2007)).

[75] *Id*. at 59 (citing *Long-Term Firm Transmission Rights in Organized Electricity Markets*, Order No. 681, 116 FERC ¶ 61,077, at P 20 (2006); PJM Tariff, Intra-PJM Tariffs, Operating Agreement, Schedule 1 § 7.8(a) (Elective Upgrade Auction Revenue Rights) (hereinafter "PJM Operating Agreement") ("[A]ny party may elect to fully fund Network Upgrades to obtain [IARRs] pursuant to this section, provided that [IARRs] granted pursuant to this section shall be simultaneously feasible with outstanding [ARRs] . . . .")).

[76] *Id*. at 59-60 (quoting *PJM*, 117 FERC ¶ 61,220 at P 46).

[77] *Id*. at 59 (citing Ex. PJM-0027 at 21:8-27:7 (Prepared Cross-Answering Testimony of Timothy J. Horger); Ex. PJM-0036) (asserting that TranSource's "physically and electrically necessary" approach would result in revenue inadequacy for

3. Briefs Opposing Exceptions

a. TranSource

35. TranSource asserts that the Initial Decision correctly found that the "physically and electrically necessary" standard applies in determining required upgrades necessary to accommodate a request for IARRs pursuant to Attachment EE.[78] TranSource states that the Initial Decision referenced the Commission's September 2015 Hearing Order, which cited two standards: Order No. 2003's physically and electrically necessary standard and the "but for" test in the PJM Tariff.[79] TranSource disagrees with PJM's attempt to assert that these standards do not apply in this case by distinguishing generation interconnection requests from IARR requests based on the notion that IARRs are financial, not physical, rights.[80] TranSource argues that the physically and electrically necessary standard applies because the Commission itself applied it to an Attachment EE IARR request and because the standard speaks directly to the core dispute in the proceeding—PJM's analysis of what physical upgrades are necessary to accommodate TranSource's Upgrade Requests for IARRs.[81] Further, TranSource argues that PJM's simultaneous feasibility test, rather than "awarding ARRs and [Financial Transmission Rights (FTRs)] *up to the physical capacity of the system*," consistent with the Commission's prior explanation of the test,[82] instead is unbounded by and untethered to any physical and electrical system capacity requirements.[83] TranSource urges the

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firm transmission customers).

[78] TranSource Brief Opposing Exceptions at 5, 82-86.

[79] *Id*. at 82-83. TranSource states that, according to the Commission, these standards indicate that "'interconnecting customers may only be assessed the costs of those facilities *necessary to accommodate their project*.'" *Id*. (quoting September 2015 Hearing Order, 152 FERC ¶ 61,229 at P 30 (emphasis added)).

[80] *Id*. at 83 (citing PJM Brief on Exceptions at 57-58).

[81] *Id*.

[82] *Id*. at 84 (citing *PJM*, 117 FERC ¶ 61,220 at P 81 (emphasis added); *see also Borough of Chambersburg, PA v. PJM Interconnection, L.L.C.,* 117 FERC ¶ 61,219, at P 60 (2006) (*Chambersburg*)).

[83] *Id*. (citing Ex. PJM-0001A at 9, 20-21 (Horger Answering Test.)). TranSource asserts that PJM's analysis is focused on whether PJM will collect enough congestion revenue to make payments to ARR/FTR holders, and to do so utilizes artificial "market limits" and economic constraints in its simultaneous feasibility modeling. *Id*. at 84-85

Commission to uphold the Initial Decision and its own September 2015 Hearing Order by applying the "but for" test and the "physically and electrically necessary" standard to TranSource's Upgrade Requests for IARRs.[84]

b. PJM

36. PJM disagrees with TranSource's argument that the "physically and electrically necessary" standard applies in this case, since it omits the critical consideration of revenue adequacy.[85] PJM asserts that, although the Commission cited this standard in the September 2015 Hearing Order, quoting an order on generator interconnections, TranSource is not proposing to interconnect generation; rather it is requesting IARRs, which are distinct from generator interconnections.[86] PJM argues that, when a customer requests IARRs through Attachment EE, PJM must identify transmission upgrades needed to ensure the specific IARRs requested will be simultaneously feasible and not increase revenue inadequacy for other customers, in accordance with its Operating Agreement section 7.8.[87] PJM asserts that TranSource's proposed standard ignores revenue adequacy. Further, PJM explains that the analysis it conducted to determine the upgrades necessary to accommodate TranSource's Upgrade Requests for IARRs is the same basic method PJM has used for all IARR requests for ten years, and it ensures that PJM honors and implements the governing standards from Order No. 681.[88] Finally,

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("In a non-published opinion, the D.C. Circuit explained that PJM's Tariff does not compel the conclusion that PJM must in every modeling decision 'allow the goal of revenue adequacy to trump other regulatory goals.'") (citing *PPL EnergyPlus, LLC v. FERC*, 503 Fed. App'x 1, No. 11-1341, at 2 (D.C. Cir. Feb. 5, 2013) (unpublished) (*PPL v. FERC*)).

[84] *Id*. at 85.

[85] PJM Brief Opposing Exceptions at 20-22 (citing TranSource Brief on Exceptions at 31, 44, 47; TranSource Post-Hearing Brief at 16, 17, 25, 41, 47, 64, 88, 92, 127).

[86] *Id*. at 20-21 (citing TranSource Brief on Exceptions at 43 n.139 (quoting September 2015 Hearing Order, 152 FERC ¶ 61,229 at P 30 n.53)).

[87] *Id*. at 21 (citing PJM Operating Agreement, Schedule 1 § 7.8(a) (Elective Upgrade Auction Revenue Rights)).

[88] *Id*. at 20 (citing Ex. PJM-0027 at 11:3-8, 14:2-5, 22:3-12 (Horger Cross-Answering Test.); Ex. TS-115 at 34:24-35:16 (Prepared Deposition of Timothy J. Horger); Tr. 709:14-19, 710:17-18 (Horger)).

PJM states that a customer is responsible for all the upgrades that would not be required "but for" its IARR request.[89]

c. PJM Transmission Owners

37. The PJM Transmission Owners disagree with TranSource's position that it was legal error for the Initial Decision to find that a System Impact Study does not constitute a final and binding determination of upgrades or costs.[90] The PJM Transmission Owners state that the Initial Decision correctly found that the Facilities Study phase would have provided a more refined and detailed study, and could have changed the upgrades identified, which the PJM Transmission Owners assert appropriately reflects the distinctions between the different phases in PJM's Attachment EE study process.[91] The PJM Transmission Owners assert that, because this is a section 206 proceeding, TranSource has the burden to demonstrate that the facilities identified in the TranSource System Impact Studies were not necessary to accommodate TranSource's requests, and that the necessary upgrades cannot definitively be determined until completion of the Facilities Study.[92] The PJM Transmission Owners disagree with TranSource that it could not have been expected to move to the Facilities Study phase because the foundational data and process was flawed and the Facilities Study "would not materially resolve most problems" in the TranSource System Impact Studies.[93] The PJM Transmission Owners contend that the Initial Decision makes no such finding, instead concluding that the correct foundational data was used in the TranSource System Impact Studies and denying

[89] *Id*. at 51, 53 (citing PJM Tariff, Part VI, Subpart B Agreements and Cost Responsibility § 217.3(a) (Local and Network Upgrades) ("Each New Service Customer shall be obligated to pay for 100 percent of the costs of the minimum amount of Local Upgrades and Network Upgrades necessary to accommodate its New Service Request and that would not have been incurred under the Regional Transmission Expansion Plan but for such New Service Request . . . .").

[90] PJM Transmission Owners Brief Opposing Exceptions at 17-18 (citing TranSource Brief on Exceptions at 44).

[91] *Id*. (citing Initial Decision, 162 FERC ¶ 63,007 at PP 83-84).

[92] *Id*.

[93] *Id*. at 18-19 (quoting TranSource Brief on Exceptions at 45).

TranSource's request to find that PJM modeled the TranSource Upgrade Requests incorrectly.[94]

d. Trial Staff

38. Trial Staff argues that TranSource's claim that the upgrades listed in the TranSource System Impact Studies are not "physically and electrically necessary" has no merit.[95] Trial Staff argues that the issue in this proceeding is not whether the upgrades are physically and electrically necessary, but rather whether the upgrades will result in sufficient congestion revenues to satisfy the ARRs held by firm transmission customers, as well as the IARRs requested by TranSource.[96] Trial Staff argues that TranSource confuses differences between the financial markets and the physical reliability of PJM's transmission system, and that IARRs are financial products that do not address reliability.[97] Trial Staff notes that TranSource in fact recognized IARRs as "financial rights," and, as such, Trial Staff argues, it is appropriate that PJM models economic constraints (or market limits) that impact the simultaneous feasibility of the ARRs and IARRs awarded.[98] Further, Trial Staff asserts that section 7.5 of Attachment K-Appendix of the PJM Tariff expressly recognizes that the objective of simultaneous feasibility is to "ensure that there are sufficient revenues" from congestion charges to satisfy all FTR and ARR obligations,[99] and that the Commission has found that "the market would be undermined [if the IARRs] could not be financially supported by

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[94] *Id*. at 19 (citing Initial Decision, 162 FERC ¶ 63,007 at PP 80(d), 80(h)).

[95] Trial Staff Brief Opposing Exceptions at 8-9, 18 (citing TranSource Brief on Exceptions at 29, 43, 44, 47).

[96] *Id*. at 9, 18 ("There is no 'physically and electrically necessary' standard for evaluating IARR requests."). Trial Staff explains that PJM has performed the same IARR analysis for 10 years with respect to 80 IARR requests, and that the process appropriately protects the rights of firm transmission service customers who have paid for PJM's transmission system, ensuring that awarded IARRs, which can last for 30 years, do not degrade those rights. *Id*. at 9 (citing Ex. PJM-0001A at 27 (Horger Answering Test.).

[97] *Id*. at 18-19.

[98] *Id*. at 19 (citing Joint Statement of Stipulated Facts at 2).

[99] *Id*. (citing PJM Tariff, Attachment K, Appendix § 7.5 (Simultaneous Feasibility)).

congestion costs."[100] Trial Staff argues that, absent TranSource's Upgrade Requests for IARRs, none of the upgrades would be necessary or required for reliability of the physical system, and therefore TranSource's reliance on a "physically and electrically necessary" standard has no support.[101] Lastly, Trial Staff disagrees with TranSource's reliance on Order No. 2003 to defend its position, asserting that Order No. 2003 relates to the physical interconnection of generators to the transmission system and has nothing to do with IARR requests.[102]

4. Commission Determination

39. We affirm the Presiding Judge's finding that no determination can be made based on this record as to whether the Attachment EE process as a whole is unjust and unreasonable because only the System Impact Study phase of the Attachment EE process was litigated.[103] Therefore, as a threshold matter, we conclude that it is appropriate in this proceeding to assess only whether the System Impact Study phase of the Attachment EE process, and PJM's application of that process to the TranSource System Impact Studies, is unjust and unreasonable. Consequently, our discussion and conclusions throughout this order will be confined to the System Impact Study phase of the Attachment EE process. Further, we find that the question of whether PJM should add a pre-System Impact Study phase to the Attachment EE study process is moot.[104] Effective April 1, 2018, the Commission approved amendments to the PJM Tariff to add a Feasibility Study for Attachment EE upgrade requests, which is conducted before the System Impact Study.[105]

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[100] *Id*. (citing *PJM*, 117 FERC ¶ 61,220 at P 46).

[101] *Id*. at 19-20 (citing Tr. 1179:8-1180:3 (Fejka)).

[102] *Id*. at 20 (citing TranSource Brief on Exceptions at 43 n.139; Order No. 2003, 104 FERC ¶ 61,103, *order on reh'g*, Order No. 2003-A, 106 FERC ¶ 61,220 (2004), *order on reh'g*, Order No. 2003-B, 109 FERC ¶ 61,287 (2004), *order on reh'g*, Order No. 2003-C, 111 FERC ¶ 61,401 (2005), *aff'd sub nom. Nat'l Ass'n of Regulatory Util. Comm'rs v. FERC*, 475 F.3d 1277 (D.C. Cir. 2007)).

[103] Initial Decision, 162 FERC ¶ 63,007 at P 88.

[104] *Id*. P 80(k).

[105] *See* PJM Interconnection, L.L.C., Transmission Service Request and Upgrade Request Feasibility Studies Revisions to PJM Open Access Transmission Tariff, Docket No. ER18-750-000 (filed Jan. 30, 2018); *PJM Interconnection, L.L.C.*, Docket No. ER18-

40. We also affirm the Presiding Judge's finding that it cannot be determined on this record whether the upgrades identified by PJM in the TranSource System Impact Studies were necessary to accommodate TranSource's Upgrade Requests.[106] The Commission has previously recognized that the System Impact Study phase and Facilities Study phase are "components of a progressive study process" detailed in the PJM Tariff, and that the purpose of conducting these studies in a sequence is to arrive at more precise results in each phase.[107] We agree with the Presiding Judge that the System Impact Study represents merely a good faith, non-binding attempt to determine the upgrades, and their costs, necessary to accommodate an Attachment EE upgrade request, and that the Facilities Study generally provides a "more refined analysis" that "may produce narrower results than the impact study."[108] Given that the System Impact Study, per the Tariff, is a "good faith attempt" to determine the costs of the necessary upgrades that "shall not be deemed final or binding," we disagree with TranSource's argument that the Initial Decision "punished" TranSource for not executing the Facilities Study Agreement.[109] Moving to the Facilities Study stage would not have bound TranSource to the scope of work in the System Impact Study.[110] In addition, TranSource's argument that there is

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750-000 (Mar. 19, 2018) (delegated order).

[106] Initial Decision, 162 FERC ¶ 63,007 at P 83.

[107] *Chesapeake Transmission*, 116 FERC ¶ 61,234 at PP 52-53.

[108] Initial Decision, 162 FERC ¶ 63,007 at PP 83, 85(a)-(d) (quoting *Chesapeake Transmission,* 116 FERC ¶ 61,234 at P 53) (internal quotations omitted).

[109] PJM Tariff, Attachment N-1 Paragraph 6 (Form of System Impact Study Agreement) ("These estimates shall represent a good faith attempt to determine the cost of necessary facilities and upgrades to accommodate the New Service Customer's New Service Request, and the New Service Customer's cost responsibility for them, but shall not be deemed final or binding. . . . Final estimates will be developed only upon execution of a Facilities Study Agreement in accordance with Part VI of the PJM Tariff.").

[110] PJM Limited Response at 2 ("Contrary to [TranSource]'s reasons for not executing [the Facilities Study Agreements] . . . TranSource was free to rescind the Facilities Study Agreement at any time after execution, and the study deposits were fully refundable, as stated in PJM's Answer. Given such facts, [TranSource] had the ability to comply with the Tariff without repercussion . . . ."); PJM Answer at 10; PJM Interconnection, L.L.C., Motion for Leave to Intervene and Protest the Request for Waiver of Tariff Milestones, Docket No. EL15-79-000, at 3 (filed July 9, 2015) ("Nowhere in Manual 14-A . . . does it state that PJM does not allow material changes to

"no evidence" that proceeding to the Facilities Stage would have produced a just and reasonable outcome is speculative and does not change the fact that we cannot determine whether the upgrades identified by PJM in the TranSource System Impact Studies, which could have been modified in the next study phase, were necessary to accommodate TranSource's Upgrade Requests.[111] Further, TranSource, which bears the burden of proof in this proceeding, has not presented any evidence that any alleged flaws in PJM's System Impact Study process would have carried over to the Facilities Study phase.

41. Therefore, because TranSource did not proceed to the Facilities Study phase, it is premature to evaluate whether the facilities that PJM identified in the System Impact Study phase were necessary to accommodate the TranSource Upgrade Requests, and similarly, whether the scope of the necessary upgrades was inflated. Instead, our analysis herein will focus on whether the results of the TranSource System Impact Studies were unreasonable, taking into consideration that System Impact Studies are intended to be good faith, non-binding estimates to be further refined.[112]

42. Regarding what standard applies for determining the upgrades required for an Attachment EE upgrade request, we find that the "but for" test is the appropriate test for determining the necessary upgrades to accommodate an Attachment EE request. Specifically, an IARR requestor pursuant to Attachment EE is responsible only for the cost of the upgrades necessary to accommodate its request for IARRs, or, in other words, the upgrades that would not be necessary "but for" the IARR request. Specifically, section 217.3(a) of the PJM Tariff establishes that new service customers, including IARR requestors like TranSource, "shall be obligated to pay for 100 percent of the costs of the minimum amount of [upgrades] necessary to accommodate its New Service Request and that would not have been incurred under the Regional Transmission Expansion Plan *but for* such New Service Request . . . ."[113] However, just as we find that it is premature to evaluate in the preliminary System Impact Study phase whether the

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the System Impact Studies after execution of the [Facilities Study Agreement]. In fact given the progressive nature of the interconnection study process, it is not uncommon for upgrades to be added or removed as the studies are refined.").

[111] TranSource Brief on Exceptions at 44.

[112] PJM Tariff, Attachment N-1 Paragraph 6 (Form of System Impact Study Agreement).

[113] PJM Tariff, Part VI, Subpart B Agreements and Cost Responsibility § 217.3 (Local and Network Upgrades) (0.0.0) (effective June 1, 2007; superseded September 17, 2010) (emphasis added); *see also* September 2015 Hearing Order at, 152 FERC ¶ 61,229 P 30.

facilities that PJM identified were necessary to accommodate the TranSource Upgrade Requests, similarly we find that the "but for" test cannot be applied until the final set of upgrades are identified, at which time the associated cost estimates will more accurately reflect the upgrades that would not be necessary but for TranSource's Upgrade Requests.

43. We disagree with the Initial Decision's implicit finding that the "necessary to physically and electrically interconnect" standard is applicable to Attachment EE upgrade requests.[114] While the September 2015 Hearing Order appropriately referenced the "but for" test in section 217.3 of the PJM Tariff, the reference to Order No. 2003 and the "physically and electrically" necessary standard was misplaced.[115] Upon reviewing the record in this case, we agree with PJM and Trial Staff that Order No. 2003 relates to the physical interconnection of generation to the transmission system and not IARR requests.[116] IARRs are purely financial rights, not physical rights, and therefore the "but for" test for an upgrade request for IARRs is focused on what upgrades are necessary to make the requested financial rights feasible. The PJM Tariff expressly provides for such a financial test by requiring that granted IARRs be "simultaneously feasible with outstanding [ARRs],"[117] which the Commission has previously recognized as the appropriate test when granting long-term financial rights such as IARRs.[118] We find that the simultaneous feasibility test, as defined in sections 7.5 and 7.8 of the PJM Tariff and Operating Agreement, is the appropriate means to determine which upgrades are necessary to accommodate an Attachment EE upgrade request (i.e., the upgrades that would not be needed but for the Attachment EE upgrade request).[119]

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[114] Initial Decision, 162 FERC ¶ 63,007 at P 85; *see* PJM Brief on Exceptions at 57-60.

[115] September 2015 Hearing Order, 152 FERC ¶ 61,229 at P 30. As Trial Staff correctly points out, absent TranSource's Upgrade Requests for IARRs, no upgrades would be required to the physical PJM system; therefore a "physically and electrically necessary" standard is inappropriate. Trial Staff Brief Opposing Exceptions at 20.

[116] PJM Brief Opposing Exceptions at 20-21; Trial Staff Brief Opposing Exceptions at 20.

[117] PJM Tariff, Attachment K, Appendix § 7.8 (Elective Upgrade Auction Revenue Rights) (1.0.0).

[118] *PJM Interconnection*, 121 FERC ¶ 61,073 at PP 22-23; *PJM Interconnection, L.L.C.*, 119 FERC ¶ 61,144 at PP 19-20; *PJM*, 117 FERC ¶ 61,220 at P 46.

[119] PJM Brief Opposing Exceptions at 21 (citing PJM Operating Agreement, Schedule 1 § 7.8(a) (Elective Upgrade Auction Revenue Rights)); *see also* Trial Staff

B. Burden of Proof

1. Initial Decision

44. The Presiding Judge denied TranSource's requests: (1) for a finding that PJM incorrectly modeled TranSource's Upgrade Requests; (2) for an order that the TranSource System Impact Studies were not properly performed and therefore should be withdrawn and reissued, and; (3) for an order that PJM commission a neutral third-party to replicate PJM's analyses and conclusions and provide estimates of the costs for the upgrades identified.[120] The Presiding Judge explained that these requests were denied because TranSource failed to meet its burden by a preponderance of the evidence to show that the results of the TranSource System Impact Studies were inaccurate or would change in any significant way, because TranSource failed to produce any "countervailing methodologies" of its own to challenge the results PJM and the PJM Transmission Owners obtained.[121]

2. Briefs on Exceptions

45. TranSource argues that the Initial Decision erred as a matter of law by requiring TranSource, the complainant, to produce "countervailing methodologies" and affix its own just and reasonable result.[122] TranSource argues that to succeed on a section 206 complaint, a complainant must fulfill its burden to show that the rate, charge, classification, rule, practice, or contract that is the subject of the complaint is unjust, unreasonable, unduly discriminatory, or preferential.[123] TranSource asserts that the Initial Decision found that TranSource met this burden by a preponderance of the evidence showing that the System Impact Study phase was non-transparent and discriminatory, in violation of the FPA and Commission precedent, but then failed to

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Brief Opposing Exceptions at 18-19 (citing PJM Tariff, Attachment K, Appendix § 7.5 (Simultaneous Feasibility)). We note that TranSource does not take exception to PJM's use of the simultaneous feasibility test in evaluating Attachment EE upgrade requests, but rather disagrees with PJM's methodology for conducting the test. *See* TranSource Brief Opposing Exceptions at 83-84.

[120] Initial Decision, 162 FERC ¶ 63,007 at PP 80(d)-(i).

[121] *Id*.

[122] TranSource Brief on Exceptions at 18, 25-30.

[123] *Id*. at 26 (citing 16 U.S.C. § 824e(b) (2012); *see Buckeye Power, Inc. v. Am. Transmission Sys., Inc.*, 142 FERC ¶ 63,007, at PP 326-329 (2013) (*Buckeye*)).

grant meaningful relief for the "untenable reason that TranSource did not offer a 'countervailing methodology' for what PJM, the system operator, was solely responsible for producing—a fact-based and transparent study of TranSource's proposed upgrades and expansions."[124] TranSource notes that the Initial Decision did not cite any case law, statute, or Commission regulation supporting the denial of TranSource's requests for relief on the grounds that it did not produce a countervailing methodology.[125]

46. TranSource argues that, in response to a section 206 complaint, once the Commission determines that a rate or practice is unjust or unreasonable, the Commission, not the complainant, bears the burden of fashioning the remedy and determining the just and reasonable result.[126] Thus, once the Initial Decision found FPA violations on the grounds of non-transparency and discrimination, TranSource argues that it was up to the Commission to affix a just and reasonable remedy in this proceeding.

47. TranSource states that the Initial Decision did not explain what it means by "countervailing methodologies" or why TranSource would be required to provide them. Further, TranSource argues that even if requiring countervailing methodologies were not an obvious legal error, such a requirement would be unworkable given the opaqueness of the data and modeling that PJM used in studying the TranSource Upgrade Requests.[127] Finally, TranSource argues that it did provide a countervailing approach for studying IARR requests, specifically identifying multiple deficiencies and fixes to various elements of the PJM System Impact Study process that could and should inform the Commission in affixing a just and reasonable result, but the Initial Decision did not explain why this evidence was inadequate.[128]

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[124] *Id*. at 25 (citing Initial Decision, 162 FERC ¶ 63,007 at PP 80(d), 80(e), 80(f), 80(h), 80(i)) (internal citations omitted).

[125] *Id*. at 25-26 (citing Initial Decision, 162 FERC ¶ 63,007 at PP 80-81).

[126] *Id*. at 26-27 (citing *Tenn. Gas Pipeline Co. v. FERC*, 860 F.2d 446, 454 (D.C. Cir. 1988); *FirstEnergy Serv. Co. v. FERC*, 758 F.3d 346, 352-354 (D.C. Cir. 2014) (*FirstEnergy*) (citing *Md. Pub. Serv. Comm'n v. FERC*, 632 F.3d 1283, 1285 (D.C. Cir. 2011) (*Md. Pub. Serv. Comm'n*)); *Buckeye*, 142 FERC ¶ 63,007 at P 328; *Md. Pub. Serv. Comm'n*, 632 F.3d at 1285 n.1).

[127] *Id*. at 27 (noting that a merchant is not in a position to "divine" the modeling procedures or circuit ratings used by PJM).

[128] *Id*. at 28-30 (citing Ex. TS-001A (Rousselle Direct Test.); Ex. TS-042 (Prepared Direct Testimony of Larry Eng); Ex. TS-067A (Prepared Direct Testimony of Dale Douglass); Ex. TS-080 (Prepared Direct Testimony of Michael Seelhof); Ex. TS-

3. Briefs Opposing Exceptions

a. PJM and the PJM Transmission Owners

48. PJM and the PJM Transmission Owners argue that the Presiding Judge correctly applied the section 206 burden, including the requirement that the Commission "'proceed with appropriate corrective remedies'" for identified section 206 violations.[129] PJM explains that the Presiding Judge appropriately adopted remedies he viewed as addressing his finding that PJM's practices "'while processing'" TranSource's Upgrade Requests were nontransparent.[130] However, PJM and the PJM Transmission Owners argue that the Initial Decision never found that PJM's estimating methods were unjust and unreasonable or that there were flaws in PJM's study results, and therefore the remedy prong of section 206 was never reached as to those allegations.[131] Therefore, PJM argues, the Initial Decision's reference to TranSource's failure to present "countervailing methodologies" is not imposing on TranSource the burden to affix a remedy under section 206, but rather merely recognizing that TranSource failed to meet its burden to demonstrate PJM's study methodology or results were unjust or unreasonable.[132] PJM asserts that, in order to

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084A (Rousselle Rebuttal Test.); Ex. TS-101 (Prepared Rebuttal Testimony of Larry Eng); Ex. TS-106A (Prepared Rebuttal Testimony of Dale Douglass); Ex. TS-109 (Prepared Rebuttal Testimony of Michael Seelhof); Ex. TS-110 (Prepared Supplemental Rebuttal Testimony of Adam Rousselle); TranSource Post-Hearing Brief at 24-116)).

[129] PJM Brief Opposing Exceptions at 9, 12-16 (quoting Initial Decision, 162 FERC ¶ 63,007 at P 20 (citing *Sunflower Elec. Power Corp. v. Kan. Mun. Energy Agency*, 152 FERC ¶ 61,217, at P 15 n.29 (2015) (*Sunflower*))); PJM Transmission Owners Brief Opposing Exceptions at 8-10.

[130] PJM Brief Opposing Exceptions at 13 (quoting Initial Decision, 162 FERC ¶ 63,007 at P 1).

[131] *Id*. at 14; PJM Transmission Owners Brief Opposing Exceptions at 8-10.

[132] PJM Brief Opposing Exceptions at 9, 14; PJM Transmission Owners Brief Opposing Exceptions at 8-10 ("While it is true that the Initial Decision used the term 'countervailing methodologies' in several places, in doing so, the Presiding Judge was conveying that TranSource failed to provide sufficient evidence demonstrating that the results of the PJM [System Impact Studies] were flawed or improper."). PJM asserts that there was a "battle between experts" over the correct estimating methodology, and that the Presiding Judge found that TranSource failed to show that PJM's substantive estimating methodologies were unjust and unreasonable. PJM Brief Opposing Exceptions at 9 (citing PJM Initial Post-Hearing Brief at 20-34; PJM Post-Hearing Reply

show that PJM's methodology led to flawed results, TranSource needed to present what it believed were the correct set of results and explain how it reached those results, which TranSource failed to do. Therefore, PJM argues, TranSource failed to cast any doubt on PJM's methodology or results.[133]

b. Trial Staff

49. Trial Staff argues that TranSource's argument that the Presiding Judge erred by incorrectly finding that TranSource failed to offer a "countervailing methodology" to PJM's IARR evaluation process "has no bearing in this case."[134] Trial Staff states that a finding that an existing rate or practice is unjust or unreasonable is "the indispensable legal predicate for the Commission's obligation under section 206 of the FPA to adopt a just and reasonable result," and that the record in this proceeding does not support a finding that PJM's existing IARR evaluation methodology is unjust and unreasonable.[135]

4. Commission Determination

50. We find that the Presiding Judge applied the correct burden of proof in this proceeding. Pursuant to FPA section 206, "the burden of proof to show that any rate, charge, classification, rule, regulation, practice, or contract is unjust, unreasonable, unduly discriminatory, or preferential shall be upon the Commission or the complainant."[136] When a person, as opposed to the Commission, initiates a section 206 complaint, the burden of proof falls on the complainant.[137] The party bearing the burden of proof will prevail only if, when the record is closed, the preponderance of the evidence supports its position.[138] Once the complainant has met its burden of proof to show that a

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Brief at 35-39).

[133] *Id*. at 15.

[134] Trial Staff Brief Opposing Exceptions at 7.

[135] *Id*. (citing Trial Staff Brief on Exceptions at 9-16, 16-19, 19-24).

[136] 16 U.S.C. § 824e(b) (2012).

[137] *Id*.; *FirstEnergy*, 758 F.3d at 353; *New England Power Generators Ass'n, Inc. v. FERC*, 879 F.3d 1200 (D.C. Cir. 2018) (*New England Power Generators*); *Sunflower*, 152 FERC ¶ 61,217 at P 15.

[138] *Puget Sound Energy, Inc. v. All Jurisd. Sellers*, Opinion No. 537, 151 FERC ¶ 61,173, at P 98, *aff'd in relevant part on reh'g*, 153 FERC ¶ 61,386 (2015).

rate or practice is unjust and unreasonable, the burden to establish the just and reasonable alternative sits with the Commission.[139]

51. As the complainant in this section 206 proceeding, TranSource had the burden to prove each of its allegations by a preponderance of the evidence. TranSource argues that the Initial Decision erred as a matter of law by requiring TranSource, the complainant, to produce "countervailing methodologies" to affix its own just and reasonable rate after finding that PJM engaged in nontransparent and discriminatory practices in violation of the FPA.[140] We disagree. Consistent with section 206, the Presiding Judge placed the appropriate burden of proof on TranSource and ultimately found that TranSource met its burden by a preponderance of the evidence to show that PJM's practices while processing the TranSource System Impact Studies were nontransparent and discriminatory, and therefore unjust and unreasonable.[141] The Presiding Judge then proceeded to establish just and reasonable remedies for those specific violations, consistent with section 206.[142] The Presiding Judge's reference to TranSource's failure to produce "countervailing methodologies" does not relate to the *remedies* to be granted for the violations the Presiding Judge found, but rather to the question of whether TranSource met its burden to prove other, separate allegations raised in its Complaints—specifically, its allegations that PJM incorrectly modeled the TranSource System Impact Studies, causing inaccurate results.[143] We understand the Presiding Judge's use of the "countervailing

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[139] *FirstEnergy*, 758 F.3d at 353-54; *New England Power Generators*, 879 F.3d at 1200.

[140] TranSource Brief on Exceptions at 25-30.

[141] Initial Decision, 162 FERC ¶ 63,007 at P 1 (summary of Presiding Judge's findings and remedies granted), P 20 (setting forth the appropriate section 206 burden of proof).

[142] *Id*. PP 1, 73 ("Under section 206 TranSource met its burden to show by a preponderance of the evidence that the [System Impact Study] phase of the Attachment EE process was applied to it in a way that was unjust and unreasonable, resulting in two separate violations of Commission policy and precedent, namely nontransparent practices and discrimination. Under section 206, once the complainant has made the appropriate legal showing, the Commission may apply reasonable remedies to address the causes in the complaint. In this case, TranSource has demonstrated that it is entitled to some remedies.").

[143] *Id.* P 80(d)-(f) ("While TranSource attempted to cast some doubt on the accuracy of the ratings and the competency of the methodologies [used by PJM], they presented no countervailing methodologies of their own to challenge the results . . . .

methodologies" language as merely a way of explaining that TranSource did not provide sufficient evidence to prove the allegations it made about PJM's System Impact Study methodologies. Therefore, we find that the Presiding Judge applied the correct burden of proof for a section 206 complaint. Our findings in this section of the order pertain only to whether the Presiding Judge applied the correct burden of proof, not whether the Presiding Judge correctly found that TranSource did or did not meet that burden as to specific allegations. Below, we evaluate each of TranSource's allegations on its own merits and the evidence presented, and set forth our findings with regard to whether TranSource met its burden as to each allegation.

52. TranSource also argues that, even if requiring "countervailing methodologies" were not a legal error, which we find it was not, that the Presiding Judge erred by not explaining why TranSource's evidence regarding multiple deficiencies and fixes to various elements of the PJM System Impact Study process was inadequate to meet its burden of proof to show that PJM's System Impact Study methodology and results were unjust and unreasonable.[144] As previously stated, we address TranSource's arguments and evidence regarding alleged errors in the PJM System Impact Study methodology and the results of the TranSource System Impact Studies in sections III.D-III.H below.[145]

C. Transparency of the System Impact Study Process for Attachment EE Upgrade Requests

1. Initial Decision

53. The Presiding Judge found that PJM's practices while processing TranSource's Upgrade Requests were nontransparent and therefore unjust and unreasonable.[146] The Presiding Judge found that the "lack of clarity and transparency in the IARR study process has likely caused systematic issues and contributed to the low completion rate of

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Here TranSource failed to meet its burden by a preponderance of the evidence.").

[144] TranSource Brief on Exceptions at 28-30.

[145] *See infra* Sections III.D-III.H.

[146] Initial Decision, 162 FERC ¶ 63,007 at PP 1, 21, 80(e). In reaching this conclusion, the Initial Decision stressed the Commission's history of fostering policies and taking actions to open the transmission grid to greater competition, including policies that require Regional Transmission Organizations (RTO)/Independent System Operators (ISO) to have policies in place for transparency and information exchange. *Id*. PP 14-20 (summarizing the Commission's findings in Order No. 1000, Order No. 888, Order No. 890, and Order No. 2003).

successful merchant IARR projects."[147] The Presiding Judge stated that no description of the components of the System Impact Study phase appears in a format or source, such as in the PJM Tariff, Operating Agreement, manuals, or other written manifestations, that would have given TranSource "a modicum of advance notice" of PJM's methods and inputs.[148] For example, the Presiding Judge highlighted various issues with the transparency of the market model[149] PJM uses as part of the System Impact Study phase for IARR requests. The Presiding Judge explained that TranSource was not provided the market model until December 2015, many months after TranSource signed its Attachment EE agreements;[150] TranSource was not aware of modifications made to the market model (as well as the planning model);[151] TranSource was not aware that PJM applied a transfer analysis to the market model and planning model;[152] and, TranSource was not aware that PJM established market limits in the market model that were not prescribed in the Tariff or Operating Agreement.[153]

54. The Presiding Judge noted that the record in this proceeding includes evidence that PJM communicated with TranSource regarding various aspects of the System Impact Study process.[154] However, the Presiding Judge found that "[t]he context of these

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[147] *Id*. P 38 (citing Ex. S-038 at 7:13-9:9 (Norman Direct and Answering Test.)).

[148] *Id*. P 66. The Presiding Judge noted that PJM admitted to taking steps in its System Impact Study process that were not in the PJM Tariff or manuals. *Id*. P 61 (citing Ex. TS-120 at 51:17-22 (Prepared Deposition of David Egan)).

[149] The market model is the model PJM uses to allocate financial rights (ARRs) to firm transmission service customers and to identify any market limit violations from the incremental impacts of IARR requests. Ex. PJM-0001A at 6:12-16 (Horger Answering Test.).

[150] *Id*. P 61 (citing Ex. TS-001A at 40:1-4 (Rousselle Direct Test.); Ex. TS-042 at 30:17-31:14 (Eng Direct Test.)).

[151] *Id*. P 62.

[152] *Id*. P 63.

[153] *Id*. P 39 (citing Ex. TS-115 at 95:8-12, 102:8-21 (Horger Dep.); Tr. 689:18-690:2 (Horger); Ex. PJM-0001A at 21:5-20 (Horger Answering Test.)).

[154] *Id*. PP 64-65. The Initial Decision noted that there are about 800 pages of emails (some pages duplicated) in the record in this case, spanning June 2013 to March 2015. *Id*. P 64.

communications illustrates the dribbling out of piecemeal information over time which is not consistent with the level of transparency that . . . Commission orders have envisioned."[155] The Presiding Judge asserted that email communications between PJM and TranSource demonstrate that the System Impact Study process had no upfront coherent informational base for a developer to use. Further, the Presiding Judge found that the emails indicated that new elements or components of the System Impact Study process, especially with regard to modeling, often "emerged . . . without warning" in emails to TranSource.[156] Ultimately, the Presiding Judge found that PJM's approach to providing information proved inadequate to satisfy the transparency obligations of PJM, rendering the System Impact Study process unjust and unreasonable as it was applied to TranSource.[157]

2. Briefs on Exceptions

a. TranSource

55. TranSource does not take exception to the Presiding Judge's finding that PJM's practices were nontransparent and, therefore, unjust and unreasonable.[158] TranSource argues that PJM's IARR study process, including PJM's assumptions and modeling processes were not open and transparent.[159] TranSource contends, even with its team of experts and numerous communications with PJM, TranSource remained in the dark about PJM's study processes and that extensive discovery over a contentious 18-month period was necessary to gain information which should have been publicly available.[160] As an example, TranSource argues that it received, only through discovery, an audit of the

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[155] *Id*. For example, the Initial Decision noted that one month after TranSource signed its Attachment EE agreements, PJM emailed TranSource the link to the IARR manual. *Id*. (citing Ex. PJM-0016). However, the Presiding Judge found that the early information provided about the IARR process had no explanations about the components that comprise the models, methodologies or important aspects of the System Impact Study Phase. *Id*.

[156] *Id*. P 65 (citing Ex. TS-035 at 63; Ex. PJM-0045 at 1).

[157] *Id*.

[158] TranSource Brief on Exceptions at 2.

[159] *Id*. at 6.

[160] *Id*. (citing Initial Decision, 162 FERC ¶ 63,007 at PP 38, 40-42).

TranSource System Impact Studies that PJM personnel had prepared during the period between TranSource's Initial Complaint and Amended Complaint.[161]

56. TranSource argues that, after PJM released the System Impact Studies, TranSource attempted to meet with PJM to resolve its questions regarding the unsupported cost estimates; however, PJM did not provide enough information to allow TranSource to obtain a reasonable understanding of the study results and resolve TranSource's concerns.[162] TranSource contends that, due to unreasonably high cost estimates, TranSource and its investors could not financially proceed to the next stage of the IARR study process—the Facilities Study.[163]

b. PJM

57. PJM argues that it went beyond its Tariff requirements and previous Commission directives to provide abundant information to TranSource regarding the process PJM uses to prepare upgrade estimates for Attachment EE requests for IARRs.[164] Specifically, PJM states that the Commission previously found that PJM's practices to inform market participants regarding PJM's ARR model, as well as practices regarding its RTEP planning model, are reasonable and meet transparency guidelines. PJM argues that the Initial Decision does not sufficiently consider PJM's compliance with prior Commission findings regarding these transparency guidelines.[165]

58. PJM argues that its commitment to transparency is reflected by the record containing "sustained, extensive communications between PJM subject matter experts and TranSource to provide TranSource with the additional information and explanations it requested."[166] PJM argues that the extensive efforts PJM undertook "to assist and

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[161] *Id*. (citing Ex. PJM-0022).

[162] *Id*. at 8.

[163] *Id*.

[164] PJM Brief on Exceptions at 3.

[165] *Id*. at 14-21 (citing *PJM,* 117 FERC ¶ 61,220 at PP 47, 103; *PJM Interconnection*, *L.L.C.*, 119 FERC 61,144 at P 97; *FPL Energy Marcus Hook, L.P. v. PJM Interconnection, L.L.C.*, 123 FERC ¶ 61,289, at PP 32, 39 (2008); *Borough of Chambersburg v. PJM Interconnection, L.L.C.*, 119 FERC ¶ 61,166, at P 43 (2007); *PJM Interconnection, L.L.C.*, 123 FERC ¶ 61,163, at P 37 (2008)).

[166] *Id*. at 3-4.

educate TranSource underscore PJM's commitment to transparency."[167] PJM states that its witnesses Mr. Egan and Mr. Horger corresponded with TranSource on a regular basis via emails, phone calls and in-person meetings to address TranSource's questions and to provide information regarding PJM's processes, methodologies, and study results.[168] PJM states that it assisted TranSource with understanding the Attachment S and Attachment EE processes, identifying the ratings used, replicating the processes, understanding the results of the System Impact Studies, and accessing and understanding PJM's market model used in the IARR process.[169] PJM also asserts that it engaged in sustained communication efforts with TranSource since TranSource's original requests under Attachment S.[170]

59. PJM notes that TranSource was able to replicate PJM's results once TranSource applied PJM's instruction and guidance.[171] PJM also notes that it has worked with the Market Monitor on a step-by-step description of the Attachment EE IARR upgrade process, including providing detailed numerical examples.[172]

60. PJM notes that, while the Initial Decision faults PJM for providing an insufficient level of transparency during a past period, the Initial Decision also finds that TranSource has now been provided with sufficient transparency regarding PJM's process.[173] PJM also notes that the Initial Decision rejected arguments "that the PJM Tariff is unjust and unreasonable and must be modified."[174]

61. PJM contends that the record demonstrates that it has satisfied Order No. 890's standard that RTOs should provide sufficient information to customers such that RTO

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[167] *Id*. at 21.

[168] *Id*. at 22.

[169] *Id*. at 22, 25 (citing Ex. PJM-0004 at 46-59, 73-74, 78-87, 91-100, 136-37 362-70; Ex. PJM-0015; Ex. PJM-0017; Ex. PJM-0018).

[170] *Id*. at 26.

[171] *Id*. at 4.

[172] *Id*. (noting that the process description is posted to PJM's website).

[173] *Id*. at 15-16.

[174] *Id*. at 16 (citing Initial Decision, 162 FERC ¶ 63,007 at P 80(j)).

interconnection study results can be replicated.[175] PJM argues that TranSource could have reasonably replicated PJM's results if TranSource had followed PJM's instructions.[176] PJM states that the Initial Decision mischaracterized PJM's efforts to educate TranSource as "piecemeal" and unjust and unreasonable.[177] PJM asserts that it responded to the many questions TranSource posed. PJM explains that the IARR process, including the market and planning models, state of the transmission system, congestion and various financial rights, are complex and dynamic. PJM argues that, as a result, it is unreasonable for the Initial Decision to imply that PJM should have been able to deliver all of the information TranSource requested once the requests were submitted.[178]

c. Trial Staff

62. Trial Staff takes exception to the Initial Decision's finding that PJM's practices when processing TranSource's Upgrade Requests were nontransparent and discriminatory and therefore unjust and unreasonable.[179] Trial Staff argues that PJM's processing of TranSource's Upgrade Requests was consistent with the Commission-approved Tariff provisions regarding IARR requests.[180] Trial Staff notes that the Presiding Judge cited Trial Staff testimony several times in support of its finding that PJM's practices lacked clarity and transparency, but Trial Staff argues that the Presiding Judge failed to fully understand its position on the transparency issue.[181] Trial Staff argues its testimony acknowledges that the public documentation available at the time TranSource entered the queue "was somewhat limited and unclear."[182] Trial Staff argues, however, that when viewed in its totality, the record reflects the fact that PJM

[175] *Id*. at 27-28 (citing *Monongahela Power Co.*, 162 FERC ¶ 61,129, at P 73 (2018) (*Monongahela*)).

[176] *Id*. at 28-30.

[177] *Id*. at 30-31 (citing Initial Decision, 162 FERC ¶ 63,007 at PP 26, 64-65).

[178] *Id*. at 30.

[179] Trial Staff Brief on Exceptions at 2.

[180] *Id*. at 2, 16-19.

[181] *Id*. at 9 (citing Initial Decision, 162 FERC ¶ 63,007 at PP 38, 66).

[182] *Id*. (citing Ex. S-038 at 11:20-12:3 (Norman Direct and Answering Test.)).

provided TranSource's representatives with substantial information concerning its IARR evaluation process during the course of TranSource's efforts to secure IARRs.[183]

63. Trial Staff states that the record reflects that PJM made reasonable, good faith efforts to promptly address TranSource's questions and concerns regarding the IARR evaluation process through in-person meetings, telephone conference calls, emails, and making necessary data available.[184] Trial Staff maintains that TranSource had the necessary information available to understand PJM's IARR process. Further, Trial Staff notes that the IARR process is a complex and continuously-evolving process that requires time to resolve relevant issues.[185]

64. Trial Staff states that Trial Staff witness Dr. Norman noted that, in addition to directing TranSource to the relevant provisions of PJM's Tariff, Operating Agreement, and manuals, PJM had multiple interactions with TranSource representatives, and that such communications may have mitigated the acknowledged limitations of the documentation that she addressed.[186] Trial Staff argues Dr. Norman further explained that, after TranSource initially submitted its IARR requests, PJM undertook a continuing effort to address and answer questions raised by TranSource concerning those requests and to make more information publicly available.[187]

65. Trial Staff explains that Dr. Norman noted that the low completion rate of new service projects may be due to many factors, including the inherent difficulties in implementing a complex process such as PJM's IARR process.[188] Trial Staff notes that PJM continues to improve upon its transparency measures through a "learning by

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[183] *Id*.

[184] *Id*. at 2, 15.

[185] *Id*. at 2.

[186] *Id*. at 9-10 (citing Ex. S-038 at 11:15-12:3 (Norman Direct and Answering Test.)).

[187] *Id*. at 10 (citing Ex. S-038 at 11:5-14 (Norman Direct and Answering Test.)).

[188] *Id*. at 14 (citing Ex. S-038 at 9:3-9 (Norman Direct and Answering Test.)).

doing".[189] process which includes improvements to PJM's IARR process through documentation and communications, as issues arise.[190]

66. Trial Staff also notes that, in May 2016, PJM issued a revised version of Manual 14E, Additional Information for Upgrade and Transmission Interconnection Projects (formerly titled Merchant Transmission Specific Requirements) to include information on Attachment EE processes.[191]

3. Briefs Opposing Exceptions

a. TranSource

67. TranSource argues that the question of "how" PJM reached the System Impact Study results for the TranSource Upgrade Requests remains unanswered after more than two and a half years of litigation and discovery.[192] TranSource asserts that PJM's defense is essentially that information provided to TranSource *during* litigation confirms that the process *prior* to litigation was transparent. However, TranSource argues that the issue is whether the process was transparent in 2014, when TranSource submitted its Upgrade Requests, such that TranSource could reasonably anticipate the outcome of the PJM technical studies and replicate PJM's modeling procedures.[193]

68. TranSource argues that prior Commission orders accepting PJM Tariff provisions related to the IARR process do not vindicate PJM's non-compliance with those Tariff provisions and the significant lack of transparency that occurred when PJM was processing TranSource's Upgrade Requests.[194]

69. TranSource argues that the June 2017 Whitepaper provides no defense to the non-transparency of the TranSource System Impact Studies. TranSource argues that the June 2017 Whitepaper confirms that the process that TranSource encountered during its

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[189] *Id*.

[190] *Id*.

[191] *Id*. at 16.

[192] TranSource Brief Opposing Exceptions at 10-11.

[193] *Id*.

[194] *Id*. at 3, 13-15.

System Impact Studies was opaque and non-transparent.[195] Further, TranSource notes that the June 2017 Whitepaper is not legally binding on PJM and is, by its terms, intended to apply only prospectively.[196] TranSource contends, because the June 2017 Whitepaper was not made public until June 2017, well after the events that are the subject of TranSource's Initial Complaint were filed in June 2015, the Initial Decision "correctly found that PJM's *post hoc* rehabilitative efforts through the creation of the whitepaper are of no legal moment."[197]

70. TranSource explains that the June 2017 Whitepaper has not been reviewed by stakeholders, nor has it been incorporated into the PJM Tariff or Operating Agreement or been approved by the Commission; therefore, TranSource argues that it has no legal significance.[198] TranSource argues that, absent a Tariff change, an Operating Agreement change, or Commission approval of the "settlement" itself, the IARR process document has no legal significance and does not bind PJM going forward.[199] TranSource further argues that the Initial Decision observed that the June 2017 Whitepaper fails to discuss the role of the transmission owners in the System Impact Study process and that more flaws in the process document could surface upon further vetting.[200]

71. TranSource argues that the Initial Decision rightly found that PJM's intent or efforts to communicate with TranSource during the System Impact Study process does not demonstrate that the process was transparent.[201] TranSource argues that the need for such frequent communications, outside of the Tariff or any documented publicly available resource, underscores the lack of transparency and clarity "plaguing" the process.[202] Further, TranSource notes that material information on the process was only obtained through three years of litigation and resource-intensive discovery, not through

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[195] *Id*.

[196] *Id*. at 3, 14.

[197] *Id*. at 13 (citing Initial Decision, 162 FERC ¶ 63,007 at PP 86-87).

[198] *Id*. at 14.

[199] *Id*.

[200] *Id*. at 15 (citing Initial Decision, 162 FERC ¶ 63,007 at P 87).

[201] *Id*. at 16 (citing Initial Decision, 162 FERC ¶ 63,007 at PP 1, 21, 64, 66-67, 75, 88).

[202] *Id*.

any pre-complaint information disclosure or process transparency.[203] TranSource notes that it did not obtain a copy of the PJM market model until litigation commenced, and that PJM had in its possession a 131-page internal audit that it did not acknowledge or release until required to do so as part of the discovery process.[204]

72. TranSource argues that various material elements of the IARR study process were nontransparent, including the actual study procedures (there was no written method available); the fact that PJM used a modified, non-simultaneously feasible market model; the details of the manual transfer analysis that aligns the RTEP planning model with the market model; information on the transfer distribution factor used; and details on the facility ratings used.[205] TranSource contends PJM and the PJM Transmission Owners did not provide TranSource with information TranSource had requested to resolve its concerns with PJM's System Impact Studies, and as a result, TranSource did not have sufficient material information before the deadline to proceed to the Facilities Study stage.[206]

73. TranSource argues the Initial Decision correctly held that PJM's "'[System Impact Study] process had no upfront coherent informational base for a developer to use," thereby preventing TranSource from understanding PJM's modeling and replicating PJM's results in the [System Impact Studies]."[207] In response to PJM's argument that TranSource could have reasonably replicated PJM's results if TranSource had followed PJM's explicit instructions, TranSource argues that PJM neglects to mention that it failed to timely provide TranSource with the information and instructions necessary to replicate PJM's studies.[208] TranSource contends PJM did not provide to TranSource a "more

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[203] *Id*. at 16-17.

[204] *Id*. at 17 (citing Ex. TS-025).

[205] *Id*. at 17-21 (citing Ex. PJM-0001A at 30-36 (Horger Answering Test.); Ex. S-038 at 19:2-4 (Norman Direct and Answering Test.); Ex. TS-001A at 38:13-14 (Rousselle Direct Test.); Ex. TS-015; Ex. TS-101 at 34:5-16 (Eng Rebuttal Test.); Ex. TS-115 at 65:24-67:8, 107:2-110:8 (Horger Dep.); Ex. TS-126; Ex. TS-127 at 2; Ex. TS-140; Ex. TS-169).

[206] *Id*. at 16.

[207] *Id*. at 23 (quoting Initial Decision, 162 FERC ¶ 63,007 at P 65).

[208] *Id*. (citing PJM Brief on Exceptions at 28).

comprehensive version" of the market model until December 2015, during settlement discussions.[209]

74. TranSource contends that, by failing to provide TranSource with timely information necessary to replicate PJM's results, PJM violated the FPA, as well as Order No. 890's transparency requirement.[210] TranSource states that in January 2015, its consultant, witness Mr. Eng, requested from PJM additional information to enable TranSource to resolve the infeasibilities in PJM's market model to determine the upgrades necessary for TranSource to achieve its IARRs for queue positions Z2-053, Z2-069, and Z2-072, and PJM refused TranSource's request.[211] TranSource also argues that PJM did not make all its work papers available to the TranSource team, in violation of section 205.4.2 of the PJM Tariff and the FPA's information requirements, and as a result TranSource could not replicate PJM's results.[212]

75. Finally, TranSource argues that PJM is not entitled to rely on the Commission's prior findings that PJM complied with the transparency requirements of Order No. 681 and Order No. 890, as violations of the FPA and non-transparent, rate-affecting, material actions outside of its Tariff, demonstrated by a preponderance of the evidence, overcome any earlier generic findings.[213]

b. PJM

76. PJM argues that the solution to a lack of transparency on process details is to describe, in more detail, the processes at issue, which PJM asserts has already

[209] *Id*. (citing PJM Brief on Exceptions at 24; Ex. PJM-0031).

[210] *Id*. at 24 (citing *PJM Interconnection, L.L.C.*, 161 FERC ¶ 61,005, at P 40 (2017) (quoting *Preventing Undue Discrimination and Preference in Transmission Service*, Order No. 890, 118 FERC ¶ 61,119, at PP 461, 471 (2007) (Order No. 890))).

[211] *Id*. (citing Ex. TS-042 at 18.14-20:27, 20:22-23 (Eng Direct Test.); Ex. TS-055).

[212] *Id*. at 25 (citing Section 213 of the Federal Power Act, 16 U.S.C. § 824*l* (2012)).

[213] *Id*. at 25-31.

occurred.[214] PJM asserts that any possible issue with transparency has been remedied on a prospective basis through the June 2017 Whitepaper.[215]

c. PJM Transmission Owners

77. The PJM Transmission Owners agree with Trial Staff that any lack of transparency in the IARR process was remedied by PJM when it provided TranSource with further information regarding the studies.[216]

4. Commission Determination

78. We reverse the Presiding Judge's finding that PJM's System Impact Study practices while processing TranSource's Upgrade Requests were nontransparent and therefore unjust and unreasonable.[217] While a lack of transparency can render a tariff unjust and unreasonable in certain circumstances, TranSource has not met its FPA section 206 burden in this case to demonstrate that the lack of details in the PJM Tariff rendered the process unjust and unreasonable. We find that PJM's practices in this case, which included open, and responsive communication and information exchange with TranSource, represent a transparent process that is just and reasonable.[218] However, although we find that PJM's communication and efforts to address TranSource's questions and concerns provided TranSource with adequate transparency in this case, we find that the record reveals that PJM's existing Tariff provisions governing the System Impact Study phase of the Attachment EE process omit material terms. While

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[214] PJM Brief Opposing Exceptions at 3.

[215] *Id*. at 60.

[216] PJM Transmission Owners Brief Opposing Exceptions at 2-3.

[217] Initial Decision, 162 FERC ¶ 63,007 at PP 1, 21, 80(e).

[218] *See*, *e.g.*, Ex. PJM-0002A (Egan Answering Test.) ("As all 855 pages of Exhibit No. TS-035, and the numerous emails I include as exhibits show, I and other PJM personnel interacted with TranSource and Mr. Rousselle on over a hundred occasions with respect to these Upgrade Requests (and their predecessor Attachment S requests). We provided detailed instructions of all aspects of requesting IARRs, including how the PJM process works, how the markets model works, and which planning model is used. PJM provided guidance through emails and through at least eight in-person meetings and telephone conference calls. Moreover, despite the voluminous inquiries, PJM endeavored to timely answer each question or request."); Ex. PJM-0014 (chart detailing PJM's responsiveness to TranSource's inquiries).

recognizing that PJM's Tariff cannot include all the technical details of the methodologies and assumptions used in a System Impact Study, we find that PJM's Tariff does not comport with the Commission's policy that "[a]ll practices that 'significantly affect rates, terms and conditions of service' must be included in the tariff,"[219] as opposed to manual or other documents not filed with the Commission.

79. As an initial matter, we disagree with the Presiding Judge that the numerous email communications and meetings between PJM and TranSource throughout the System Impact Study process demonstrate a lack of transparency that renders the process unjust and unreasonable as it was applied to TranSource.[220] Rather, such communications are an important and significant part of the interconnection process at all stages.[221] As demonstrated in this record, we find that PJM made reasonable, good faith efforts to address TranSource's concerns regarding the System Impact Study phase of the Attachment EE process. The record demonstrates that PJM provided TranSource with numerous meetings, phone calls, emails, and instructions on how to obtain data necessary to evaluate the Upgrade Requests.[222] The record shows that PJM made reasonable, good faith efforts to promptly address TranSource's questions and concerns regarding the IARR evaluation process.[223] There is evidence of "at least eight in-person meetings," as well as telephone conference calls.[224] Further, the record contains over 800 pages of email communications between PJM and TranSource, some dated before TranSource even filed its Upgrade Requests,[225] which demonstrate that PJM was actively engaged in

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[219] *See Monterey MA, LLC v. PJM Interconnection, L.L.C.*, 165 FERC ¶ 61,201, at P 52 (2018) (*Monterey*) (quoting *Demand Response Coalition v. PJM Interconnection, L.L.C.*, 143 FERC ¶ 61,061, at P 17 (2013) (*Demand Response*)).

[220] Initial Decision, 162 FERC ¶ 63,007 at P 65.

[221] *See PJM Interconnection, L.L.C.*, 165 FERC ¶ 61,078, at P 23 (2018) (finding that PJM operates an open and transparent RTEP process, which includes responding to customer questions).

[222] *See supra* n.218.

[223] PJM responded to almost all of TranSource's inquiries within a week, with many on the same day. *See* Ex. PJM-0014.

[224] Ex. PJM-0002A at 48 (Egan Answering Test.).

[225] Ex. PJM-0038A at 10:12-22 (Prepared Cross-Answering Testimony of David M. Egan); Ex. PJM-0002A at 49:5-17 (Egan Answering Test.); Ex. PJM-0027 at 8:9-9:4

answering TranSource's questions, providing necessary data, and directing TranSource to where it could find even more information on the System Impact Study process and the models used.[226] Collectively, these communication exchanges (over one hundred interactions in total),[227] along with available information found in the Tariff, Operating Agreement, and manuals provided TranSource with a reasonable level of transparency regarding "how the PJM process works, how the markets model works, and which planning model is used."[228] Further, as required by the PJM Tariff, PJM discussed the results of the System Impact Studies with TranSource, and in addition, responded to TranSource's concerns, which included withdrawing and reissuing the TranSource System Impact Studies.[229] TranSource attempts to make much of the fact that some information, such as PJM's internal audit of the TranSource System Impact Studies, was not provided to TranSource until discovery commenced in this litigation.[230] However, this argument inaptly conflates the "related work papers" that PJM must disclose to TranSource pursuant to its Tariff[231] with documents that may be discoverable in

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(Horger Cross-Answering Test.); Ex. PJM-0004 at 46-59, 73-74, 78-87, 91-100, 136-37, 362-70; Ex. PJM-0015; Ex. PJM-0017; Ex. PJM-0018.

[226] Initial Decision, 162 FERC ¶ 63,007 at P 64 ("[t]he record is replete with about 800 pages of emails . . . beginning in [sic] June 28, 2013 to March 13, 2015"); Ex. PJM-0004; Ex. S-038 at 11-12 (Norman Direct and Answering Test.).

[227] Ex. PJM-0002A at 49 (Egan Answering Test.) (citing Ex. TS-035).

[228] *Id*. at 48.

[229] *See* PJM Tariff, Part VI, Subpart A System Impact Studies and Facilities Studies § 205.4.4 (Meeting with Transmission Provider) (0.0.0) ("At the New Service Customer's request, Transmission Provider, the affected Transmission Owner(s) and the New Service Customer shall meet to discuss the results of the System Impact Study. Such meeting may occur in person or by telephone or video conference.").

[230] TranSource Brief on Exceptions at 6.

[231] *See* PJM Tariff, Part VI, Subpart A System Impact Studies and Facilities Studies § 205.4.2 (Materials for Customers) (1.0.0) ("The Transmission Provider shall provide a copy of the System Impact Study and, to the extent consistent with the Office of the Interconnection's confidentiality obligations in Section 18.17 of the Operating Agreement, related work papers to all New Service Customers that had New Service Requests evaluated in the study and to the affected Transmission Owner(s)."); *see also* PJM Interconnection, L.L.C., Manual 14A: New Services Request Process, § 2.6 Work

litigation. Further, in its Initial Complaint, TranSource specifically sought certain PLS.CADD files and Form 715 ratings as "work papers . . . used to determine the cost estimates associated with each circuit."[232] The Initial Decision correctly determined that no evidence showed that the PLS.CADD files TranSource sought as "related work papers" were used to perform the TranSource System Impact Studies.[233] Further, as we find herein, PJM appropriately did not use Form 715 ratings in the TranSource System Impact Studies.[234] We find that the record shows that PJM appropriately provided TranSource with all related work papers and was available to answer any questions TranSource had on the System Impact Study process and the results of the TranSource System Impact Studies.[235]

80. In addition, we recognize PJM's commitment to providing transparency regarding the IARR process, as demonstrated by its efforts in expanding the information provided publicly through several documents, including the June 2017 Whitepaper and a revised

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Papers (eff. May 24, 2018), https://www2.pjm.com/-/media/documents/manuals/archive/m14a/m14av23-new-services-request-process-05-24-2018.ashx ("Upon completion of a study report, the Tariff provides that PJM will provide New Service Customers work papers upon request. . . . Generally, work papers include all files necessary for a customer to modify the base case and duplicate the results obtained by PJM in the queue studies. . . . However, if an upgrade cost was developed using a deskside estimate, no additional detail is required to be generated. For example, if a reconductor was required for a five mile line and was estimated based on past experience to cost about $1M/mile, no further cost detail is required to be created. Work papers do not include documents, data or information desired by an entity that were not created by PJM or were not used in the production of a study.").

[232] Initial Complaint at Appendix A; *see also* PJM Answer at 4-5 ("Since all data and work papers used for System Impacts Studies at issue in this Complaint were previously provided to Complainant, [TranSource] essentially seeks production of the PLS.CADD files and the FERC Form No. 715 rating that each mitigation was based upon . . . because all other data and working papers were provided previously to him.").

[233] Initial Decision, 162 FERC ¶ 63,007 at P 80(a).

[234] *See infra* section III.E.

[235] *See* PJM Brief on Exceptions at 22 ("PJM provided TranSource work papers and other materials to assist TranSource with: (1) understanding the Attachment S and Attachment EE processes; (2) ratings used; (3) replicating the processes; and (4) understanding the results of the System Impact Studies.") (internal citations omitted); *see also supra* n.218.

Manual 14E.[236] These documents in particular provide a detailed description of PJM's IARR process and inform customers regarding the studies, agreements and rights specific to Attachment EE upgrade requests. We agree with PJM and Trial Staff that the IARR process is an inherently complex process and that it is therefore reasonable to expect continuous improvements in transparency over time, as PJM gains more experience with the process and more market participants make use of the procedure, thus revealing potential areas of confusion. We find that PJM made reasonable, good faith efforts to not only address concerns raised by TranSource, but also to provide further transparency regarding the IARR process to all customers through manual updates and posting the June 2017 Whitepaper on the PJM website.[237]

81. We disagree with TranSource's contention that PJM violated Order No. 890's transparency requirements, as well as the FPA, by failing to provide TranSource with the necessary information to replicate PJM's results. First, contrary to the assertions of TranSource and the findings of the Presiding Judge, the transparency principle in Order No. 890 is not applicable to the System Impact Studies at issue in this proceeding.[238] The transmission planning principles of Order No. 890, including the transparency principle, apply to local and regional transmission planning, not to interconnection studies.[239] Regardless, the record demonstrates that PJM provided TranSource with necessary information to replicate PJM's studies, including the PJM market model, and TranSource was in fact able to replicate PJM's results when it followed PJM's instructions.[240] Accordingly, we find that TranSource received clarity regarding the

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[236] Ex. S-053 (PJM Manual 14E); Ex. PJM-0033 (June 2017 Whitepaper).

[237] Trial Staff Initial Post-Hearing Brief at 21, 24 ("[T]he concerns raised in Dr. Norman's testimony concerning the transparency of PJM's IARR process and the limited documentation of that process have been addressed by PJM's filings, particularly the June 2017 [Whitepaper]."); Notice of Partial Settlement at 1 (explaining that the June 2017 Whitepaper "resolves, going forward, the transparency concerns the Market Monitor raised in its pleadings filed in this docket").

[238] Order No. 890, 118 FERC ¶ 61,119 at PP 437, 471, 488, 549; *see also, ISO New England Inc.*, 162 FERC ¶ 61,058, at P 51 (2018) (*ISO-NE*).

[239] *ISO-NE*, 162 FERC ¶ 61,058 at P 51 ("We note that Clear River's reliance on Order No. 890 is inapposite, as that order applies to transmission planning studies, not to the interconnection studies at issue here.").

[240] *See* PJM Brief on Exceptions at 28-30 (noting that when TranSource ran the models as PJM instructed, rather than based on TranSource's incorrect notions of how the study should be done, TranSource obtained results similar to PJM's); *see also* Ex. PJM-0027 at 8:16-9:4 (Horger Cross-Answering Test.); Ex. PJM-0004 at 91-100, 362-70; Ex.

process PJM uses to determine required upgrades and the relevant costs associated with TranSource's Upgrade Requests. For all the reasons discussed above, we find that TranSource has not established that PJM's System Impact Study process for Attachment EE upgrade requests is unjust and unreasonable based on a lack of transparency.

82. While the open exchange of information between PJM and TranSource demonstrates that PJM's practices were sufficiently transparent while processing TranSource's Upgrade Requests, the record, and in particular the creation of the 2017 June Whitepaper, reveal that material terms and conditions regarding the System Impact Study process for Attachment EE requests are not included in the PJM Tariff. As the Commission has explained, "[a]ll practices that significantly affect rates, terms and conditions of service must be included in the tariff. [I]mplementation details, such as instructions, guidelines, examples and charts, which guide internal operations and inform market participants of how the [ISO] conducts its operations under the [] tariff, are appropriately contained in business practice manuals."[241] Based on the record in this

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PJM-0015; Ex. PJM-0016; Ex. PJM-0017; Ex. PJM-0018. We note that the Presiding Judge interpreted a statement by the Commission in a Notice of Proposed Rulemaking to mean that an interconnection customer should be able to reasonably estimate its costs *before entering* the interconnection queue. Initial Decision, 162 FERC ¶ 63,007 at P 38 (citing *Reform of Generator Interconnection Procedures and Agreements*, Notice of Proposed Rulemaking, 157 FERC ¶ 61,212, at P 29 (Dec. 15, 2016) ("[i]ncreasing transparency will allow for interconnection customers to better evaluate the viability of an interconnection request prior to entering the queue, which could result in fewer interconnection requests dropping out of the queue")). We disagree with the Presiding Judge's interpretation that an interconnection customer should be able to reasonably estimate its costs *before entering* the queue. The purpose of the progressive interconnection study process for each queue position is to determine the effect of the requested service, taking into consideration other proposed projects higher in the queue. It is through these studies that the interconnection customer gains information regarding its likely costs. *Chesapeake Transmission*, 116 FERC ¶ 61,234 at PP 52-53; *Neptune Reg'l Trans. Sys, LLC v. PJM Interconnection, L.L.C.*, 110 FERC ¶ 61,098, at P 22-24 (2005) (*Neptune*) (noting that other higher-queued projects can drop out of the queue over time, which may affect the cost estimates of lower-queued projects).

[241] *Monterey*, 165 FERC ¶ 61,201 at P 52 (internal quotations and citations omitted); *see also Demand Response*, 143 FERC ¶ 61,061 at P 17 (granting a complaint by PJM stakeholders alleging that PJM's manual proposal would significantly affect jurisdictional rates, terms and conditions of service, and therefore must be submitted to the Commission pursuant to section 205 of the FPA) (citing *Cargill Power Markets, LLC v. Pub. Serv. Co. of New Mexico*, 141 FERC ¶ 61,141, at P 14 (2012); *Quest Energy, L.L.C. v. Detroit Edison Co.*, 106 FERC ¶ 61,227, at P 20 (2004) ("a company's tariffs,

proceeding, we find that PJM must include additional information in its Tariff, and we therefore require PJM to propose modifications to its Tariff to ensure that critical details affecting the study process for Attachment EE upgrade requests are contained within its Tariff.

83. We note that the Market Monitor and PJM's joint filing of the June 2017 Whitepaper, Ex. PJM-0033, provides a detailed description of the study processes, modeling methodologies, and assumptions associated with System Impact Studies for Attachment EE requests. While certain details regarding the implementation of the models may appropriately remain outside of the Tariff in the Whitepaper, or in a stakeholder-vetted manual, PJM must include a more detailed description of the practices it engages in when conducting System Impact Studies for Attachment EE requests. Specifically, the Tariff must include high-level summaries of: (1) a definition of the models used to evaluate IARR requests, including descriptions of the IARR market model and the planning model; (2) a description of how the market limits or operative constraints in the market model are determined; and (3) a detailed explanation of how "simultaneous feasibility" is determined for IARR requests, including a description of how PJM conducts the "simultaneous feasibility test" and determines the "incremental capability required" for IARR requests to be granted, taking into account financial rights and physical constraints of the system.

84. We require that PJM include these details in its Tariff, because we find that the modeling methodology and limits PJM uses, as well as the methodology it uses to perform the simultaneous feasibility test, are practices that significantly affect rates, terms, and conditions of service and should therefore be included in the Tariff. PJM witness Mr. Horger has acknowledged that PJM's process and approach to market limits in the market model is not thoroughly prescribed in the Tariff.[242] In addition, the term

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not its manuals or handbooks, must define the rates, terms and conditions of jurisdictional services"), *complaint withdrawn*, 109 FERC ¶ 61,334 (2004); *accord Cal. Indep. Sys. Operator Corp.*, 126 FERC ¶ 61,147, at P 58 (2009) (finding that consistent with Commission's policy, as implemented through the rule of reason, a provision "that significantly affects rates, terms and conditions of service . . . must be filed for Commission approval and made a part of the . . . tariff"); *Wis. Power & Light Co.*, 123 FERC ¶ 61,307, at P 6 (2008) (pursuant to 18 C.F.R. §§ 35.1-35.2, rate schedules must set forth in writing, clearly and specifically, all rates, terms, and conditions for sales of electric energy subject to the Commission's jurisdiction); *see generally Prior Notice and Filing Requirements under Part II of the Federal Power Act*, 64 FERC ¶ 61,139, at 61,986-89, *order on reh'g*, 65 FERC ¶ 61,081 (1993)).

[242] Ex. TS-115 at 102:8-21 (Horger Dep.); *see also* Tr. 689:18-690:2 (Horger) (showing that PJM witness Mr. Horger was unable to point to Tariff provision providing

"operative constraints," used in PJM's testimony[243] to describe the economic market limits, is also not defined or described in the Tariff or Operating Agreement.[244] We also note that the Commission has previously found that a tariff may cross-reference manuals, so long as the information present in the manual, but not the tariff, does not significantly affect rates, terms, or conditions of service.[245] To that end, we are requiring only high level summaries be added to the Tariff, while specific details of the processes that do not significantly affect rates, terms and conditions of service need not be included, or may be included by reference.

85. We therefore require PJM to make a compliance filing, within 45 days of the date of this order, proposing amendments to its Tariff to include information regarding its System Impact Study processes for Attachment EE upgrade requests. Modifying the Tariff to include such information regarding these processes should limit concerns regarding the sufficiency of the information included in the Tariff and enhance the interconnection customers' ability to make more informed decisions on a prospective basis.

D. Refined and Comprehensive Standard

1. Initial Decision

86. The Presiding Judge found that TranSource did not meet its burden to show that PJM's methodologies for completing the TranSource System Impact Studies lacked

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guidance on what conditions to consider when determining ratings for the day-ahead energy market).

[243] *See* Ex. PJM-0001A at 21:5-20 (Horger Answering Test.).

[244] Ex. TS-115 at 95:8-12 (Horger Dep.).

[245] *See*, *e.g.*, *Midcontinent Indep. Sys. Operator, Inc.*, 165 FERC ¶ 61,190 at P 105 (citing *Midcontinent Indep. Sys. Operator, Inc.*, 162 FERC ¶ 61,165, at P 69 (2018)); *see also Cal. Indep. Sys. Operator Corp.*, 122 FERC ¶ 61,271, at P 16 (2008) ("It is appropriate for Business Practice Manuals to contain implementation details, such as instructions, guidelines, examples and charts, which guide internal operations and inform market participants of how the CAISO conducts its operations . . . . Whether provisions included in the Business Practice Manuals must be filed under section 205 of the [FPA] and made part of the . . . tariff is determined through the 'rule of reason,' which discerns those provisions significantly affecting rates, terms and conditions of service, which therefore must be filed for Commission approval.") (internal quotations and citations omitted).

competency or that the results calculated by those methodologies were inaccurate.[246] With regards to the nature of a System Impact Study, the Presiding Judge stated that the PJM Tariff provides that the System Impact Study "will provide more comprehensive estimates of the cost and length of time required to accommodate the New Service Customer's New Service Request than those developed through the Feasibility Study or Initial Study," and that "[t]hese estimates shall represent *a good faith attempt* to determine the cost of necessary facilities and upgrades," "but shall not be deemed final or binding."[247] The Presiding Judge stated that, in practice, PJM admits that the System Impact Study is a "desk-side" study, performed at a desk, without site visits, field examination, or detailed engineering analysis.[248] The Presiding Judge explained that a desk-side study is typically '"[p]reliminary," "rough," and "high level," with an estimated plus or minus 40 percent accuracy.[249] While the Presiding Judge noted that the "term desk-side study" is not contemplated in the PJM Tariff, the Presiding Judge did not indicate whether a desk-side study was appropriate at the System Impact Study phase.[250]

87. In TranSource's case, the Presiding Judge explained that PSE&G performed a desk-side study that recommended the wreck and rebuild of the Readington-Roseland towers to accommodate the TranSource Upgrade Requests.[251] The Presiding Judge stated that this particular desk-side study was based on a PSE&G engineer's institutional knowledge about the condition of other similar lines in 2004-2006, which the Presiding Judge characterized as an "unfair desk-side juxtaposition" with the Readington-Roseland circuit, since evidence showed that PSE&G contracted for inspections and repairs on the Readington-Roseland circuit from 2013-2015, and therefore the condition of the line was

[246] Initial Decision, 162 FERC ¶ 63,007 at 80(d).

[247] *Id*. P 48 (quoting PJM Tariff, Part VI, Subpart A System Impact Studies and Facilities Studies § 205.2 (Scope of Studies)) (internal quotations omitted). We note that at the time TranSource submitted its Upgrade Requests, there was no Feasibility Study or Initial Study for an Attachment EE upgrade request.

[248] *Id*. PP 8, 25, 49 (citing Ex. PJM-0002A at 12:22-24 (Egan Answering Test.); Ex. TS-120 at 72:12 (Egan Dep.)).

[249] *Id*. PP 48-49 (quoting Ex. TS-120 at 72:12 (Egan Dep.); Ex. PJM-0002A at 14:10-14 (Egan Answering Test.); Tr. 931:22 (Ali); Tr. 855:1 (Khadr)) (internal quotations omitted).

[250] *Id*. P 49.

[251] *Id*. P 56.

better understood.[252] However, the Presiding Judge found that the PSE&G engineer performing the desk-side study was not aware of these activities.[253]

88. Ultimately, the Presiding Judge asserted that the PJM Tariff requires a customer who wishes to proceed beyond the System Impact Study phase to sign a Facilities Study Agreement, and that the subsequent "'[F]acilities [S]tudy is intended to be a more refined analysis than the [System Impact Study] and may produce narrower results than the [System Impact Study].'"[254] Since TranSource chose not to sign the Facilities Study Agreement, the Presiding Judge found that PJM was not able to prepare "the more refined upgrade studies."[255]

89. Although the Presiding Judge did not determine whether a desk-side study was appropriate for the System Impact Study phase of the Attachment EE process, the Presiding Judge did find that the fact that System Impact Studies are desk-side studies lacked transparency. The Presiding Judge found from a reading of the Tariff, "any public observer would have expected that [the System Impact Study] phase would include studies that had some legitimate sophistication beyond the mere notion of a desk-side look at the grid, especially when section 205.3 [of the PJM Tariff[256]] refers to Attachment D of the tariff and the inputs of FERC Form 715."[257] The Presiding Judge stated that if TranSource were to learn that the System Impact Studies were desk-side in nature, it did not learn it from any information officially published by PJM.[258] The

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[252] *Id*. PP 56-57 (citing Ex. PS-004 at 7-8 (Prepared Direct Testimony of Richard Crouch); Ex. TS-112; Ex. TS-113 at 349; Tr. 1036:3-1037:15, 1059:3-6 (Crouch)).

[253] *Id*. P 57.

[254] *Id*. P 83 (quoting *Chesapeake Transmission*, 116 FERC ¶ 61,234 at P 53).

[255] *Id*. P 84.

[256] We believe the Presiding Judge intended to cite to section 205.2 of the PJM Tariff, which describes the scope of System Impact Studies. *See* PJM Tariff, Part VI, Subpart A System Impact Studies and Facilities Studies § 205.2 (Scope of Studies) (0.0.0) (effective September 17, 2010; superseded April 1, 2018)). Section 205.3 of the PJM Tariff relates to the timing of System Impact Studies and does not reference Attachment D or Form 715. *See* PJM Tariff, Part VI, Subpart A System Impact Studies and Facilities Studies § 205.3 (Timing of Studies).

[257] Initial Decision, 162 FERC ¶ 63,007 at P 49.

[258] *Id*. P 50.

Presiding Judge acknowledged the PJM Transmission Owners' argument that TranSource's consultant and witness Mr. Rousselle knew the studies were desk-side in nature, as indicated by an email he sent to PJM regarding the TranSource System Impact Studies.[259] However, the Presiding Judge found the PJM Transmission Owners failed to note that the Rousselle email was dated October 28, 2014, two months before the TranSource Attachment EE agreement was signed, at a time when TranSource was transitioning from Attachment S to Attachment EE. Further, the Presiding Judge stated that the email gave no indication as to the extent of any definition that Mr. Rousselle may have received about the meaning of a desk-side study,[260] and subsequent emails sent by Mr. Rousselle indicated that his understanding of the nature of the desk-side study was different from the explanations PJM had previously provided.[261]

2. Briefs on Exceptions

a. TranSource

90. On exceptions, TranSource argues that PJM and the PJM Transmission Owners violated the Tariff in performing the TranSource System Impact Studies, by failing to provide "refined and comprehensive estimates of cost responsibility and construction lead times" as required by section 205.2 of the Tariff.[262] TranSource argues that the PJM Transmission Owners provided rough and "off-the-cuff," desk-side study estimates when evaluating the TranSource Upgrade Requests, rather than adhering to a reasonableness standard and using accurate or best available information and data, despite the mandates of the FPA, the PJM Tariff, the Commission, and Form 715.[263] TranSource contends

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[259] *Id*. (citing Ex. TS-035 at 611 (In an email dated October 28, 2014, Mr. Rousselle posed the following question to witness Egan: "Does PJM have a process whereby a member can accelerate the SIS portion of the EE process, especially since such studies are desktop in nature?")).

[260] *Id*. (noting that the evidence was also silent about whether the term "desk-side study" had the same meaning in the Attachment EE process).

[261] *Id*. P 51 (citing Ex. TS-016 at 22).

[262] TranSource Brief on Exceptions at 41-42 (citing PJM Tariff, Part VI, Subpart A System Impact Studies and Facilities Studies § 205.2 (Scope of Studies)).

[263] *Id*. at 41 (citing Tr. 895:19 (Khadr); TranSource Initial Brief at 65-88 (citing 16 U.S.C. § 824*l* (2012); 18 CFR § 2.20; 18 CFR § 141.300; PJM Tariff, Part VI, Subpart A System Impact Studies and Facilities Studies § 203.1 (Cost Responsibility);

that PJM allows the PJM Transmission Owners to provide imprecise estimates that provide only a plus or minus 40 percent accuracy level, which violates the "refined and comprehensive" standard in the PJM Tariff and also makes it impossible for merchant developers to plan, budget, and finance upgrades and expansions.[264] TranSource asserts that the Commission should order PJM and the PJM Transmission Owners to adhere to the PJM Tariff and provided refined and comprehensive cost estimates, "using accurate data and recent, best available information and studies."[265]

91. Regarding the use of best available information, TranSource asserts that the Initial Decision was correct in finding that PSE&G failed to rely on the most recent studies and information available,[266] such as a 2014 Facilities Study for Exelon's queue position X4-038 (2014 Exelon Facilities Study), certain tower leg studies, and documentation and photographs of repairs conducted on the Readington-Roseland circuit,[267] in conducting its cost estimates for the TranSource System Impact Studies.[268] As a result, TranSource contends that PSE&G's cost estimate was not provided in good faith, in violation of the PJM Tariff, which states that System Impact Study estimates "shall represent a good faith attempt to determine the cost of necessary facilities and upgrades."[269] TranSource argues that these provisions should ensure that the PJM Transmission Owners utilize the best

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PJM Tariff, Attachment N-1 Paragraph 6 (Form of System Impact Study Agreement)); Ex. TS-003 (Form 715 Instructions)).

[264] *Id*. at 41-42 (citing Ex. PJM-0002A at 14:12-14 (Egan Answering Test.); TranSource Reply Brief at 49-54 (citing PJM Tariff, Part VI, Subpart A System Impact Studies and Facilities Studies § 205.2 (Scope of Studies)). TranSource asserts that a reasonably accurate System Impact Study is vital to project development and helps a developer and its investors understand the scope of their undertaking. *Id*. at 42.

[265] *Id*.

[266] *Id*. at 65-66 (citing Initial Decision, 162 FERC ¶ 63,007 at PP 53, 58, 60).

[267] *Id*. at 65 (citing Ex. TS-113; Ex. TS-198; Tr. 1230:17-33:9 (Rousselle); Ex. TS-189).

[268] *Id*. at 65-66 (citing Ex. TS-112; Ex. TS-113).

[269] *Id*. at 66, n.211 (quoting PJM Tariff, Part VI, Subpart A System Impact Studies and Facilities Studies § 203.1 (Cost Responsibility) and Attachment N-1 Paragraph 6 (Form of System Impact Study Agreement); Ex. TS-116 at 2). TranSource notes that section 1.22 also requires good utility practices.

available information available about their system to ensure the greatest accuracy and the most efficient upgrades.[270]

92. Further, TranSource states that PJM Tariff section 203.1 requires PJM to "'rely, to the extent reasonably practicable, on existing transmission planning studies' when conducting [System Impact Studies]."[271] TranSource asserts that PSE&G admitted that existing studies are available in electronic databases from the desks of the PJM Transmission Owners' engineers.[272] Nevertheless, TranSource contends that PSE&G failed to rely on existing studies and inspection reports when performing cost estimates for the Readington-Roseland circuit—specifically, a 2014 Exelon Facilities Study performed a few months before the TranSource System Impact Studies and certain inspection and repair studies—in violation of the PJM Tariff.[273] TranSource alleges that PSE&G's Mr. Crouch instead relied on his memory of other lines in developing TranSource's cost estimate.[274]

93. As such, TranSource disagrees with the Presiding Judge's finding that errors in the System Impact Study phase would have been resolved in the more refined Facilities Study phase.[275] TranSource contends that the Initial Decision does not provide any evidentiary support for its assertion that the Facilities Study would have provided a more refined and detailed study, or that PJM would have materially revised the PJM Transmission Owners' casual cost estimates, but rather relies on Commission precedent in the *Chesapeake Transmission* case.[276]

94. With regard to the transparency of the desk-side nature of the System Impact Studies, TranSource explains that it was only during the course of this proceeding that TranSource discovered that the necessary upgrades and estimated costs to accommodate

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[270] *Id*. at 66.

[271] *Id*. (quoting PJM Tariff, Part VI, Subpart A System Impact Studies and Facilities Studies § 203.1 (Cost Responsibility)).

[272] *Id*. (citing Tr. 1041:19-20, 1047:14-19 (Crouch)).

[273] *Id*. at 66-67.

[274] *Id*. at 65-66 (citing Ex. TS-112; Ex. TS-113).

[275] *Id*. at 43 (citing Initial Decision, 162 FERC ¶ 63,007 at PP 83-84).

[276] *Id*. at 45-46 (citing Initial Decision, 162 FERC ¶ 63,007 at P 84 (citing *Chesapeake Transmission*, 116 FERC ¶ 61,234 at PP 53, 55)).

its Upgrade Requests were determined through rough, "off-the-cuff" desk-side study estimates, despite the mandates of the FPA, the PJM Tariff, the Commission, and Form 715.[277]

b. PJM

95. PJM contends that the Presiding Judge erred by reading into the PJM Tariff that the System Impact Study should be more than a desk-side study.[278] PJM states that the PJM Tariff provides that PJM "shall use due diligence to complete the System Impact Studies within 120 days of the date the study commences," and in order to perform the necessary analysis within the 120-day window—which involves a "cluster study" of thousands of facilities for hundreds of queue positions—PJM argues that it cannot be expected to complete detailed on-site studies.[279] In addition, PJM asserts that the $50,000 deposit for the System Impact Study is insufficient to cover costs for in-person, on-site evaluations.[280] Given the time and dollar limitations, PJM asserts that the industry reasonably interprets the System Impact Study as requiring desk-side study estimates, meaning studies performed at a desk, with no field or detailed engineering analysis.[281]

96. PJM asserts that the use of desk-side studies is consistent with the stated purpose of the System Impact Study, which is to provide a developer with "'a good faith attempt to determine the cost of necessary facilities and upgrades" and with estimates that "'shall

[277] *Id*. at 41 (citing TranSource Initial Brief at 65-88 (citing 16 U.S.C. § 824*l* (2012); 18 C.F.R. § 2.20; 18 C.F.R. § 141.300; PJM Tariff, Part VI, Subpart A System Impact Studies and Facilities Studies § 203.1 (Cost Responsibility) and Attachment N-1 (Form of System Impact Study Agreement)); Ex. TS-003 (Form 715 Instructions)).

[278] PJM Brief on Exceptions at 35-38 (citing Initial Decision, 162 FERC ¶ 63,007 at P 49).

[279] *Id*. at 35-36 (quoting PJM Tariff, Part VI, Subpart A System Impact Studies and Facilities Studies § 205.3 (Timing of Studies); citing Tr. 783:6-14 (Egan); Ex. PJM-0002A at 16:17-17:13, 50:23-51:1 (Egan Answering Test.)) (internal quotations and citations omitted).

[280] *Id*. at 36 (citing Ex. PJM-0003 at 17).

[281] *Id*. (citing Ex. PJM-0002A at 12:22-24 (Egan Answering Test.)).

not be deemed final or binding.'"[282] While the Tariff requires PJM to "'refine and more comprehensively estimate each New Service Customer's cost responsibility'" than the estimates provided in the Feasibility Study, PJM argues that the Tariff does not imply that the System Impact Study requires on-site examination.[283] In contrast, PJM states that it is well understood that the subsequent Facilities Study includes "a more detailed, engineering estimate of the scope of work and cost."[284] PJM claims that thousands of other customers, and even ultimately TranSource, recognize that System Impact Studies are desk-side in nature.[285]

97. PJM argues that the Initial Decision incorrectly found that the System Impact Study process lacks transparency because it includes a desk-side study,[286] arguing that the Initial Decision incorrectly discounted information provided to TranSource prior to it signing the Attachment EE agreements in December 2014, such as emails sent to TranSource informing it that the System Impact Study is a desk-side study.[287] Further, PJM argues that the Initial Decision improperly focused on TranSource's subjective view, rather than an objective review of how System Impact Studies fit within the broad queue process.[288] PJM explains that it is not reasonable to expect PJM or the affected transmission owners to perform detailed on-site studies during the System Impact Study phase of the queue process,[289] given the 120-day window to complete System Impact

[282] *Id*. at 37 (quoting PJM Tariff, Attachment N-1 Paragraph 6 (Form of System Impact Study Agreement); citing Ex. PJM-0040 at 3, 9, 15 (TranSource System Impact Study Agreements)).

[283] *Id*. at 37-38 (quoting PJM Tariff, Part VI, Subpart A System Impact Studies and Facilities Studies § 205.2 (Scope of Studies); citing Ex. PJM-0002A at 15:11-16:2, 34:6-10 (Egan Answering Test.)).

[284] *Id*. at 37 (citing Ex. PJM-0002A at 15:17-18 (Egan Answering Test.)).

[285] *Id*. at 38 (citing Ex. TS-035 at 611; Ex. PJM-0004 at 262).

[286] *Id*. at 35 (citing Initial Decision, 162 FERC ¶ 63,007 at PP 49, 52).

[287] *Id*. at 26 (citing Initial Decision, 162 FERC ¶ 63,007 at P 50).

[288] *Id*. at 35 (citing Initial Decision, 162 FERC ¶ 63,007 at P 51).

[289] *Id*. (noting that Order No. 2003 standardized the queue process and set strict timelines for which System Impact Studies must be completed).

Studies and the minimal ($50,000) deposit.[290] Given these limitations, PJM asserts that the industry reasonably interprets the System Impact Study phase as requiring a desk-side study.

98. Finally, even if the PJM Tariff were vague, which PJM argues it is not, PJM asserts that that does not entitle TranSource, or any other customer, to infer its own meaning. PJM notes that thousands of other customers have understood the nature of the System Impact Study as a desk-side study, including TranSource, and it therefore is transparent.[291] Finally, PJM argues that even if Mr. Rousselle's subjective understanding was a factor, it is undercut by the Initial Decision's finding that Mr. Rousselle acknowledged that the System Impact Study is "desktop in nature."[292]

3. Briefs Opposing Exceptions

a. TranSource

99. TranSource reiterates that PJM violated section 205.2 of the Tariff by failing to conduct refined and comprehensive cost estimates and section 203.1 of the Tariff by failing to use existing studies when performing the TranSource System Impact Studies, and seeks enforcement of existing provisions.[293] TranSource argues that it reasonably relied on the "refined and comprehensive" standard as prescribed in the Tariff,[294] and that this standard does not condone the use of rough, "off-the-cuff," desk-side study estimates

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[290] *Id*. at 36 (citing Tr. 783:6-14 (Egan); Ex. PJM-0002A at 16:17-17:13, 50:23-51:1 (Egan Answering Test.)). PJM states that, due to the 120-day limitation, it is not reasonable to expect PJM or the affected transmission owners to send engineers (electrical and environmental), project leads, and construction experts to evaluate every site and transmission facility impacted by a queue position and perform detailed on-site studies at the System Impact Study phase.

[291] *Id*. at 38.

[292] *Id*. at 37 (citing Ex. TS-035 at 611).

[293] TranSource Brief Opposing Exceptions at 4, 60, 64 (citing PJM Tariff, Part VI, Subpart A System Impact Studies and Facilities Studies § 205.2 (Scope of Studies); *Atl. City Elec. Co. v. PJM Interconnection, L.L.C.*, 115 FERC ¶ 61,132, at P 26 (2006) (*Atlantic City*)).

[294] *Id*. at 61 (citing Ex. TS-120 at 73-74 (Egan Dep.)).

by the PJM Transmission Owners that allow for a 40 percent margin of error.[295] Further, TranSource states that a merchant transmission developer cannot make a sound business decision based on a potential plus or minus 40 percent swing in cost responsibility, and that PJM Witness Egan and Trial Staff acknowledge that there should be a reasonableness standard for cost estimates in System Impact Studies.[296] Notwithstanding the allowable 40 percent margin of error—which TranSource contends is not prescribed in the Tariff or PJM manuals—TranSource argues that PJM and the PJM Transmission Owners do not have internal standards in place that govern the development of desk-side study cost estimates or any uniform means to review, audit, or verify these estimates, which is inconsistent with the Tariff.[297]

100. In addition, TranSource argues that PJM incorrectly asserts that the Initial Decision interprets the PJM Tariff to imply that a System Impact Study should be more than a "desk-side estimate" and should involve field visits.[298] TranSource states that it does not expect System Impact Studies to include field visits but rather to be performed using "best available data and recent studies, available from a desk."[299] TranSource contends that PJM and PSE&G did not comply with this desk-side study standard because they failed to consider the prior 2014 Exelon Facilities Study that evaluated the Readington-Roseland circuit and photographic evidence of work performed on the circuit that was readily available in PSE&G's database.[300] In addition, TranSource states that PSE&G was unable to explain the $16 million increase in the cost estimate for the

[295] *Id*. at 60-61 (citing Tr. 929:16-21, 930:11-21 (Ali); Ex. PJM-0002A at 14 (Egan Answering Test.); Ex. TS-120 at 73-74 (Egan Dep.)).

[296] *Id*. at 61 (citing Ex. TS-084A at 61:1-17 (Rousselle Rebuttal Test.); Ex. TS-120 at 73:7-9 (Egan Dep.); Ex. TS-116 at 2).

[297] *Id*. at 61, 64 (citing Ex. TS-120 at 73-74 (Egan Dep.); Tr. 895:12-21 (Khadr), 931:19-24; Tr. 1017:23-25 (Ali); Tr. 1019:11-13 (Crouch)).

[298] *Id*. at 61 (citing PJM Brief on Exceptions at 35-38).

[299] *Id*. at 62 (citing TranSource Post-Hearing Brief at 2, 18, 65-66, 81, 87-88, 136; TranSource Brief on Exceptions at 41-42, 61, 65).

[300] *Id*. at 62-64 (citing TranSource Post-Hearing Brief at 67-88; TranSource Reply Brief at 53-56; Ex. TS-030; Ex. TS-085 at 68-81; Tr. 509:10-510-1 (Rousselle); Tr. 1041:19-20, 1047:14-19 (Crouch)).

Readington-Roseland circuit from the March to June 2015 TranSource System Impact Studies.[301]

101. With regard to transparency, TranSource argues that the 40 percent margin of error for System Impact Studies is not prescribed in the Tariff and was not effectively documented by PJM or shared with TranSource,[302] but rather available only in internal "training slides."[303] Further, TranSource argues it reasonably relied on PJM's Tariff in that the System Impact Study cost estimates would be "refined and comprehensive,"[304] and therefore expected PJM and the PJM Transmission Owners would use best available data and recent studies.[305]

b. PJM

102. PJM disagrees with TranSource, asserting that its desk-side study cost estimates were reasonable and compliant with the Tariff.[306] Regarding the reasonableness of using desk-side study estimates during the System Impact Study phase, PJM states that the estimates are merely one part of a multi-stage process designed to be rough, high level, non-binding, good-faith, preliminary, and conservative, in part due to the 120-day study window prescribed by the Tariff.[307] PJM asserts that TranSource even admitted that System Impact Studies are "desktop in nature."[308] PJM states that the expected range of uncertainty on System Impact Study cost estimates is well known, and that the PJM queue, with 18 merchant projects in service, negates TranSource's claim that the 40

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[301] *Id*. at 63 n.242, 77 n.298 (citing Tr. 1034:7-22 (Crouch)).

[302] *Id*. at 61 (citing Ex. TS-120 at 73-74 (Egan Dep.)).

[303] *Id*. (citing Ex. TS-120 at 74:5-15 (Egan Dep.)).

[304] *Id*. (citing Ex. TS-084A at 61:1-17 (Rousselle Rebuttal Test.)).

[305] *Id*. at 61-62.

[306] PJM Brief Opposing Exceptions at 47-53.

[307] *Id*. at 47-48 (citing Tr. 782:11-784:1 (Egan); Tr. 853:10-855:14 (Khadr); Tr. 931:22 (Ali); Tr. 1018:7-12 (Crouch); Ex. TS-120 at 72:12 (Egan Dep.); Ex. PJM-0002A at 16:17-17:3, 50:23-51:1 (Egan Answering Test.); PJM Tariff, Part VI, Subpart A System Impact Studies and Facilities Studies § 205.3 (Timing of Studies); PJM Initial Brief at 46-49).

[308] *Id*. at 48 (citing Ex. TS-035 at 611).

percent accuracy level makes it impossible for a merchant developer to plan, budget, and finance upgrades.[309]

103. Regarding TranSource's allegations of PJM violating the "refined and comprehensive" standard in Tariff section 205.2, PJM states that TranSource's argument ignores the fact that the System Impact Study provides a more refined and more comprehensive estimate of the upgrades and cost responsibility for the upgrades than is presented in the Feasibility Study.[310] Further, PJM states that the Commission has recognized that a System Impact Study informs an investor of the maximum amount of risk of a project, and therefore is conservative, benefiting applicants by not grossly underestimating potential cost outlays.[311]

104. Lastly, PJM contends that, in contrast to PJM's reasonably conservative approach, TranSource's estimation process is "recklessly aggressive" and runs the risk of substantially underestimating project costs and misleading applicants.[312] Specifically, PJM states that TranSource discounted and declined to account for certain costs and assigned a wide margin of error to the resulting estimate.[313] Therefore, PJM asserts that TranSource cannot credibly fault PJM's desk-side study, plus or minus 40 percent estimate.[314]

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[309] *Id*. at 48-49 (citing Tr. 786:14-23 (Egan); Tr. 853:14-21 (Khadr); Tr. 929:14-930:21 (Ali); TranSource Brief on Exceptions at 41; PJM Interconnection, L.L.C., *New Services Queue – Beta*, https://www.pjm.com/planning/services-requests/interconnection-queues.aspx (to see only merchant transmission projects, go to the filter "Project Type(s)" and check only the box for "merchant transmission")).

[310] *Id*. at 49-50 (citing TranSource Brief on Exceptions at 41; PJM, Intra-PJM Tariffs, OATT, Part VI, Subpart A System Impact Studies and Facilities Studies § 205.2 (Scope of Studies)).

[311] *Id*. at 50-51 (citing *Chesapeake Transmission*, 116 FERC ¶ 61,234 at P 50; Ex. PJM-0002A at 61:10-12 (Egan Answering Test.); Tr. 784:5-9, 17-22 (Egan)).

[312] *Id*. at 51, 53.

[313] *Id*. at 52-53 (citing Tr. 344:19-346:8, 347:4-12, 347:24-348:20, 349:4-8 (Rousselle)).

[314] *Id*. at 53.

c. PJM Transmission Owners

105. The PJM Transmission Owners disagree with TranSource's assertion that desk-side study estimates do not use accurate or best-available information and data, and therefore are insufficiently precise.[315] The PJM Transmission Owners agree with PJM and state that the System Impact Study process is reasonable and that a more refined analysis is performed at the Facilities Study phase.[316] Further, the PJM Transmission Owners contend that the System Impact Study process, conducted in a limited amount of time, keeps costs low and is intended to provide order of magnitude estimates, whereas an in-depth analysis would equate to additional time and money for the developer, which TranSource fails to address.[317] The PJM Transmission Owners contend that TranSource is requesting the benefits of a Facilities Study at the System Impact Study phase, and is asking the Commission to jettison the distinction between the two phases, despite the Presiding Judge finding that the Facilities Study would have provided a more refined and detailed study.[318]

4. Commission Determination

106. In this section, the Commission addresses: (1) whether PJM's use of a desk-side study at the System Impact Study phase is just and reasonable and consistent with the PJM Tariff; (2) whether PJM's actual practices in performing the desk-side studies for TranSource were just and reasonable and consistent with the PJM Tariff; and (3) whether it was transparent that PJM uses a desk-side study at the System Impact Study phase.

107. We affirm the Presiding Judge's finding that TranSource failed to meet its burden to show that PJM's System Impact Study methodology, specifically with regard to the type of study PJM does (i.e., a desk-side study), was unjust and unreasonable. The Presiding Judge correctly found that the term "desk-side study" is not defined in the Tariff.[319] Although not defined in the Tariff, we find that a desk-side study, as opposed to an on-site engineering study, is appropriate at the System Impact Study phase and reasonably fulfills the requirement in section 205.2 of the Tariff that the System Impact

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[315] PJM Transmission Owners Brief Opposing Exceptions at 17 (citing TranSource Brief on Exceptions at 41).

[316] *Id.*

[317] *Id*. (citing Tr. 783:6-25, 784:1, 784:4-9 (Egan); Tr. 1018:16-24 (Crouch)).

[318] *Id*. at 17-18 (citing Initial Decision, 162 FERC ¶ 63,007 at PP 83-84).

[319] Initial Decision, 162 FERC ¶ 63,007 at PP 48-49.

Study provide "refined and comprehensive estimates of cost responsibility and construction lead times for new facilities and system upgrades."[320] A desk-side study means an analysis of existing materials and engineering principles that can be performed from a desk, without the necessity for visiting the site in the field or conducting a detailed engineering analysis.[321] We agree with PJM that the Tariff does not specify the level of accuracy required for a System Impact Study; however, as PJM indicates, the System Impact Study is intended to provide a conservative estimate of the potential upgrade costs, with the understanding that the cost estimates are further refined at the Facilities Studies phase.[322] Additionally, a desk-side study is appropriate because PJM processes hundreds of new service requests a year and must be able to timely make assessments about the reasonableness of the upgrades needed for each.[323]

108. We also disagree with TranSource's argument and the Presiding Judge's assertion that PJM's internal rule of thumb of a 40 percent margin of error for System Impact Studies is inappropriate. As PJM explains, due to the uncertainty inherent in a desk-side study estimate, as compared to what may be revealed by a more detailed engineering analysis and on-site examination (such as excavation), *which occurs at the Facilities Study phase*, PJM's internal guideline to generally expect overall System Impact Study costs to be estimated to plus or minus 40 percent of the actual cost is reasonable.[324] Further, a reasonable margin of error is consistent with the Tariff's description of a System Impact Study at Attachment N-1 (Form of System Impact Study Agreement), which states that a System Impact Study is a "good faith attempt" to determine the costs

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[320] PJM Tariff, Part VI, Subpart A System Impact Studies and Facilities Studies § 205.2 (Scope of Studies); *see also* Ex. PJM-0002A at 14, 29 (Egan Answering Test.).

[321] Ex. PJM-0002A at 12-13, 22 (Egan Answering Test.).

[322] *Chesapeake Transmission*, 116 FERC ¶ 61,234 at P 50 ("*Neptune* permits changes after the [System Impact Study] study. . . .") (discussing *Neptune*, 110 FERC ¶ 61,098); *see also* PJM Tariff, Attachment N-2 at § 7 (Form of Facilities Study Agreement) ("The purpose of the Facilities Study is to provide . . . conceptual engineering and, as appropriate, detailed design, plus cost estimates and project schedules, to implement the conclusions of the System Impact Study . . . .").

[323] Ex. PJM-0002A at 14:14-18 (Egan Answering Test.). As PJM notes, a $50,000 deposit for a System Impact Study is likely insufficient to cover the costs of performing an in-depth on-site engineering study. PJM Brief on Exceptions at 36.

[324] Ex. PJM-0002A at 14:10-14 (Egan Answering Test.).

of the necessary upgrades, but that it "shall not be deemed final or binding."[325] We disagree with TranSource's contention that the expectation of an overall System Impact Study cost estimate margin of error of plus or minus 40 percent of the actual costs must be in the PJM Tariff or manuals. This is merely an internal guideline that helps to define the level of accuracy expected of PJM's planners.[326] As discussed above, Commission precedent[327] and the PJM Tariff make clear that the System Impact Study is a conservative study so as to provide to applicants with a good faith estimate of what their project may cost.

109. While we agree with PJM that a desk-side study is an appropriate methodology for the System Impact Study phase and consistent with the "refined and comprehensive" language in its Tariff, we also find that TranSource has shown that the specific desk-side studies performed by PJM for the TranSource System Impact Studies violated the refined and comprehensive requirement of section 205.2 of the Tariff.[328] The record indicates several instances where PJM and the PJM Transmission Owners relied on either outdated data or "off-the-cuff" estimates, (i.e., estimates that are unsupported or based on unverifiable data such as personal memory) in processing the TranSource System Impact Studies. For example, Mr. Crouch, a PSE&G project manager who assisted with the TranSource cost estimates, could not explain a $16 million difference between the cost estimates provided to TranSource for the Readington-Roseland circuit in the March 15, 2015 study and the later June 10, 2015 study, stating that "it could have been an error."[329] Further, Mr. Crouch admitted that he failed to consider certain relevant information available at his desk, including recent inspection and other reports and related photographs of the Readington-Roseland circuit, and rather based his estimate for the upgrade to that line solely on his outdated institutional knowledge of other sister lines –

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[325] PJM Tariff, Attachment N-1 Form of System Impact Study Agreements § 6 (5.0.0).

[326] Tr. 1029:19-23 (Crouch) ("[W]e have much better than 40 percent accuracy in many cases. . . . [W]e try to do the best we can.").

[327] *Chesapeake Transmission*, 116 FERC ¶ 61,234 at P 50 (citing *Neptune*, 110 FERC ¶ 61,098).

[328] PJM Tariff, Part VI, Subpart A System Impact Studies and Facilities Studies § 205.2 (Scope of Studies).

[329] Tr. 1034:13-22 (Crouch) ("Q: You don't know why [the Readington-Roseland estimate] increased by $17 [sic] million from the March version [of the TranSource System Impact Study] to the June version? A: It's my understanding that it's possible it could have been an error that was transposed at possibly PJM.").

i.e., his personal experience and memory.[330] PJM also admitted that one of the TranSource System Impact Studies failed to include all necessary upgrades identified by PJM, because of communication lapses between PJM employees.[331] These errors indicate that the processing of the TranSource System Impact Studies, while appropriately a desk-side study, fell short of the "refined and comprehensive" standard in this case, in violation of the PJM Tariff. Accordingly, we find here that a "refined and comprehensive" System Impact Study requires a reasonable review of any recent studies or reports on the circuits in question, including any recent repairs. We find that estimates that are unsupported or based solely on unverifiable data without additional supporting evidence are insufficient.

110. We do not agree with TranSource, however, that PJM and the PJM Transmission Owners violated section 203.1 of the Tariff, which requires that, in performing a System Impact Study, they "rely, to the extent reasonably practicable, on existing transmission planning studies."[332] The 2014 Exelon Facilities Study that TranSource asserts should have been relied on in the TranSource System Impact Studies is an interconnection study, not a "transmission planning study," and therefore section 203.1 does not implicate the use of that study.

111. We reverse the Presiding Judge's finding that the desk-side study nature of the System Impact Studies lacked transparency.[333] While the PJM Tariff does not explicitly define System Impact Studies as a desk-side study, we find that, in the context of all the Tariff provisions defining the various phases of the interconnection queue process, it is reasonable to expect that the System Impact Study phase will be a desk-side study and not involve an on-site engineering analysis. As PJM points out, the Tariff describes the limited timeframe (120 days) in which PJM must complete hundreds of System Impact Studies, the small ($50,000) deposit required for a System Impact Study, and the fact that

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[330] Initial Decision, 162 FERC ¶ 63,007 at PP 54-57; Tr. 1035:9-16, 1053:8-11 (Crouch).

[331] Ex. PJM-0002A at 39 (Egan Answering Test.).

[332] PJM Tariff, Part VI, Subpart A System Impact Studies and Facilities Studies § 203.1 (Cost Responsibility) (1.0.0).

[333] Initial Decision, 162 FERC ¶ 63,007 at P 49. We note that in support of this finding, the Presiding Judge cites section 205.3 of the PJM Tariff, which the Presiding Judge says "refers to Attachment D and the inputs of Form 715." *Id*. However, section 205.3 of the PJM Tariff, which relates to the timing of System Impact Studies, does not reference Attachment D or Form 715. *See* PJM Tariff, Part VI, Subpart A System Impact Studies and Facilities Studies § 205.3 (Timing of Studies).

the Facilities Study phase, which follows the System Impact Study, includes an engineering analysis.[334] Further, the System Impact Study is defined in the executed TranSource System Impact Study Agreements as good-faith and non-binding, and as providing preliminary estimates of the costs and upgrades, which also reasonably implies that the studies will be desk-side studies.[335]

112. Further, the most compelling evidence that the desk-side nature of the System Impact Study phase was adequately transparent to TranSource is the fact that TranSource clearly understood the studies to be desk-side studies, as evidenced by Mr. Rousselle's October 2014 email to PJM, which referred to the studies as "desktop in nature."[336] The Presiding Judge incorrectly discounts this evidence, because it was dated before TranSource signed its Attachment EE Agreements.[337] Rather than undermine the evidence, the timing of the email shows that *before* TranSource moved forward with its Attachment EE Requests, it was aware that a System Impact Study was a desk-side study, which indicates that there was adequate transparency. In addition, the record shows PJM provided information to TranSource regarding desk-side studies during the period TranSource was transitioning from the Attachment S to the Attachment EE process.[338] Additionally, the continuity between the Attachment S and Attachment EE process was understood by TranSource.[339] We find that the information PJM provided to TranSource during this transition period provided additional transparency regarding the nature of the System Impact Study process.

113. We disagree with TranSource's argument that PJM's internal practices regarding margins of error for System Impact Studies demonstrates that the process lacks

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[334] PJM Brief on Exceptions at 35-37; *see also* PJM Tariff, Attachment N-2 Form of Facilities Study Agreement § 7 (4.0.0).

[335] Ex. PJM-0040 at 3, 9, 15 (TranSource System Impact Study Agreements).

[336] Ex. PJM-0004 at 262-63 (email from Adam Rousselle stating: "Does PJM have a process whereby a member can accelerate the SIS portion of the EE process, especially since such studies are desktop in nature?").

[337] Initial Decision, 162 FERC ¶ 63,007 at P 50.

[338] Ex. PJM-0017 at 1-10.

[339] Tr. 290:8-17 (Seelhof).

transparency.[340] PJM's Tariff makes clear that System Impact Studies are good-faith, conservative, non-binding cost estimates that will be further refined at the Facilities Study stage,[341] and such estimates will inherently have a margin of error. PJM had no duty to disclose publicly its internal guidelines for such error margins.

E. Facility Ratings Errors

1. Initial Decision

114. The Presiding Judge found that PJM's use of facility ratings in the TranSource System Impact Studies lacked transparency.[342] In support, the Presiding Judge stated that TranSource was not initially aware that neither PJM nor the PJM Transmission Owners use the facility ratings reported in Form 715 to perform System Impact Studies to identify the upgrades required to support an Attachment EE upgrade request.[343] The Presiding Judge explained that no public information, and nothing in PJM's Tariff, Operating Agreement, manuals, or other written manifestations, made TranSource aware that PJM utilized facility ratings incorporated into the 2018 RTEP base case, as modified to reflect system upgrades with higher queue positions than those of TranSource, to evaluate the TranSource Upgrade Requests, rather than using the data publicly reported in Form 715.[344] Therefore, the Presiding Judge found that it was reasonable for

[340] TranSource Brief Opposing Exceptions at 61 (citing Ex. TS-120 at 73-74 (Egan Dep.)).

[341] PJM Tariff, Attachment N-1 Form of System Impact Study Agreements § 6 (5.0.0).

[342] Initial Decision, 162 FERC ¶ 63,007 at PP 27-28, 32, 42-44.

[343] *Id*. PP 24, 26, 33-34.

[344] *Id*. PP 33-35.

TranSource to rely on publicly reported Form 715[345] facility ratings to conduct its own evaluation of its Upgrade Requests.[346]

115. The Presiding Judge determined that, in order to identify and evaluate low-cost, high-value transmission system upgrades, merchant transmission developers like TranSource must have access to the data and methodology used to evaluate available transmission capacity and constraints, including power flow base cases and the transmission owner facility ratings.[347] Further, the Presiding Judge found that interconnection customers should be able to reasonably estimate their cost before entering the queue.[348]

116. The Presiding Judge explained that Attachment D to the PJM Tariff specifically contemplates that Form 715 has a role in the PJM transmission planning process.[349] Further, the Presiding Judge noted that the general instructions to Form 715 contemplate its use in helping potential customers anticipate the outcome of technical studies.[350] The Presiding Judge therefore concluded that the "known landscape" for TranSource, as provided by statute, regulations, and the Tariff was that the pertinent information to develop the System Impact Study phase was reasonably obtainable in Form 715. Also, the Presiding Judge found that any reasonable transmission developer would believe that

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[345] Form 715 contains detailed listings of the ratings of all the elements within each transmission zone. It is filed annually with the Commission by PJM, after collecting the relevant information from the transmission owners. *Id*. PP 23, 28-29 (citing 18 C.F.R. § 141.300 (2017); Ex. TS-003 (Form 715 Instructions) ("FERC Form 715 is required under Sections 213(b), 307(a), and 311 of the FPA. A FERC Form 715 filing includes branch circuit ratings and all other relevant ratings with respect to power flow base cases.")).

[346] *Id*. PP 27-28, 31.

[347] *Id*. P 30 (citing 16 U.S.C. § 824*l*(b) (2012); Ex. TS-003 at 3-4 (Form 715 Instructions)).

[348] *Id*. P 38 (citing *Reform of Generator Interconnection Procedures and Agreements*, Notice of Proposed Rulemaking, 157 FERC ¶ 61,212 at P 29).

[349] *Id*. P 31.

[350] *Id*. PP 31-33 (noting that TranSource relied on fact that facility ratings reported in Form 715 were required to be accurately reported).

the ratings information used to evaluate its Attachment EE upgrade requests could be found in Form 715.[351]

117. Further, the Presiding Judge found that the methodologies the transmission owners use to determine the relevant facility ratings—North American Reliability Corporation (NERC) Reliability Standard FAC-008-3 methodologies[352]—are not public, and therefore TranSource was not cognizant of how the PJM Transmission Owners calculate their facility ratings.[353] The Presiding Judge also found that the relevant transmission owners did not provide TranSource all of the inputs that would be necessary to replicate the facility ratings, using the FAC-008-3 methodologies, for a given transmission facility.[354] However, the Presiding Judge did note that in discovery, TranSource's witness Dr. Douglass conceded that he was not able to demonstrate whether any of the PJM Transmission Owners violated the NERC-required FAC-008-3.[355]

118. Finally, the Presiding Judge found that, although TranSource attempted to cast some doubt on the accuracy of the ratings, the evidence does not demonstrate that the facility ratings PJM and the PJM Transmission Owners used in the TranSource System Impact Studies were inaccurate, noting, as discussed above, that TranSource failed to meet its burden by a preponderance of evidence.[356] Therefore, the Initial Decision did not grant TranSource any relief related to the facility ratings PJM and the PJM

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[351] *Id.* P 31 (citing PJM Tariff, Attachment D (Methodology for Completing a System Impact Study)).

[352] The purpose of the FAC-008-3 methodologies, which must be approved by NERC, are to "ensure that [f]acility [r]atings used in the reliable planning and operation of the Bulk Electric System (BES) are determined based on technically sound principles." NERC, Standard FAC-008-3—Facility Rating, https://www.nerc.com/pa/Stand/Reliability%20Standards/FAC-008-3.pdf.

[353] Initial Decision, 162 FERC ¶ 63,007 at PP 42-44 (citing Ex. TO-001A at 6:11-16 (Prepared Direct Testimony of Thomas J. Gentile)).

[354] *Id.* P 43 (citing Ex. TO-001A at 14:16-25 (Gentile Direct Test.)). For example, the Initial Decision explains that the relevant transmission owners did not provide TranSource with the maximum conductor temperatures applied to each specific transmission line—an input necessary to replicate the facility ratings. *Id.*

[355] *Id.* P 44 (citing Ex. TO-002A at 1).

[356] *Id.* PP 80(d), 80(f), 80(h) ("PJM and the [PJM Transmission Owners] are presumed to have made correct ratings without evidence to the contrary.").

Transmission Owners used in the TranSource System Impact Studies.[357] Further, the Initial Decision denied TranSource's request to issue new System Impact Studies consistent with the ratings data reported in Form 715 and the 2018 RTEP base case.[358]

2. Briefs on Exceptions

a. TranSource

119. TranSource argues that while the Initial Decision correctly found that TranSource's reliance on the Form 715 facility ratings was reasonable, it erred by not requiring PJM and the PJM Transmission Owners to use the publicly reported Form 715 facility ratings for System Impact System modeling, rather than "secret 'alternative' ratings."[359] TranSource asserts that PJM's use of the non-publicly reported facility ratings disregards the FPA's requirement for accurate transmission system information,[360] and excludes competitors at the System Impact Study phase.[361]

120. In addition to PJM's "unlawful use of multiple sets of ratings for multiple purposes," TranSource argues that many of the ratings used by PJM and the PJM Transmission Owners contained mathematical errors and understated the capacity of the transmission system.[362] TranSource notes that PJM witness Mr. Egan's 131-page internal audit of PJM's processing of the TranSource Upgrade Requests admits to numerous facility ratings errors, but that the full scope of ratings errors remains unknown.[363]

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[357] *Id*.

[358] *Id*. P 80(f).

[359] TranSource Brief on Exceptions at 29, 35-36 (citing Initial Decision, 162 FERC ¶ 63,007 at PP 26-27, 32-33).

[360] *Id.* at 37.

[361] *Id.* at 22-23.

[362] *Id.* at 37 (citing Ex. TS-010A; Ex. TS-011A; Ex. TS-024A; Ex. TS-076A; Ex. TS-096; Ex. TS-106A (Douglass Rebuttal Test.); Ex. TS-107A; Ex. TS-108A).

[363] *Id.* at 38 (citing Ex. PJM-0022). TranSource argues that because PJM admitted that Mr. Egan's internal audit did not catch all of the transmission facility ratings errors, a more exhaustive and official audit likely could reveal even more ratings errors. *Id*.

121. Further, TranSource asserts that PJM and the PJM Transmission Owners failed to review and verify the accuracy of facility ratings, in violation of the FPA.[364] TranSource argues that it presented detailed testimony and exhibits highlighting facility ratings errors—both process errors and mathematical errors—and inconsistencies between the ratings PJM reported in Form 715 and those in the base case used to evaluate its Upgrade Requests.[365] TranSource argues that the Commission should, upon reinstatement of TranSource's queue positions, direct PJM to rectify the facility ratings by redoing the TranSource System Impact Studies using facility ratings reported under oath in Form 715.[366]

122. Further, TranSource contends that the Initial Decision erred in not holding PJM and the PJM Transmission Owners accountable for their "Form 715 FPA violations."[367] TranSource asks the Commission to find that PJM and the PJM Transmission Owners violated the FPA's Form 715 requirements by using ratings data that were completely delinked from Form 715 data, and by failing to review and verify the accuracy of that ratings data.[368] TranSource argues that the PJM Transmission Owners' disregard for the Congressionally-mandated, FERC-approved Form 715, and their use of data that departs from Form 715, harms ratepayers and merchant developers.[369]

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[364] *Id.* at 55-56 (citing Ex. TO-026 at 4 (Prepared Direct Testimony of Esam A.F. Khadr); Ex. TS-005; Tr. 867:24-25, 870:6-7, 871:2-5, 872:23-25 (Khadr); Tr. 944:7-10, 949:8-17 (Ali)).

[365] *Id.* at 39 (citing Ex. TS-010A; Ex. TS-011A; Ex. TS-024A; Ex. TS-076A; Ex. TS-086; Ex. TS-087A; Ex. TS-096; Ex. TS-107A; Ex. TS-108A).

[366] *Id.* at 40. In the alternative, TranSource argues that PJM must be directed to prove that the ratings it used were accurate, which would include explaining why and how the ratings used in the TranSource System Impact Studies departed from the ratings reported under oath in Form 715. *Id*.

[367] *Id.* at 54 (citing Initial Decision, 162 FERC ¶ 63,007 at PP 26-27, 32-33).

[368] *Id.* at 55.

[369] *Id.* at 56-57 (explaining that the PJM Transmission Owners determine what ratings to give their facilities and noting that they are uniquely positioned to benefit their own interests and undermine merchant development in setting those ratings).

123. With respect to the facility ratings methodologies, TranSource generally supports the Initial Decision's conclusions, including that the PJM Transmission Owners' FAC-008-3 methodologies for calculating the facility ratings were not transparent and TranSource was not provided all the inputs necessary to replicate the facility ratings.[370]

124. TranSource argues that PJM's website highlights the requirements of transmission utilities under section 213 of the FPA to allow potential customers "to reasonably anticipate the outcome of technical studies a transmitting utility would perform that assess the availability of transmission capacity to satisfy a request for transmission service."[371] TranSource argues that by using one set of facility ratings for one purpose and a separate, disconnected set of ratings for another purpose, PJM disregards the FPA's requirement for transparency and accurate transmission system information.[372]

b. PJM

125. PJM argues that the Initial Decision misconstrued the relevance of Form 715 and erroneously concluded that PJM's Tariff "contemplate[s] the use of FERC Form 715 in conducting [S]ystem [I]mpact [S]tudies."[373] PJM asserts that these findings are contrary to FERC precedent, the PJM Tariff, PJM's website, and information PJM provided to TranSource, all of which state that the PJM RTEP model, not Form 715, is the proper source of facility ratings for the System Impact Study process.[374] PJM asserts that Order No. 890 found that "'Form 715 is an insufficient basis for broad transmission planning purposes and must be supplemented by additional assumptions and data,'"[375] and

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[370] *Id.* at 17, 35-36, 54.

[371] *Id.* at 36-37 (quoting Ex. TS-093).

[372] *Id.* at 37 (citing Ex. TS-093).

[373] PJM Brief on Exceptions at 32 (quoting Initial Decision, 162 FERC ¶ 63,007 at PP 31-32).

[374] *Id.* at 32-33 (citing PJM Tariff, Part VI, Subpart A Interconnection Procedures § 36.1.7 (General); PJM Interconnection, L.L.C., *Modeling Data*, http://www.pjm.com/planning/rtep-development/powerflow-cases.aspx (last visited Feb. 12, 2018)).

[375] *Id.* at 32 (quoting Order No. 890, 118 FERC ¶ 61,119 at P 477).

therefore directed such assumptions, data, and information to be disclosed.[376] PJM contends that it met this requirement by making available the RTEP base case and associated data under PJM Tariff section 36.1.7.[377]

126. PJM argues that the Initial Decision erred by finding that "'any reasonable transmission developer'" would "'believe that the ratings information that it would need to evaluate its upgrade requests can be found in the FERC Form 715.'"[378] Therefore, PJM also disagrees with the Initial Decision's finding that TranSource acted reasonably in relying on Form 715 facility ratings to model its Upgrade Requests.[379] Further, PJM states that the Tariff dictates that System Impact Studies utilize base case data, which is contained in the RTEP model.[380] By providing the RTEP planning model and base case data, PJM argues that it provides the information needed to roughly anticipate the outcome of System Impact Studies.[381]

127. PJM argues that the Initial Decision's reference to Attachment D is misplaced, because although it references Form 715, Attachment D is not relevant to the performance of System Impact Studies for IARR requests.[382]

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[376] *Id.* at 32-33 (citing Order No. 890, 118 FERC ¶ 61,119 at P 478).

[377] *Id.* at 33 (citing *PJM Interconnection, L.L.C.*, 123 FERC ¶ 61,163 at P 37, nn.26-27). PJM notes that this Tariff provision states that System Impact Studies will rely on "base case data," which is contained in the RTEP model. Further, PJM states that its website also says all queue position studies, including System Impact Studies, will rely on the RTEP model. *Id*.

[378] *Id.* at 32 (quoting Initial Decision, 162 FERC ¶ 63,007 at P 31).

[379] *Id.* (citing Initial Decision, 162 FERC ¶ 63,007 at P 32).

[380] *Id.* at 33 (citing PJM Tariff, Part VI, Subpart A Interconnection Procedures § 36.1.7 (General)).

[381] *Id.* at 24-25.

[382] *Id.* at 33 (explaining that section 205.2 refers to Attachment D only in the context of "Completed Applications," which are requests for network or point-to-point transmission service, and have nothing to do with upgrade requests) (citing PJM Tariff, Part VI, Subpart A System Impact Studies and Facilities Studies § 205.2 (Scope of

128. Further, PJM argues that the Initial Decision incorrectly finds that the System Impact Study process lacked transparency because the PJM Transmission Owners calculate line ratings based on non-public methodologies, pursuant to NERC standard FAC-008-3.[383] PJM asserts that the Initial Decision fails to cite, nor does the record show, that the PJM Transmission Owners failed to comply with a requirement mandating that they provide their line ratings or rating methodologies.[384] PJM states that, based on the faulty findings regarding FAC-008-3, the Initial Decision incorrectly concluded that the market model process lacked transparency. PJM argues that the market model used by PJM to model System Impact Studies does not contain physical operative constraints (i.e., the line ratings) but rather economic constraints.[385]

c. PJM Transmission Owners

129. The PJM Transmission Owners argue that the ratings reported in Form 715 differ from the ratings in PJM's RTEP base case because they reflect models developed at different times and for different time periods.[386] The PJM Transmission Owners agree with the Initial Decision's determination to not grant TranSource's requested relief, since TranSource failed to identify specific errors or concerns with the System Impact Study analysis and demonstrate how those errors and concerns produced improper results.[387]

130. The PJM Transmission Owners take exception to the Initial Decision's finding that they failed to provide the required level of transparency regarding their facility ratings.[388] The PJM Transmission Owners argue that they were transparent in providing all relevant information that PJM relied upon in developing its System Impact Studies and that the Initial Decision provides no factual basis for a conclusion that additional

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Studies)).

[383] *Id.* at 34 (citing Initial Decision, 162 FERC ¶ 63,007 at P 42).

[384] *Id*.

[385] *Id.* at 34-35 (citing Ex. PJM-0001A at 21:9 (Horger Answering Test.)).

[386] PJM Transmission Owners Brief on Exceptions at 14 (citing Ex. TO-001A at 35-36 (Gentile Direct Test.); Ex. PJM-0002A at 55-56, 77 (Egan Answering Test.)).

[387] *Id.* at 7.

[388] *Id.* at 2, 7, 8, 10-14.

information was necessary to ensure sufficient transparency.[389] The PJM Transmission Owners argue that the record is clear that TranSource knew about the FAC-008-3 requirements and had access to relevant ratings data.[390] The PJM Transmission Owners argue that the FAC-008-3 is a published NERC standard, and therefore it is reasonable to assume that a market participant would be familiar with the standard and its requirements.[391] Moreover, the PJM Transmission Owners assert that TranSource witness Mr. Rousselle understood the existence and implications of FAC-008-3, as indicated by an email he sent to PJM requesting all work papers used by the PJM Transmission Owners, including models "collected pursuant to FAC-008."[392]

131. Further, the PJM Transmission Owners state that they fully complied with the requirements of FAC-008-3, and that the ratings methodologies are not required to be made public.[393] The PJM Transmission Owners contend that the non-public FAC-008-3 methodologies have no bearing on whether the PJM IARR study process is reasonably transparent.

132. With regard to the Initial Decision's finding that TranSource did not have the necessary inputs to replicate the FAC-008-3 methodologies, the PJM Transmission Owners assert that the Initial Decision misunderstands that purpose of the FAC-008-3, which is simply to ensure that transmission owners have a methodology for determining ratings consistent with reliability standards, not to provide other entities with the ability to replicate specific facility ratings.[394]

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[389] *Id.* at 7.

[390] *Id.* at 10-11.

[391] *Id.* at 11 (citing Ex. TS-028; NERC, *Standard FAC-008-3 – Facility Ratings*, http://www.nerc.com/pa/Stand/Reliability%20Standards/FAC-008-3.pdf).

[392] *Id.* (citing Ex. TS-002; Ex. PJM-0020 at 3).

[393] *Id.* at 11-12 (citing Ex. TO-001A at 9-10 (Gentile Direct Test.)). The PJM Transmission Owners point out that no party rebutted the fact that the methodologies need not be made public. Further, the PJM Transmission Owners note that their ratings methodologies were audited and found to be compliant with the requirements of FAC-008-3. *Id.* at 12 (citing Ex. S-029A at 15:18-2 (Prepared Direct and Answering Testimony of Junoh B. Kim)).

[394] *Id.* at 13 (citing Ex. TO-001A at 15 (Gentile Direct Test.)).

133. Finally, the PJM Transmission Owners argue that the Initial Decision does not explain the correlation between Order No. 890 and FAC-008-3 requirements. The PJM Transmission Owners state that Order No. 890 only applies to transmission planning studies, and therefore does not apply to this proceeding because it does not involve transmission planning studies.[395] Regardless, the PJM Transmission Owners assert that TranSource had access to the information PJM relied on in performing the studies, including the ratings used to determine the upgrades, and therefore they request that the Commission clarify that the PJM Transmission Owners provided the required level of transparency with respect to facility ratings.[396]

3. Briefs Opposing Exceptions

a. TranSource

134. TranSource reiterates that the Initial Decision correctly found that TranSource reasonably relied on facility ratings that PJM, acting on behalf of the PJM Transmission Owners, reported publicly in the annual Form 715,[397] despite the litigation revealing that PJM actually uses other, non-public ratings data to model IARR requests that are inconsistent with the publicly reported ratings.[398]

135. TranSource argues that PJM and the PJM Transmission Owners violated Form 715 filing requirements.[399] In particular, TranSource states that the PJM Transmission Owners have admitted that they do not review the ratings that PJM files on their behalf in Form 715 despite signing the certification statement each year.[400] According to TranSource, the PJM Transmission Owners failed to demonstrate the accuracy of their facility ratings for all facilities listed in the TranSource System Impact Studies.

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[395] *Id.* at 13-14 (explaining that Order No. 890 applies to transmission planning studies, not to interconnection studies) (citing *ISO-NE*, 162 FERC ¶ 61,058).

[396] *Id.*

[397] TranSource Brief Opposing Exceptions at 32 (citing Initial Decision, 162 FERC ¶ 63,007 at PP 26-27, 32-33).

[398] *Id.* at 32-33 (citing Initial Decision, 162 FERC ¶ 63,007 at P 34; Ex. TS-120 at 99:12-20 (Egan Dep.); Ex. TS-010A; Ex. TS-011A).

[399] *Id.* at 11.

[400] *Id.* at 21-22, 34 (citing Ex. TO-026 at 4 (Khadr Direct Test.); Tr. 867:13-25, 870:6-7, 871:2-5 (Khadr); Tr. 949:8-17, 944:7-10 (Ali)).

TranSource also contends that PJM failed to exercise reasonable diligence in reviewing the PJM Transmission Owners' facility ratings, since the PJM Transmission Owners stand to benefit from providing low ratings to justify more transmission buildout to add to their rate base.[401] Therefore, TranSource urges the Commission to direct an independent review of the ratings that should apply on TranSource's reinstatement in the queue.[402]

136. TranSource argues that the PJM Transmission Owners' assertion that "'TranSource had access to the information relied on by PJM in performing its studies'"[403] is untrue and contradicted by significant evidence presented in this case.[404] Further, although the PJM Transmission Owners contend they were fully compliant with NERC's FAC-008-3 facility ratings requirements, TranSource argues that NERC FAC-008-3 demands consistency, which requires reporting the same ratings for the same circuit at the same time.[405] TranSource states that, given the inconsistencies between ratings publicly filed with the Commission and provided to PJM to evaluate TranSource's IARR requests, the PJM Transmission Owners failed to demonstrate compliance with FAC-008-3's consistency requirement.[406]

137. In addition, TranSource argues that although the PJM Transmission Owners contend that there is no requirement that the FAC-008-3 methodologies be made public or that an entity be able to replicate the methodologies, the PJM Transmission Owners cannot avoid Order No. 890's replication requirement and the Commission's recent findings of widespread and pervasive non-compliance with Order No. 890 by the PJM Transmission Owners.[407]

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[401] *Id.* at 49-50 (citing Ex. TS-120 at 123-24 (Egan Dep.); Ex. TS-092; TranSource Post-Hearing Brief at 24–44).

[402] *Id.* at 35 (citing Ex. TS-085 at P 53).

[403] *Id.* at 33 (quoting PJM Transmission Owners Brief on Exceptions at 13).

[404] *Id.* (citing Ex. TS-001A (Rousselle Direct Test.); Ex. TS-042 (Eng Direct Test.)).

[405] *Id.* (citing PJM Transmission Owners Brief on Exceptions at 11-13; Ex. TS-028 at 2).

[406] *Id.* at 34.

[407] *Id.* at 35 (citing Transmission Owners Brief on Exceptions at 8-9; *PJM Interconnection, L.L.C.*, 161 FERC ¶ 61,005, at P 40 (2017)). TranSource states that Order No. 890's transparency principle is clear and requires access to information to

138. TranSource argues that the PJM Transmission Owners mistakenly contend that the principles of Order No. 890 do not apply to this case and cite a recent ISO New England (ISO-NE) case,[408] which TranSource claims is inapplicable because the ISO-NE proceeding concerned a generation interconnection request under the ISO-NE tariff and a request for restudies, whereas TranSource's case relates to distinct and unique PJM Tariff provisions governing IARRs.[409] TranSource contends that Order No. 890, which concerns transmission planning, controls in the instant proceeding, noting that a team from PJM's planning department was involved and used a "planning" model to evaluate TranSource's IARR requests, and that transmission planning studies are a "critical part" of the IARR study process.[410] Further, TranSource argues that PJM's exceptions contradict the PJM Transmission Owners' assertion that Order No. 890 applies, because PJM recognizes the Order No. 890 requirements and attempts to argue its own compliance with Order No. 890.[411] TranSource argues that the Initial Decision correctly rejected PJM's arguments that PJM's past compliance with Order No. 890 justified the existing non-transparent practices regarding Form 715 facility ratings.[412]

139. TranSource argues that PJM attempts to "warp" the FPA's standard by arguing that PJM has long provided the information needed to "roughly anticipate" the outcome of PJM's System Impact Studies.[413] TranSource argues that the Commission has determined that to satisfy FPA Section 213(b), "'potential customers must be able to *reasonably anticipate* the outcome of technical studies a transmitting utility would

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"enable customers, other stakeholders, or an independent third party to replicate the results of planning studies." *Id.* (internal quotations and citations omitted). TranSource explains that the Commission recently held, in an unrelated case, that the PJM Transmission Owners have engaged in widespread and pervasive non-compliance with Order No. 890, explaining that they often provide models, criteria, and assumptions that are "vague" and "do not allow stakeholders to replicate the results of planning studies." *Id.* at 36 (quoting *Monongahela*, 162 FERC ¶ 61,129).

[408] *Id.* at 37 (citing PJM Transmission Owners Brief on Exceptions at 13).

[409] *Id.* (citing *ISO-NE*, 162 FERC ¶ 61,058 at P 62).

[410] *Id.* at 37-38 (citing Ex. PJM-0002A at 6-8, 11, 13, 40-46 (Egan Answering Test.)).

[411] *Id.* (citing PJM Brief on Exceptions at 27).

[412] *Id.* at 33-34 (citing Initial Decision, 162 FERC ¶ 63,007 at PP 37-38).

[413] *Id.* at 12.

perform that assess the availability of transmission capacity to satisfy a request for transmission service,'" as reflected in 18 C.F.R § 141.300.[414] TranSource states that even PJM's website recognizes that customers must be able to reasonably anticipate the outcome of PJM's technical studies,[415] rather than roughly anticipate the outcome, and that PJM's testimony acknowledges that a reasonableness standard applies.[416]

b. PJM

140. PJM reiterates that it properly relied on facility ratings in its RTEP model, rather than those in Form 715, and that Commission precedent, including Order No. 890, rejects the use of Form 715 ratings for planning studies.[417] PJM states that in the proposed rule that led to Order No. 890, the Commission sought comment on "'whether the information provided in the FERC Form 715 . . . is adequate,'"[418] ultimately concluding that Form 715 was "an insufficient basis for broad transmission planning purposes" and did "'not provide[] customers and others with the timely data needed to perform load flow studies and other analyses to ensure that planning is being conducted on a comparable basis.'"[419] To comply with Order No. 890, PJM states that it made the RTEP base case and the base case data available under PJM Tariff section 36.1.7.[420] PJM asserts that the facility

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[414] *Id.* (quoting Ex. TS-093) (emphasis in original).

[415] *Id.* (citing Ex. TS-093).

[416] *Id.* at 12-13 (citing Ex. PJM-0038A at 10:20-22 (Egan Cross-Answering Test.)).

[417] PJM Brief Opposing Exceptions at 38-47.

[418] *Id.* at 40 (quoting Order No. 890, 118 FERC ¶ 61,119 at P 461).

[419] *Id.* (quoting Order No. 890, 118 FERC ¶ 61,119 at P 477).

[420] *Id.* (citing *PJM Interconnection, L.L.C.*, 123 FERC ¶ 61,163 at P 37, nn.26-27). Section 36.1.7 of the PJM Tariff states: "Transmission Provider shall provide Interconnection Customer with base power flow, short circuit and stability databases, including all underlying assumptions, and contingency list upon request and subject to the confidentiality provisions of Section 223 of the Tariff. Transmission Provider may require Interconnection Customer to sign a confidentiality agreement before the release of commercially sensitive information or Critical Energy Infrastructure Information in the Base Case data. Such databases and lists, herein after referred to as Base Cases, shall include all (i) generation projects and (ii) transmission projects, including merchant transmission projects, that are included in the then-current, approved Regional Transmission Expansion Plan." PJM Tariff, Part VI, Subpart A Interconnection

ratings in Form 715 are not used in the market model to study upgrade requests or the planning model to study new service requests. PJM notes that the Commission found PJM compliant with Order No. 890, because PJM makes the RTEP base case and the base case data available.[421] PJM asserts that it explained this to TranSource early in the process and gave TranSource precise steps to obtain the RTEP models with the relevant facility ratings, which TranSource did obtain.[422]

141. Moreover, PJM asserts that Form 715 ratings are inappropriate for use in the planning base case and market model for an IARR request for many reasons.[423] PJM states that Form 715 is a snapshot of the ratings on the day of filing, rather than a five-year out model reflecting planned upgrades.[424] Further, the Form 715 ratings, RTEP base case, and planning base case reflect different transmission systems, and ratings in Form 715 are not standardized based on common reference points, such as ambient temperature.[425]

142. In addition, PJM argues that TranSource incorrectly asserts that Mr. Egan's internal audit revealed "numerous," material ratings errors and suggests that many others likely exist.[426] PJM explains that Mr. Egan's audit verified all of the facility ratings used in the TranSource System Impact Studies and that only minor, immaterial ratings errors that had no material impact on the study results were found.[427] PJM argues that

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Procedures § 36.1.7 (General) (7.0.0).

[421] *Id.* (citing *PJM Interconnection*, *L.L.C.*, 123 FERC ¶ 61,163 at P 37, nn.26-27).

[422] *Id.* at 41 (citing Ex. PJM-0002A at 40:15-41:6, 49:5-6, 50:16-18 (Egan Answering Test.); Ex. PJM-0017). PJM explains that the ratings used in the TranSource System Impact Studies correspond to the ratings in the RTEP model, with a handful of exceptions that were fully explained by PJM witness Mr. Egan. *Id*. at 42 (citing Ex. PJM-0022).

[423] *Id.* (citing Ex. PJM-0002A at 41:15-16 (Egan Answering Test.)).

[424] *Id.* (citing Ex. PJM-0002A at 41:16-19, 42:19-21, 44:20-23 (Egan Answering Test.)).

[425] *Id.* at 42-43 (citing Ex. PJM-0002A at 44:10-25, 42:2-16 (Egan Answering Test.)).

[426] *Id.* at 43-44.

[427] *Id.* at 43-46 (citing Ex. PJM-0002A at 55:5-56:23, 62:23-63:2 (Egan

differences between the facility rating in Form 715 and the rating in the RTEP model are not evidence of an error, as the Form 715 ratings are not appropriate for planning studies.[428]

c. PJM Transmission Owners

143. The PJM Transmission Owners state that TranSource's argument misrepresents the purpose and function of Form 715.[429] The PJM Transmission Owners contend that Form 715 is filed annually and the Commission has stated that interim updates are not required, resulting in filings that capture a snapshot in time.[430] The PJM Transmission Owners assert that facility ratings can change as a result of altered system topology;[431] therefore, they agree with PJM that the data in Form 715 is static and inappropriate for analyzing IARR requests.[432] Further, the PJM Transmission Owners assert that Order No. 558 specifically found that "[i]nformation regarding specific transmission service requests, including requests under § 213(a), is not within the scope of Form 715"[433] and

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Answering Test.); Ex. TS-120 at 120:24-122:4 (Egan Dep.)).

[428] *Id.* at 45.

[429] PJM Transmission Owners Brief Opposing Exceptions at 23.

[430] *Id.* at 23-24 (citing 18 C.F.R. § 141.300 (2017); *New Reporting Requirement Implementing Section 213(b) of the Federal Power Act and Supporting Expanded Regulatory Responsibilities under the Energy Policy Act of 1992, and Conforming and Other Changes to Form No. FERC-714*, Order No. 558, FERC Stats. & Regs. ¶ 30,980 (cross-referenced at 64 FERC ¶ 61,369), *reh'g denied*, Order No. 558-A, 65 FERC ¶ 61,324 (1993), *final rule*, Order No. 558-B, FERC Stats. & Regs. ¶ 30,993 (1994) (cross-referenced at 66 FERC ¶ 61,341). The PJM Transmission Owners note that, as stated in Order No. 558, transmission customers need only ask PJM for updates on interim system topology changes, and they state that PJM provided TranSource with that information. *Id.* at 27 (citing Ex. PJM-0029 at 16-25).

[431] *Id.* (citing Ex. TO-001A at 35:17-20 (Gentile Direct Test.)).

[432] *Id.* at 24 (citing PJM Transmission Owners Post-Hearing Reply Brief at 33-34).

[433] *Id.* at 25-26 (citing Order No. 558, FERC Stats. & Regs. ¶ 30,980 at 30,910).

that the information in Form 715 is explicitly described as only being useful in performing "preliminary screening analyses," implying a need for further analysis.[434]

144. The PJM Transmission Owners assert that, even if the Commission were to agree with the Initial Decision that TranSource reasonably relied on the Form 715 facility ratings to estimate the outcome of the IARR studies, that finding would not support TranSource's argument that PJM was legally compelled to use those ratings in its IARR analysis.[435] Requiring PJM to use Form 715 data, the PJM Transmission Owners allege, would result in inaccurate results and increase the likelihood that native load customers would have their rights diminished, in violation of the FPA.[436]

145. In addition, the PJM Transmission Owners assert that the Initial Decision appropriately found that TranSource failed to show that the facility ratings were inaccurate or incorrect.[437] The PJM Transmission Owners note that the Initial Decision held that the evidence is insufficient to demonstrate that the ratings were inaccurate.[438] Yet TranSource requests that ratings "be proven to be accurate."[439] The PJM Transmission Owners state that the facility-by-facility analysis performed in accordance with NERC-mandated FAC-008-3 facility rating methodologies showed that the ratings were correct, which TranSource admitted in testimony.[440] In addition, the PJM Transmission Owners state that ReliabilityFirst has audited the PJM Transmission Owners and found them in compliance with facility ratings methodologies.[441] While PJM's internal audit identified some errors in the base case data, it found that any rating

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[434] *Id.* at 24-25 (citing Order No. 558, FERC Stats. & Regs. ¶ 30,980 at 30,901).

[435] *Id.* at 11-12, 26 (noting that the Initial Decision did not suggest that PJM erred by not using Form 715 ratings) (citing Initial Decision, 162 FERC ¶ 63,007 at P 80(f)).

[436] *Id.* at 26 (citing 16 U.S.C. § 824q (2012)).

[437] *Id.* at 11-16 (citing Initial Decision, 162 FERC ¶ 63,007 at PP 80(f), 80(h)).

[438] *Id.* at 12 (citing Initial Decision, 162 FERC ¶ 63,007 at P 80(f)).

[439] *Id.* (citing TranSource Brief on Exceptions at 40).

[440] *Id.* at 12-13 (citing Ex. TO-001A (Gentile Direct Test.); Ex. TO-018; Ex. PJM-022; Ex. TS-183; Tr. 671:3-24 (Douglass)).

[441] *Id.* at 13-14 (citing Ex. TO-004 at 10; Ex. TO-005 at 10; Ex. TO-006 at 10; Ex. TO-040 at 15-16; Tr. 1133:1-25 (Gentile)).

issues were subsequently corrected,[442] and that PJM and the PJM Transmission Owners worked together to identify issues.[443]

146. Lastly, the PJM Transmission Owners contend that the evidence does not support TranSource's claim that the PJM Transmission Owners failed to review and verify ratings.[444] Specifically, the PJM Transmission Owners assert that PPL,[445] Delmarva,[446] and PSE&G[447] used the correct ratings despite TranSource's allegations to the contrary.[448]

d. Trial Staff

147. Trial Staff asserts that TranSource's argument regarding facility ratings is flawed because PJM uses the planning base case, rather than Form 715 data, during the IARR process. Trial Staff explains that Form 715 is a status report that provides a snapshot of information, while the PJM planning base case is a planning document.[449] Trial Staff agrees with PJM that there are differences between the ratings contained in Form 715 and those used by PJM during the IARR process, since, for example, the PJM planning base case accounts for scheduled higher queued projects, and, unlike Form 715, includes all planned rating increases or decreases.[450] Trial Staff states that TranSource never rebuts

[442] *Id.* at 14 (citing Ex. PJM-0022).

[443] *Id.* at 15 (citing PJM Transmission Owners Initial Post-Hearing Brief at 50-53).

[444] *Id.* at 15-16.

[445] *Id.* at 15 (citing Tr. 941:21-942:5 (Ali)).

[446] *Id.* at 16 (citing Ex. TO-001A at 17:15-16, 26:1-6, 19:18-23 (Gentile Direct Test.)).

[447] *Id.* (citing Ex. TO-001A at 30:18-22, 31:10-14 (Gentile Direct Test.)).

[448] *Id.* at 15-16 (citing TranSource Brief on Exceptions at 39-40).

[449] Trial Staff Brief Opposing Exceptions at 3, 21 (citing Ex. S-029A at 20:10-11 (Kim Direct and Answering Test.)).

[450] *Id.* at 20-21 (citing Ex. S-029A at 20:6-9 (Kim Direct and Answering Test.); Ex. PJM-0002A at 41:20-21 (Egan Answering Test.)). Trial Staff asserts that the 2014 Form 715, for example, does not "reflect the additions and upgrades scheduled between 2014 and 2018, as they are based on a 2014 summer case, whereas the PJM Planning

the reasons as to why Form 715 ratings are inappropriate.[451] Instead, Trial Staff asserts that TranSource states that PJM uses "secret 'alternative' ratings," and that PJM's failure to use Form 715 data violates the FPA.[452] Trial Staff dismisses these claims and contends that PJM makes available the RTEP base case data under PJM Tariff section 36.1.7, and that section 36.1.7, along with Order No. 890, clearly establishes that the facility ratings from the RTEP model—and not Form 715—are to be used in the IARR process.[453]

4. Commission Determination

148. The Presiding Judge found that PJM's use of facility ratings in the TranSource System Impact Studies lacked transparency.[454] However, the Presiding Judge also found that TranSource did not meet its burden to show that the actual facility ratings PJM used in the TranSource System Impact Studies were inaccurate.[455] We reverse the Presiding Judge's findings with regard to the transparency of the facility ratings used. We find that PJM and the PJM Transmission Owners' use of facility ratings in processing TranSource's System Impact Studies was sufficiently transparent, that it was not reasonable for TranSource to rely on Form 715 facility ratings to model its Upgrade Requests, and that the PJM Transmission Owners had no obligation to make their FAC-008-3 methodologies public or replicable. We affirm the Presiding Judge's finding that TranSource has failed to meet its burden to show that the facility ratings used were inaccurate. We address each of these determinations in turn, below.

149. The Presiding Judge found that the facility ratings PJM used lacked transparency, and that it was therefore reasonable for TranSource to rely on Form 715 ratings in conducting its own evaluation of its Upgrade Requests, based on the fact that the Form 715 instructions and Attachment D of the PJM Tariff suggest that facility ratings

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base case that PJM used to evaluate TranSource's requests accounted for the scheduled higher queued projects." *Id.* at 21 (internal quotations and citations omitted).

[451] *Id.* at 20-21.

[452] *Id.* (citing TranSource Brief on Exceptions at 19, 29, 37, 54-57).

[453] *Id.* (citing Order No. 890, 118 FERC ¶ 61,119 at P 477).

[454] Initial Decision, 162 FERC ¶ 63,007 at PP 27-28, 32, 42-44.

[455] *Id.* PP 80(d), 80(f), 80(h).

reported in Form 715 are relevant to Attachment EE upgrade requests.[456] We disagree. The Form 715 instructions explicitly state that the information provided is merely a "starting point" for transmission planning studies.[457] Regardless, Attachment D does not state that PJM will use Form 715 ratings for any type of System Impact Study. Rather, Attachment D provides that PJM "plans and evaluates the PJM Region Transmission System in strict compliance with . . . [t]ransmission planning criteria, methods and procedures described in the FERC Form No. 715 . . . ."[458] Nor do Commission orders or regulations require that Form 715 ratings be used in System Impact Studies. Further, although the PJM Tariff and Operating Agreement do not specify what *facility ratings* are used in System Impact Studies, the Tariff does state that System Impact Studies will rely on *base case data* contained in the RTEP model.[459] Further, PJM points out that its website also says that the RTEP model is used for queue studies such as System Impact Studies.[460] Thus, a reasonable interpretation of the publicly available information regarding System Impact Studies is that RTEP data, including RTEP facility ratings, will

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[456] *Id.* PP 31-32 (citing Ex. TS-003 at 3 (Form 715 Instructions); PJM Tariff, Attachment D (Methodology for Completing a System Impact Study)).

[457] Ex. TS-003 at 2, 5 (Form 715 Instructions). The Part 2 instructions state: "A Respondent participating in a regional or subregional process (for consolidating and ensuring the consistency and accuracy of the power flow information used by the Respondent for transmission planning) must submit the most current regional or subregional input data to solved power flow base cases that the transmitting utility would ordinarily use as the *starting point* for its transmission planning studies or, where these data are unavailable from a regional organization, submit such data itself." (emphasis added).

[458] *See* PJM Tariff, Attachment D (Methodology for Completing a System Impact Study) (1.0.0). "In developing the RTEP, PJM identifies transmission projects to address different criteria, including PJM planning procedures, North American Electric Reliability Corporation (NERC) Reliability Standards, Regional Entity reliability principles and standards, and individual transmission owner Form No. 715 local planning criteria." *PJM Interconnection, L.L.C.*, 164 FERC ¶ 61,002, at P 3 (2018). Additionally, Attachment D only purportedly applies to "Completed Applications," not upgrade requests. PJM Brief on Exceptions at 33.

[459] PJM Tariff, OATT, Part VI, Subpart A Interconnection Procedures § 36.1.7 (General).

[460] PJM Brief on Exceptions at 33 (citing PJM Interconnection, L.L.C., *Modeling Data*, http://www.pjm.com/planning/rtep-development/powerflow-cases.aspx).

be used to conduct System Impact Studies. While Attachment D indicates that transmission planning criteria, methods, and procedures are described in Form 715,[461] the Commission has found that Form 715 ratings are an insufficient basis for broad transmission planning purposes,[462] and accordingly, we find that PJM is not required to use Form 715 ratings in the RTEP process.

150. Furthermore, we find that to the extent any confusion remained after reading the Tariff and PJM's website with regard to what facility ratings PJM would use, PJM's direct communications with Mr. Rousselle explained what data PJM would rely on in the System Impact Studies. For example, PJM explains that as early as May 2013, before TranSource submitted its Attachment EE Upgrade Requests, Mr. Egan explained to Mr. Rousselle via email that the RTEP base case is the starting point for all planning analyses.[463] Further, PJM Planning provided TranSource with incremental flows and base case ratings.[464] These are just a few examples of PJM providing guidance to Mr. Rousselle. The record demonstrates that PJM went through extensive efforts to communicate with TranSource, supply necessary information and work papers in accordance with PJM Tariff section 205.4.2, and to otherwise answer questions and assist TranSource with understanding the System Impact Study process, including the facility ratings used.[465] Therefore, we find that the facility ratings were sufficiently transparent to TranSource.

151. With regard to TranSource's argument that customers must be able to reasonably anticipate the outcome of PJM's technical studies, we emphasize that, pursuant to section 36.1.7 of the PJM Tariff, PJM makes available to interconnection customers base case

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[461] PJM Tariff, Attachment D (Methodology for Completing a System Impact Study).

[462] Order No. 890, 118 FERC ¶ 61,119 at P 477.

[463] Ex. PJM-0002A at 77:13-16 (Egan Answering Test.) ("Mr. Rousselle has consistently misrepresented here that the FERC Form 715 ratings should be used, when Mr. Rousselle has known since at least 2013 that the PJM RTEP base case is the starting point for all planning analyses. I explained this to Mr. Rousselle in an email exchange in May 2013, regarding a different New Service Request, and Mr. Rousselle and his consultant from Siemens obtained the necessary permissions to access the RTEP base case.") (citing Ex. PJM-0017 at 5; Ex. PJM-0026).

[464] *Id.* at 50:13-15 (Egan Answering Test.).

[465] *Id.* at 49:12-17 (Egan Answering Test.) (citing Ex. PJM-0015); *see also supra* section III.C.4.

data, which is contained in the RTEP model and on which PJM relies to conduct System Impact Studies. TranSource's reliance on Form 715 facility ratings as relevant to "reasonably anticipate" the outcome of the TranSource System Impact Studies, based on 18 CFR § 141.300 and section 213(b) of the FPA, is inapt.[466]

152. We disagree with TranSource's argument that because PJM used information from its planning base case model to evaluate TranSource's IARR requests, Order No. 890's transparency principle applies to interconnection study results.[467] While transparency is one of the transmission planning principles detailed in Order No. 890,[468] it is specific to transmission planning studies, not to studies of elective interconnection upgrades, like TranSource's System Impact Studies. Although the "planning" group within PJM[469] has a significant role in processing upgrade requests submitted under Attachment EE, and such upgrades are included as inputs in the transmission planning model used to determine which facilities must be upgraded to provide the incremental capability needed to obtain financial rights, TranSource's Upgrade Requests are not enhancements or expansions to the transmission system for reliability, market efficiency, operational performance or public policy purposes and thus are not developed as part of PJM's regional transmission plan. Therefore, contrary to TranSource's argument, the System Impact Study associated with the Attachment EE process is an interconnection study, and Order No. 890 applies to transmission planning studies, not to interconnection studies.[470]

153. In addition to finding a lack of transparency regarding the facility ratings that PJM uses to model System Impact Studies, the Presiding Judge also found that the process lacked transparency because the PJM Transmission Owners' methodologies for calculating the facility ratings were not public and the ratings were not replicable. We find that the PJM Transmission Owners have no obligation to make public their FAC-008-3 facility ratings methodologies, nor is there a requirement that IARR requestors be able to replicate FAC-008-3 methodologies.[471] We therefore reverse the Presiding

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[466] Ex. TS-084A (Rousselle Rebuttal Test.).

[467] TranSource Brief Opposing Exceptions at 37.

[468] Order No. 890, 118 FERC ¶ 61,119 at PP 471-78.

[469] *See* PJM-0002A at 23-25 (Egan Answering Test.) (describing the role of "PJM Planning," a group within PJM, in the processing of new service requests).

[470] *ISO-NE*, 162 FERC ¶ 61,058 at P 51 (explaining that Order No. 890 applies to transmission planning studies, not to interconnection studies).

[471] *See* NERC, Standard FAC-008-3- Facility Ratings at R4 (eff. Jan. 1, 2013), https://www.nerc.com/pa/Stand/Reliability%20Standards/FAC-008-3.pdf; Ex. TO-001A

Judge's finding that PJM Transmission Owners failed to provide sufficient transparency regarding their NERC-approved FAC-008-3 methodologies.[472] The NERC FAC-008-3 standard requires transmission owners to have and maintain a documented methodology for determining the facility ratings of its solely and jointly owned facilities,[473] with the purpose of ensuring that transmission owners have a methodology for determining ratings consistent with reliability standards.[474] The record reflects that ReliabilityFirst audited the PJM Transmission Owners' facility ratings methodologies, and resulting ratings, for compliance with the NERC FAC-008 requirements.[475] However, there is no requirement

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at 15:12-21 (Gentile Direct Test.) ("FAC-008-3 requires each transmission owner to provide a copy of the methodology to its Reliability Coordinators, Transmission Operators, Transmission Planners, or Planning Coordinators upon request. Likewise the transmission owner is required to provide the first and second most limiting elements upon request to the same NERC entities. This ensures that transmission owners are complying with their obligations under FAC-008-3. But those obligations do not include providing their ratings methodologies, as well as all of the criteria and data used to implement them, to anyone who asks for them. Thus, the inability of another party, such as TranSource, to reproduce all of the PJM Transmission Owners' facilities ratings without additional information does not represent a failure to comply with NERC standard FAC-008-3").

[472] Initial Decision, 162 FERC ¶ 63,007 at PP 23, 26, 33, 44.

[473] PJM Transmission Owners Brief on Exceptions at 11.

[474] PJM Transmission Owners Brief on Exceptions at 12-13 (citing Ex. TO-001A at 15 (Gentile Direct Test.)); Ex. S-029A at Glossary of Terms (Kim Direct and Answering Test.) ("FAC-008-3 – A NERC Reliability Standard titled "Facility Ratings," it enforces how the facility ratings used in power system operations should be determined. In Requirement 3 (R3), which discusses the requirements for the TOs, TOs are required to have and maintain 'a documented methodology for determining Facility Ratings of its solely and jointly owned Facilities.'"); *see also*, NERC, *Standard FAC-008-3—Facility Rating*, https://www.nerc.com/pa/Stand/Reliability%20Standards/FAC-008-3.pdf.

[475] *See* PJM Transmission Owners Brief on Exceptions at 12 (citing Ex. S-029A (Kim Direct and Answering Test.); *see also* Ex. S-029A at 10-11 (Kim Direct and Answering Test.); Ex. TO-001A at 16-19 (Gentile Direct Test.); Ex. TO-050; Ex. TO-004 at 10; Ex. TO-005 at 10; Ex. TO-006 at 10; Ex. TO-040 at 15-16. Trial Staff noted that FirstEnergy was not audited by ReliabilityFirst. *See* Ex. S-029A at 11:11-13 (Kim Direct

that transmission owners make publicly available the methodology they use to calculate the ratings of any specific facility. Lastly, we disagree with TranSource's argument that PJM's failure to review the facility ratings raises transparency concerns.[476] The Tariff states that transmission owners are responsible for updating and verifying transmission facility ratings.[477] PJM is not required by the Transmission Owner Agreement to review facility ratings used by the transmission owners in the RTEP and new service request processes, such as the Attachment EE System Impact Study process. Rather, PJM has oversight authority to question any transmission facility rating used in such processes,[478] as well as the oversight authority to reject or modify ratings and to direct transmission owners to provide detailed data justifying ratings.[479] Therefore, for the above reasons, we find that TranSource failed to meet its burden to demonstrate that the PJM Transmission Owners were inadequately transparent regarding their FAC-008-3 methodologies.

154. Having addressed the Presiding Judge's finding with regard to the transparency of the facility ratings used, we now turn to the question of whether PJM's use of facility ratings in the TranSource System Impact Studies was appropriate. As detailed below, we affirm the Presiding Judge's finding that TranSource failed to meet its burden to show that the actual facility ratings PJM used in the TranSource System Impact Studies were inaccurate.[480] We agree with PJM, the PJM Transmission Owners, and Trial Staff that the facility ratings in the RTEP base case—not the Form 715 ratings—are appropriately used in System Impact Studies for upgrade requests, including TranSource's Upgrade

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and Answering Test.). However, in discovery, TranSource conceded that it was "'not able to dispute or verify [that any of the PJM TOs] violated NERC requirement FAC-008-3.'" Initial Decision, 162 FERC ¶ 63,007 at P 45 (quoting Ex. TO-002A at 1).

[476] TranSource Brief Opposing Exceptions at 34-35 (citing TranSource Reply Brief at 23-24 (citing Ex. TS-120 at 111:7-12 (Egan Dep.)).

[477] PJM Tariff, Attachment K, Appendix §§ 1.9.8 and 1.9.9 (Prescheduling) (3.0.1); PJM Operating Agreement, Schedule 1 §§ 1.9.8 and 1.9.9 (Prescheduling) (3.0.1).

[478] Ex. PJM-0002A at 26:9-14, 76:2-7 (Egan Answering Test.).

[479] PJM Tariff, Attachment K, Appendix §§ 1.9.8 and 1.9.9 (Prescheduling) (3.0.1); PJM Operating Agreement, Schedule 1 §§ 1.9.8 and 1.9.9 (Prescheduling) (3.0.1).

[480] Initial Decision, 162 FERC ¶ 63,007 at PP 80(d), 80(f), 80(h).

Request.[481] As PJM explained, the Form 715 ratings are "snapshot in time" ratings as of April of each year and do not reflect all approved future RTEP projects—or the impacts of higher queued New Service Requests.[482] System Impact Studies for Attachment EE requests should not be based on facility ratings that are out-of-date or only reflect a snapshot in time, like the Form 715 ratings, but rather the facility ratings PJM uses should account for planned RTEP projects and higher queued New Service Requests.[483] As PJM and Trial Staff indicate, the RTEP base case takes into account higher queued projects and pending upgrades that might impact a facility rating but were not planned and approved at the time the Form 715 information was compiled.[484]

155. In addition, regarding the accuracy of the facility ratings used in the TranSource System Impact Studies, we find that TranSource has not demonstrated that PJM or the PJM Transmission Owners used improper facility ratings. PJM performed an audit on the relevant facility ratings and established that "the ratings PJM used were generally correct" and that "PJM corrected any incorrect ratings."[485] Similarly, ReliabilityFirst audited the PJM Transmission Owners and found them to be in compliance with the NERC FAC-008-3 standard regarding facility rating methodologies.[486] TranSource argues that the facility ratings used in the TranSource System Impact Studies were inaccurate because they differed from the facility ratings in Form 715;[487] however, we find that this is not evidence of facility ratings errors, as it is reasonable that facility ratings in the RTEP base case and those in the Form 715 would not necessarily be the same, because they each represent the components of the transmission system at separate and distinct points in time and are designed for separate and distinct purposes. Further,

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[481] PJM Brief on Exceptions at 32; PJM Transmission Owners Brief Opposing Exceptions at 23-24, 27; Trial Staff Brief Opposing Exceptions at 3, 21 (citing Ex. S-029 at 20:10-11 (Kim Direct and Answering Test.)).

[482] Ex. PJM-0002A at 44:20-25 (Egan Answering Test.).

[483] Ex. PJM-0002A at 45:1-9 (Egan Answering Test.).

[484] Ex. TO-001A at 36:21-23 (Gentile Direct Test.).

[485] PJM Brief Opposing Exceptions at 46 (citing Ex. PJM-0002A at 55:5-12 (Egan Answering Test.)).

[486] PJM Transmission Owners Brief Opposing Exceptions at 13-14 (citing Ex. TO-004 at 10; Ex. TO-005 at 10; Ex. TO-006 at 10; Ex. TO-040 at 15-16; Tr. 1133:1-25 (Gentile)).

[487] TranSource Brief on Exceptions at 56.

as we stated above, the Form 715 ratings are insufficient for use in System Impact Studies for Attachment EE upgrade requests, including TranSource's Upgrade Requests.[488] Therefore, we deny TranSource's request to find that PJM and the PJM Transmission Owners violated the FPA or Form 715 requirements by using facility ratings that differed from what were publicly reported in Form 715.[489]

156. TranSource alleges that an incumbent transmission owner could benefit from reporting artificially low facility ratings to PJM.[490] We reject this argument as unrelated to whether PJM is required to use Form 715 ratings in System Impact Studies, and as speculative, as no party put forward evidence that the PJM Transmission Owners intentionally provided inaccurate or low ratings.

157. Lastly, we find that neither PJM nor the PJM Transmission Owners were required to provide independent verification or analysis of the facility ratings. The PJM Tariff does not require that PJM or the transmission owners independently verify every facility rating provided by the PJM Transmission Owners for System Impact Studies, nor does TranSource cite to such a requirement. The PJM Tariff rather permits PJM to rely on data, such as facility ratings, from the PJM Transmission Owners when conducting those studies, and even allows PJM to "rely upon [the PJM Transmission Owners] to conduct part or all of the [System Impact Study]."[491] Since the facility ratings used in the TranSource System Impact Studies are the same ratings used in the PJM RTEP, we see no need for further independent verification as PJM and the PJM Transmission Owners have an incentive to ensure that the RTEP data is accurate to preserve system reliability. Therefore, we deny TranSource's request for an independent review of the facility ratings, as there is no Tariff or other basis upon which such a review must be

[488] PJM Brief on Exceptions at 32; PJM Transmission Owners Brief Opposing Exceptions at 23-24, 27; Trial Staff Brief Opposing Exceptions at 3, 21 (citing Ex. S-029 at 20:10-11 (Kim Direct and Answering Test.)).

[489] TranSource Brief on Exceptions at 55.

[490] TranSource Brief Opposing Exceptions at 49-50 (citing Ex. TS-120 at 123-124 (Egan Dep.); Ex. TS-092; TranSource Post-Hearing Brief at 24-44).

[491] PJM Tariff, Attachment N-1 Paragraph 9 (Form of System Impact Study Agreement) (2.0.0) (effective September 2, 2014; superseded April 23, 2018); PJM, Intra-PJM Tariffs, OATT, Part VI, Subpart A System Impact Studies and Facilities Studies § 203.1 (Cost Responsibility) (1.0.0) (stating that the System Impact Study is "determined in coordination with the affected Transmission Owner(s)"); Subpart A section 210 (stating that PJM "may contract with consultants, including the affected [PJM Transmission Owners], to obtain services or expertise with respect to any such study.").

conducted.[492]

F. Condition of the Readington-Roseland Circuit

1. Initial Decision

158. The Presiding Judge determined that TranSource did not show that PJM's determination that the Readington-Roseland circuit required a wreck and rebuild to accommodate its Upgrade Requests was unreasonable, although he made several transparency-related findings.[493] The Presiding Judge stated that the 2014 Exelon Facilities Study resulted in an approximately $14 million cost estimate to upgrade the Readington-Roseland circuit, and did not recommend a wreck and rebuild.[494] However, in the March 2015 TranSource System Impact Studies, the same upgrade "ballooned" to over $126 million, and in the June 2015 TranSource System Impact Studies, it increased to over $140 million, based on a determination that the line required a wreck and rebuild.[495] The Presiding Judge explained that the latter studies recommending a wreck and rebuild were based on institutional knowledge of two other similar lines reviewed in 2004 and 2006, which the Presiding Judge found was "unfair."[496]

159. The Presiding Judge also noted that in 2016, PSE&G determined that the Readington-Roseland circuit was violating end of life criteria under Form 715, and argued that the line could not have been in significantly better condition in 2014, when

[492] TranSource Brief Opposing Exceptions at 35 (citing Ex. TS-085 at 53).

[493] Initial Decision, 162 FERC ¶ 63,007 at PP 53-60 (finding that a lack of transparency prevented TranSource from obtaining earlier knowledge of the condition of the Readington-Roseland circuit), 80(e) (finding that TranSource did not meet its burden to show that the results of the TranSource System Impact Studies were inaccurate), 83 (finding that it could not be determined whether the upgrades PJM identified were necessary to accommodate TranSource's Upgrade Requests, given that System Impact Studies are merely good faith, non-binding estimates, further refined at the Facilities Study phase).

[494] *Id.* PP 54-55 (citing Ex. TS-030).

[495] *Id.* P 54 (citing Ex. TS-085 at 56; Tr. 1034:7-22 (Crouch)).

[496] *Id.* PP 56-57.

the TranSource System Impact Studies were done.[497] Therefore, the Presiding Judge found that PSE&G did not timely report the condition of the Readington-Roseland circuit on Form 715.[498] The Presiding Judge concluded that an earlier version of Form 715 should have reported that the line was in "dire straits," and, had it done so, TranSource would likely have had the information it needed to timely estimate the costs for its upgrades.[499] Nevertheless, the Presiding Judge did not find that PSE&G's failure to report the condition of the Readington-Roseland circuit amounted to intentional misconduct.[500]

160. Lastly, the Presiding Judge found that TranSource presented a "fair argument" that a lack of transparency prevented TranSource from obtaining earlier knowledge of the condition of the Readington-Roseland circuit, so that it could timely estimate the actual costs of the upgrades required to accommodate its Upgrade Requests.[501]

2. Briefs on Exceptions

a. TranSource

161. TranSource states that the Initial Decision erred in concluding that "'the Readington-Roseland [circuit] was in dire straits' and that '[i]f the line had such a dire status by 2016, the Readington-Roseland [circuit] could not have been in a better condition in 2014'" when the TranSource System Impact Study phase began.[502] TranSource argues that the Initial Decision's conclusions are not supported by the evidence in the record, including the 2014 Exelon Facilities Study, which did not anticipate the need for a wreck and rebuild of the Readington-Roseland circuit, the fact

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[497] *Id.* PP 58-60 (citing Tr. 860:20-861:2, 904:13-17 (Khadr); Tr. 1033:7-10 (Crouch)).

[498] *Id.* PP 53, 58 ("The evidence shows that the problematic condition of the [Readington-Roseland] circuit was reported in the [TranSource System Impact Studies], but should have been reported some years earlier in other Commission formats such as the FERC Form 715.").

[499] *Id.* PP 53, 60.

[500] *Id.* PP 53-60.

[501] *Id.* P 53.

[502] TranSource Brief on Exceptions at 66 (quoting Initial Decision, 162 FERC ¶ 63,007 at P 58).

that PSE&G did not propose such a replacement project until September 2017, and that none of the PSE&G-commissioned reports suggested the need for a wreck and rebuild.[503]

162. TranSource supports the Presiding Judge's finding that PSE&G's lack of transparency about the Readington-Roseland circuit prevented TranSource from obtaining earlier knowledge regarding the actual conditions of the circuit.[504] However, TranSource contends that the Initial Decision errs by not holding PSE&G accountable for misrepresenting the conditions of its transmission facilities and failing to provide reasonable, good faith estimates of upgrade costs in accordance with the FPA and PJM's Tariff.[505] Specifically, TranSource argues that PSE&G misrepresented the condition of the Readington-Roseland circuit by ignoring best available information in conducting cost estimates for the TranSource System Impact Studies, by conveying false and misleading information, and by failing to provide TranSource with necessary documents about the circuit.[506]

163. Regarding the use of best available information, TranSource asserts that the Initial Decision was correct in finding that PSE&G failed to rely on the most recent studies and information, such as the 2014 Exelon Facilities Study, tower leg studies, and documentation and photographs of repairs of the Readington-Roseland circuit, in conducting its cost estimate for the TranSource System Impact Studies, and rather relied on PSE&G engineer Mr. Crouch's memory of other lines. TranSource states that PSE&G proposed to charge TranSource $142 million for a wreck and rebuild of the Readington-Roseland circuit, which TranSource claims was not necessary, since the prior 2014 Exelon Facilities Study identified upgrade costs of only $14 million for the same line,[507] and since PSE&G had spent considerable resources analyzing the conditions of the Readington-Roseland towers and repaired the tower legs only two years earlier—facts TranSource argues that PSE&G hid from TranSource.[508] As a result, TranSource contends that PSE&G's cost estimate was not provided in good faith, in violation of the PJM Tariff, which states that System Impact Study estimates "'shall represent a good faith attempt to determine the cost of necessary facilities and upgrades'" and that PJM

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[503] *Id.* at 67-69.

[504] *Id.* at 61.

[505] *Id.* at 18, 61 (citing Initial Decision, 162 FERC ¶ 63,007 at PP 53-60).

[506] *Id.* at 61-62 (citing TranSource Post Hearing Brief at 73-82, 96-99).

[507] *Id.* at 65, 73 (citing Initial Decision, 162 FERC ¶ 63,007 at P 54).

[508] *Id.* at 62 (citing Initial Decision, 162 FERC ¶ 63,007 at PP 56-60).

shall "'rely, to the extent reasonably practicable, on existing transmission planning studies' when conducting [System Impact Studies]."[509] TranSource argues that these provisions should ensure that the PJM Transmission Owners utilize information available about their system to ensure the greatest accuracy and the most efficient upgrades.

164. Regarding failure to produce necessary documents, TranSource claims that PSE&G failed to promptly produce responses to relevant discovery related to the Readington-Roseland circuit,[510] that PSE&G hid facts regarding the condition of the circuit (e.g., that repairs had been made to many tower legs),[511] and that PSE&G misrepresented photographs.[512] Regarding photographs, TranSource indicates that PSE&G attached Ex. PS-005 to show the condition of the Readington-Roseland circuit, but in discovery, TranSource learned that the photographs were over a decade old, of tower legs on a different circuit.[513] Further, TranSource explains that during oral argument, the Presiding Judge granted TranSource's Motion to Compel discovery responses seeking information on the conditions of PSE&G's circuits.[514] TranSource argues that even after its Motion to Compel was granted, PSE&G's obstruction of information continued.[515] TranSource argues that, in 2015, the "Market Monitor observed that 'the possession of the relevant information' in the hands of the PJM Transmission Owners pose[d] 'a major obstacle to a resolution' of TranSource's Complaint[s]".[516] TranSource further argues that it was reliant on information from

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[509] *Id.* at 66, 66 n.211 (quoting PJM Tariff, Part VI, Subpart A System Impact Studies and Facilities Studies § 203.1 (Cost Responsibility); PJM Tariff, Attachment N-1 Form of System Impact Study Agreements § 6 (5.0.0)).

[510] *Id.* at 70 (citing Order Granting in Part and Denying in Part TranSource's Motion to Compel, Docket No. EL15-79-001 (July 31, 2017); TranSource, LLC, Motion for Sanctions Against Public Service Electric and Gas Company, Docket No. EL15-79-001 (Aug. 30, 2017); Tr. 277:24-278:4 (Presiding Judge)).

[511] *Id.* at 70-71 (citing Ex. PS-004 at 7:14-8 (Crouch Direct Test.); Ex. PS-005; Ex. TS-084A at 67:8-12 (Rousselle Rebuttal Test.)).

[512] *Id.* at 72 (citing Ex. TS-084A at 63:10-64:8 (Rousselle Rebuttal Test.)).

[513] *Id.* at 72 n.224 (citing Ex. TS-084A at 63:10-64:8 (Rousselle Rebuttal Test.)).

[514] *Id.* at 71.

[515] *Id.*

[516] *Id.* at 69 (quoting Motion for Investigative Process).

PJM, PSE&G, and other PJM Transmission Owners to figure out why the results in the TranSource System Impact Studies were so out of line with what TranSource claims to be reasonable, Tariff-based expectations.[517]

165. TranSource asserts that the Commission accordingly should impose meaningful penalties on PSE&G to deter the PJM Transmission Owners from engaging in self-serving misrepresentations of the conditions of their facilities.[518]

166. In addition, TranSource contends that the Initial Decision errs by not holding PJM and the PJM Transmission Owners accountable for violating the FPA's Form 715 reporting requirement.[519] TranSource argues that the PJM Transmission Owners, who possess the direct access and knowledge to rate facilities, bear responsibility for the accuracy of the Form 715.[520]

b. PJM and the PJM Transmission Owners

167. PJM and the PJM Transmission Owners argue that the Initial Decision erred by finding that PSE&G should have known that the Readington-Roseland circuit required a wreck and rebuild in 2014, as the evidence shows PSE&G did not reach that end-of-life conclusion until 2017.[521] PJM states that nothing in the record establishes that PSE&G should have warned TranSource of this condition in 2014.[522] PJM argues that it performed the TranSource System Impact Studies based on the information it had at the time TranSource entered the queue.[523] Further, the PJM Transmission Owners assert that PSE&G's proposal for a wreck and rebuild of the Readington-Roseland circuit did not

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[517] *Id.* at 70.

[518] *Id.* at 73.

[519] *Id.* at 54 (citing Initial Decision, 162 FERC ¶ 63,007 at PP 26-27, 32-33).

[520] *Id.* at 55 (citing Tr. 872:16-18 (Khadr); 16 U.S.C. § 824*l* (2012); 18 C.F.R. § 141.300).

[521] PJM Brief on Exceptions at 39-40; PJM Transmission Owners Brief on Exceptions at 21 (citing Tr. 903:6-16 (Khadr)).

[522] PJM Brief on Exceptions at 40 (citing Initial Decision, 162 FERC ¶ 63,007 at PP 58, 60).

[523] *Id.*

occur until 2017, after the TranSource System Impact Studies,[524] that one of the tower studies was only an inspection report and would not have supported a wreck and rebuild conclusion,[525] and even if TranSource had been made aware of the end-of-life conclusion earlier, TranSource still would have disagreed with it.[526] The PJM Transmission Owners contend that there were both "before" and "after" photos in one of the tower studies that the Initial Decision may have failed to consider.[527]

168. PJM states that the Initial Decision erred in finding a lack of transparency based on PSE&G's alleged failure to report, years before it actually concluded, that its Readington-Roseland circuit was at an "end of life condition."[528] Similarly, the PJM Transmission Owners state that the Initial Decision erred in asserting that the condition of the Readington-Roseland circuit "was known and should have been properly submitted to the Commission in some way as on the FERC Form 715."[529] PJM likewise states that nothing in the record establishes that PSE&G improperly failed to report its concerns to the Commission.[530] The PJM Transmission Owners argue that the Initial Decision misunderstands Form 715 requirements, asserting that the PJM RTEP is the most comprehensive statement regarding the condition of PJM transmission facilities and that neither PSE&G nor PJM had an obligation to report anything regarding the condition of the Readington-Roseland circuit on Form 715 prior to that time.[531]

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[524] PJM Transmission Owners Brief on Exceptions at 21 (citing Tr. 903:6-16 (Khadr); Ex. PS-017 at 1). The PJM Transmission Owners explain that the report that provided the structural analysis supporting the need to wreck and rebuild the Readington-Roseland circuit was only issued in April of 2017.

[525] *Id.* at 21 n.55 (citing Tr. 506:25-508:25 (Rousselle)).

[526] *Id.* at 20-21, 21 n.53 (citing Initial Decision, 162 FERC ¶ 63,007 at P 58).

[527] *Id.* at 22 n.57.

[528] PJM Brief on Exceptions at 39-40 (citing Initial Decision, 162 FERC ¶ 63,007 at PP 58, 60).

[529] PJM Transmission Owners Brief on Exceptions at 20 (citing Initial Decision, 162 FERC ¶ 63,007 at P 60).

[530] PJM Brief on Exceptions at 40 (citing Initial Decision, 162 FERC ¶ 63,007 at PP 58, 60).

[531] PJM Transmission Owners Brief on Exceptions at 20-22.

169. Further, the PJM Transmission Owners argue that the Initial Decision fails to appreciate the timing associated with planning transmission projects, including facilities categorized as "end of life" projects.[532] The PJM Transmission Owners explain that, consistent with the PJM regional transmission planning process, PSE&G properly planned for the Readington-Roseland circuit.[533] The PJM Transmission Owners state that the Initial Decision's finding implies that PSE&G should have communicated the status of the Readington-Roseland circuit prior to the conclusion of the PJM RTEP process, which ignores that regional transmission planning requires a meaningful opportunity to review and provide input from stakeholders.[534] The PJM Transmission Owners argue that "it would be premature and speculative for either PJM or PSE&G to include potential concerns in the FERC Form 715 where such concerns have not materialized into a concrete plan and have not been vetted with stakeholders."[535]

3. Briefs Opposing Exceptions

a. TranSource

170. TranSource states that PJM and the PJM Transmission Owners[536] are incorrect in disagreeing with the Initial Decision, which asserted that PSE&G failed to make known the actual conditions of the facility.[537] TranSource highlights several instances when it claims PSE&G misrepresented the condition of the Readington-Roseland circuit. TranSource argues that PSE&G failed to reference or differentiate the results of the 2014 Exelon Facilities Study and the TranSource System Impact Studies, which provided a tenfold difference in upgrade costs for the same circuit and time period.[538] Further, TranSource claims that PSE&G sought to prevent TranSource from accessing

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[532] *Id.* at 22.

[533] *Id.* at 22-23.

[534] *Id.* at 23 (explaining the PJM RTEP process).

[535] *Id.*

[536] TranSource Brief Opposing Exceptions at 75 (citing PJM Transmission Owners Brief on Exceptions at 20-24).

[537] *Id.* (citing Initial Decision, 162 FERC ¶ 63,007 at PP 52- 60).

[538] *Id.* at 57 (citing Initial Decision, 162 FERC ¶ 63,007 at P 54); TranSource Brief Opposing Exceptions at 76-77, 77 n.298 (citing Tr. 1038:5-16 (Crouch); Ex. PS-004 (Crouch Direct Test.); Ex. PS-005).

information in discovery and calling said data "not truly relevant";[539] that PSE&G used old pictures of "sister lines" without revealing that the pictures were not of Readington-Roseland;[540] that PSE&G did not rely on or disclose relevant tower studies;[541] that PSE&G falsely stated that the Readington-Roseland circuit existed in a swamp and was difficult to access;[542] that PSE&G relied on "institutional knowledge" rather than available studies and data;[543] that PSE&G only proposed to replace the Readington-Roseland circuit a week before evidentiary hearings;[544] and that PSE&G and PJM failed to produce documents from their pre-hearing meeting regarding the Readington-Roseland circuit and generally failed to be transparent.[545]

171. Further, TranSource argues that the timeline of events demonstrates that PSE&G misrepresented the condition of its facilities. TranSource contends that in 2013, PSE&G was willing to commission a tower study on the Readington-Roseland circuit,[546] and in 2014, made repairs to tower legs on the same line.[547] TranSource argues that in 2015, PSE&G was willing to tell TranSource that the Readington-Roseland circuit would require a $142 million "wreck-and-rebuild;"[548] however, PSE&G had failed to make

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[539] *Id.* at 58 (citing Ex. PS-004 at 7:14-9:4 (Crouch Direct Test.); Ex. PS-005; Ex. TS-084A at 67:8-13 (Rousselle Rebuttal Test.)), 77 (citing TranSource, LLC, Motion to Compel Production of Discovery, Docket No. EL15-79-000, at Attachment D (filed May 31, 2017)).

[540] *Id.* (citing TranSource Post-Hearing Brief at 74-77, citing Ex. PS-004 at 7-8 (Crouch Direct Test.)).

[541] *Id.* at 77 (citing Tr. 1038:5-16 (Crouch); Ex. PS-004 (Crouch Direct Test.); Ex. PS-005).

[542] *Id.* (citing Ex. PS-004 at 7:3-8 (Crouch Direct Test.)).

[543] *Id.* (citing Ex. PS-004 at 7:3-8 (Crouch Direct Test.)).

[544] *Id.* (citing Ex. TS-189).

[545] *Id.* at 58, 77 (citing TranSource, LLC, Motion to Compel Production of Discovery, Docket No. EL15-79-000, at Attachment D (filed May 31, 2017)).

[546] *Id.* at 76 (citing Ex. TS-112).

[547] *Id.* (citing Ex. TS-113 at 471-640).

[548] *Id.* (citing Ex. TS-085 at 71, 79).

known any apparently troubling or dire conditions of the circuit prior to this hearing. Further, TranSource points out that PSE&G had failed to report such dire conditions on Form 715.[549] In addition, TranSource highlights the inconsistency of PSE&G's position on the condition of the circuit, noting that PSE&G's assessment of its condition was strong enough to warrant increasing the cost estimate from $14 million to $140 million in 2015,[550] yet, in an August 2017 deposition, a PSE&G witness confirmed that there were no plans to upgrade the Readington-Roseland circuit.

172. Finally, TranSource contends that PJM and the PJM Transmission Owners are incorrect in disagreeing with the Initial Decision that PSE&G should have reported the Readington-Roseland circuit's condition on its Form 715.[551] TranSource argues that PSE&G witness testified at the hearing in September 2017 that the Readington-Roseland circuit had reached an "end-of-life" Form 715 violation and would be replaced, yet PSE&G had not reported such violation on the Form 715 at that time.[552] TranSource argues that the language in Part 6 of the Form 715[553] indicates that the PJM Transmission Owners should not wait for the final RTEP to reveal the "end-of-life" determination on Form 715.[554] TranSource also disagrees with the PJM Transmission Owners' claim that the RTEP is adequate to meet the requirements of Part 6 of Form 715.[555]

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[549] *Id.*

[550] *Id.* at 80-81.

[551] *Id.* at 75, 78-80.

[552] *Id.* at 78 (citing Ex. TS-165 at 5:20-24 (Khadr Deposition Excerpts)).

[553] Namely, TranSource argues that the "evaluation is to be drawn from existing utility transmission planning *studies* and the *experience and judgment of the Respondents' transmission system planners*," and that the "utility must provide a narrative evaluation or *assessment of the performance of its transmission system in future time periods* based on the application of its reliability criteria . . . " and "provide a *clear understanding of the existing and expected system performance*." *Id.* at 78-79 (quoting Ex. TS-003 (Form 715 Instructions)) (emphasis in original).

[554] *Id.* at 78-80 (citing Ex. TS-003 (Form 715 Instructions)).

[555] *Id.* at 78-79.

b. PJM

173. PJM disagrees with TranSource, stating that regardless of the conflicting positions of PSE&G and TranSource regarding the condition of the Readington-Roseland circuit, it was reasonable for PJM to include the costs of the wreck and rebuild in the TranSource System Impact Studies.[556] PJM asserts that the System Impact Study is intended to be a conservative estimate, and the Facilities Study would be required to definitively assess the necessity of the wreck and rebuild.[557] PJM notes that although the Initial Decision faulted PSE&G for not concluding and announcing in 2014 that the Readington-Roseland circuit needed to be rebuilt, TranSource has consistently disputed, by contrast, the need for a rebuild of the Readington-Roseland circuit.[558]

c. PJM Transmission Owners

174. The PJM Transmission Owners disagree with TranSource's exception that the Initial Decision erred by not holding PSE&G accountable for misrepresenting the condition of Readington-Roseland.[559] The PJM Transmission Owners argue that TranSource presents the same baseless assertions that PSE&G already refuted,[560] but, more fundamentally, that TranSource and the Initial Decision are at odds regarding what the "condition" of the circuit is, or what "condition" should have been reported earlier.[561] The PJM Transmission Owners contend that the Initial Decision appears to accept that a wreck and rebuild was required, as supported by evidence from PSE&G[562] and PJM,[563]

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[556] PJM Brief Opposing Exceptions at 62-63.

[557] *Id.* at 62 (citing Ex. PJM-0002A at 61:10-12 (Egan Answering Test.); *Chesapeake Transmission*, 116 FERC ¶ 61,234 at P 50).

[558] *Id.* at 5.

[559] PJM Transmission Owners Brief Opposing Exceptions at 28 (citing TranSource Brief on Exceptions at 18).

[560] *Id.* at 29 (citing PSE&G Post-Hearing Brief at 6-18).

[561] *Id.*

[562] *Id.* at 31 (citing Tr. 905:20-908:17 (Khadr); Ex. PS-017).

[563] *Id.* (citing Ex. PJM-0002A at 66:1-67:2 (Egan Answering Test.)).

while TranSource claims that it was not.[564] The PJM Transmission Owners assert that TranSource did not provide evidence to support a finding that a wreck and rebuild would not be required at the conclusion of the IARR process,[565] and therefore, TranSource's assertions of harm caused by PSE&G's alleged misrepresentation are based on speculation.[566]

175. The PJM Transmission Owners assert that TranSource failed to demonstrate, and the Initial Decision did not find, that the PJM Transmission Owners violated Form 715 reporting requirements.[567] The PJM Transmission Owners take issue with the Initial Decision's assumption that PSE&G provided untimely notice of the condition of the Readington-Roseland circuit.[568] PJM Transmission Owners also argue that there was not any problem with PSE&G's Form 715.[569] The PJM Transmission Owners contend that Form 715 must be filed annually by transmission utilities no later than April 1st, and the Commission has stated that interim updates are not required.[570] Like PJM, the PJM Transmission Owners point out that although the Initial Decision faulted PSE&G for not concluding and announcing in 2014 that the Readington-Roseland circuit needed to be rebuilt, TranSource has consistently disputed, by contrast, the need for a rebuild of the Readington-Roseland circuit.[571]

176. The PJM Transmission Owners reiterate that there is no factual or legal basis for the Initial Decision's "assumption" that PSE&G provided untimely notice of the condition of the Readington-Roseland circuit.[572] The PJM Transmission Owners assert

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[564] *Id.* at 30.

[565] *Id.* at 31 (citing Ex. PJM-0002A 66:1-67:2 (Egan Answering Test.)).

[566] *Id.*

[567] *Id.* at 11, 23-27 (citing TranSource Brief on Exceptions at 18).

[568] *Id.* at 28 (citing PJM Transmission Owners Brief on Exceptions at 20-24).

[569] *Id.* at 28-29 (citing PJM Transmission Owners Brief on Exceptions at 22).

[570] *Id.* at 23-24 (citing 18 C.F.R. § 141.300 (2017); Order No. 558, FERC Stats. & Regs. ¶ 30,980, *reh'g denied*, Order No. 558-A, 65 FERC ¶ 61,324, f*inal rule*, Order No. 558-B, FERC Stats. & Regs. ¶ 30,993).

[571] *Id.* at 29.

[572] *Id.* at 28.

that TranSource has rehashed "the same baseless assertions" it made in its Post-Hearing Brief, to which PSE&G responded in its Post-Hearing Brief.[573] For example, the PJM Transmission Owners state that TranSource mischaracterizes PSE&G witness Mr. Crouch's testimony and the use of the photos in Ex. PS-005—a plain reading of Mr. Crouch's testimony indicates that Mr. Crouch relied on his knowledge of the condition of neighboring sister lines to inform his conclusions regarding the Readington-Roseland circuit, and the Ex. PS-005 photo is a picture of a sister line and was accurately labeled as such.[574]

4. Commission Determination

177. The Presiding Judge found that a lack of transparency with regard to the condition of the Readington-Roseland circuit prevented TranSource from being able to timely estimate its costs.[575] The Presiding Judge explained that the "dire" condition of the circuit was reported in TranSource's System Impact Studies, despite there previously being no indication that the condition of the circuit was that poor.[576] Further, the Presiding Judge implied that PSE&G violated Form 715 reporting requirements by failing to report an end-of-life condition for the Readington-Roseland circuit prior to 2017.[577] Despite making these transparency-related findings, the Presiding Judge ultimately determined that TranSource has not shown that PJM's determination that the Readington-Roseland circuit required a wreck and rebuild to accommodate its Upgrade Requests was unreasonable.[578] As discussed below, we reverse the transparency-related

[573] *Id.* at 28-29.

[574] *Id.* at 29 (citing Ex. PS-004 (Crouch Direct Test.); Ex. PS-005).

[575] Initial Decision, 162 FERC ¶ 63,007 at P 53.

[576] *See id.* PP 53-60 (noting that a prior Facilities Study of the same circuit did not recommend a wreck and rebuild and prior Form 715 submissions by PSE&G did not indicate that the circuit was at its end-of-life).

[577] *Id.* PP 53, 58.

[578] *Id.* PP 80(e) (finding that TranSource did not meet its burden to show that the results of the TranSource System Impact Studies were inaccurate), 83 (finding that it could not be determined whether the upgrades PJM identified were necessary to accommodate TranSource's Upgrade Requests, given that System Impact Studies are merely good faith, non-binding estimates, further refined at the Facilities Study phase).

findings and affirm the finding that TranSource has not shown that the wreck and rebuild determination was unreasonable.

178. First, we find that TranSource has failed to allege, pursuant to section 206 of the FPA, a valid transparency concern with regard to the condition of the Readington-Roseland circuit. TranSource's claims do not relate to any lack of transparency in the PJM Tariff or manuals. Further, TranSource failed to identify any compelling evidence that PSE&G or PJM intentionally presented or used false information during the System Impact Study process regarding the condition of its transmission facilities in determining that a wreck and rebuild of the Readington-Roseland circuit was necessary. The record reveals that the real issue is that TranSource simply disagrees with PJM and PSE&G's substantive findings in determining whether the wreck and rebuild of the Readington-Roseland circuit was necessary to accommodate TranSource's Upgrade Requests.

179. With regard to whether PJM's determination that the Readington-Roseland circuit needed a wreck and rebuild to accommodate TranSource's Upgrade Requests was reasonable, we note our finding above that it cannot be definitively determined on this record what upgrades are necessary to support TranSource's Upgrade Requests, given the preliminary, non-binding nature of System Impact Study estimates.[579] Therefore, we consider only whether PJM's wreck and rebuild determination was reasonable in the context of a System Impact Study, where the estimates are meant to be conservative.[580] In this context, we find that TranSource failed to meet its burden to demonstrate that a wreck and rebuild of the Readington-Roseland circuit was an unreasonable assumption to include in the TranSource System Impact Studies. The 2014 Exelon Facilities Study, on which TranSource relies most to argue that a wreck and rebuild was unnecessary to accommodate its Upgrade Requests, found that the Readington-Roseland circuit required only a reconductoring of the line, rather than a wreck and rebuild, to support the Exelon project.[581] However, the fact that the 2014 Exelon Facilities Study did not recommend a wreck and rebuild to accommodate that different project does not change our conclusion with regard to whether PJM's determination as to TranSource's Upgrade Requests was reasonable. The 2014 Exelon Facilities Study relates to a different set of circumstances and a different scope of analysis than the TranSource studies. More importantly, the 2014 Exelon Facilities Study included a significant caveat: it found that a detailed engineering analysis would be needed to confirm the upgrade determination, such that it

[579] *See supra* section III.A.4.

[580] *Chesapeake Transmission*, 116 FERC ¶ 61,234 at P 50 (discussing *Neptune*, 110 FERC ¶ 61,098).

[581] Ex. TS-084A at 62 (Rousselle Rebuttal Test.).

did not make a determination on the nature of the rebuild.[582] PSE&G testified that, for that very reason, its recommendation that the TranSource Upgrade Requests required a wreck and rebuild of the Readington-Roseland circuit would not have changed had it reviewed the 2014 Exelon Facilities Study.[583] Though TranSource attempts to identify other reports to suggest that a wreck and rebuild of the Readington-Roseland circuit was an unreasonable conclusion, none of this evidence definitively indicates that a wreck and rebuild was an unreasonable assumption in TranSource's case.[584] We find that the inclusion of the wreck and rebuild in the TranSource System Impact Studies constitutes a reasonable and conservative estimate of the costs TranSource might have been expected to incur.

180. TranSource also contends that because the Readington-Roseland circuit later received an "end-of-life" designation, in the context of Form 715 transmission planning, those costs should not have been included in its System Impact Study. However, the record shows that the structural analysis of the Readington-Roseland circuit that led to the end-of-life designation on the Form 715 did not occur until April 2017,[585] three years after TranSource's System Impact Studies were completed. The end-of-life designation in 2017 does not indicate that a wreck and rebuild would not have been necessary in 2014 to accommodate TranSource's Upgrade Requests.

181. Finally, with regard to the Presiding Judge's implied finding that PSE&G violated the Form 715 reporting requirements by failing to report "the problematic condition of the circuit . . . some years earlier," we reverse.[586] As an initial matter, as we find above,

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[582] *Id.* at 14.

[583] Tr. 1058:1-23 (Crouch) ("Q: . . .Would it have changed your conclusion the Readington-Roseland circuit would require a wreck and rebuild to accommodate the TranSource IARR request if you had had access or had had the Black & Veatch report in your possession? A: It would not change my opinion for a wreck and rebuild. Q: Why not? A: Because when I looked at the Black & Veatch report, it was a fairly large caveat in that report that stated their assumptions were the work that they had done did not include and they recommended that a structural analysis be performed to make a final conclusion.").

[584] Tr. 908:1-8 (Khadr) (indicating that PSE&G would still consider a wreck and rebuild based on the results of the MainLine and Osmose reports).

[585] PJM Transmission Owners Brief on Exceptions at 21 (citing Ex. PS-017 at 1).

[586] Initial Decision, 162 FERC ¶ 63,007 at P 53. The Presiding Judge asserted that "[t]o further confuse the status of the Readington-Roseland [circuit], PSE[&]G engineers advised in 2016 that the line was violating end of life criteria under FERC Form 715" and

it was unreasonable for TranSource to rely on Form 715 facility ratings to model its Upgrade Requests. Moreover, the record here shows that PSE&G did not receive the structural analysis of the Readington-Roseland circuit indicating that an end-of-life designation on the Form 715 was necessary until April 2017. So, we find it was reasonable for PSE&G to not include the end-of-life determination on an earlier Form 715.

G. Queue Prioritization Error

1. Initial Decision

182. The Presiding Judge found that TranSource provided sufficient evidence that Delmarva's supplemental projects were improperly modeled ahead of TranSource's queue positions in violation of the Commission's Order Granting Waiver.[587]

2. Briefs on Exceptions

a. TranSource

183. TranSource does not take exception to this finding, asserting that the Initial Decision correctly found that Delmarva's supplemental projects were improperly prioritized ahead of TranSource's queue positions.[588] TranSource argues that Delmarva knew, just as PJM knew, that TranSource's queue positions had higher priority than the four Delmarva supplemental projects.[589] TranSource states that this prioritization was contrary to the Commission's Order Granting Waiver, which determined that it could maintain its original Attachment S priority dates for its queue positions, which were early than the Delmarva supplemental projects' priority dates.[590] TranSource argues that

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that the "FERC Form 715 of that earlier period should have noted the condition." *Id*. (citing Tr. 904:13-17 (Khadr)).

[587] *Id.* P 80(b).

[588] TranSource Brief on Exceptions at 47 (citing Initial Decision, 162 FERC ¶ 63,007 at PP 80(b), 81(a)).

[589] *Id.* at 50.

[590] *Id.* (citing Order Granting Waiver, 149 FERC ¶ 61,169).

Delmarva has failed to acknowledge the queue prioritization error and has failed to take any steps to rectify it.[591]

b. PJM

184. PJM does not take exception to the Initial Decision's finding that TranSource's queue positions were not properly prioritized. However, PJM argues that the Initial Decision erred by requiring PJM to restore the queue position to remedy the prioritization error, without any consideration of the necessary Tariff waiver or the potential adverse impacts on third parties.[592]

3. Briefs Opposing Exceptions

a. PJM

185. PJM admits that it made a mistake in prioritizing the Delmarva supplemental projects ahead of TranSource's queue positions.[593] PJM explains that the mistake occurred because TranSource required a waiver of the Tariff in order to transform its Attachment S requests to Attachment EE requests, and PJM does not have a procedure for handling new service requests when its Tariff is waived. PJM argues that it would have caught its mistake and corrected the error at the Facilities Study stage, had TranSource continued through the process.[594]

b. PJM Transmission Owners

186. The PJM Transmission Owners state that TranSource submitted its Upgrade Requests six days after PJM provided notice of Delmarva's supplemental projects, and that the Commission's Order Granting Waiver is what gave TranSource priority over Delmarva's queue position.[595] The PJM Transmission Owners acknowledge that PJM admitted to making an error by prioritizing Delmarva's supplemental projects over

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[591] *Id.* at 51.

[592] PJM Brief on Exceptions at 51-54.

[593] PJM Brief Opposing Exceptions at 60-61 (citing PJM Initial Brief at 56-58; PJM Post-Hearing Reply Brief at 26-27, 53; Ex. TS-120 at 23:17-20 (Egan Dep.)).

[594] *Id.* at 61 (citing Tr. 766:12-767:3 (Egan); Ex. PJM-0002A at 62:23-63:12 (Egan Answering Test.)).

[595] PJM Transmission Owners Brief Opposing Exceptions at 20-21 (citing Tr. 471:23-474:3 (Rousselle); Ex. TO-034; Order Granting Waiver, 149 FERC ¶ 61,169).

TranSource's, resulting in an overestimation of costs to TranSource of about $16.125 million.[596] The PJM Transmission Owners argue that this error caused TranSource no harm, because the amount of the error was immaterial,[597] and the error would have been corrected in the Facilities Study, had TranSource proceeded.[598] The PJM Transmission Owners also assert that there was plainly no intent to disadvantage TranSource to enrich Delmarva, as Delmarva did not know, nor could it have known, when it announced its supplemental projects that it was proposing upgrades to the same facilities that PJM would later determine required upgrades to satisfy TranSource's request for IARRs. Additionally, the PJM Transmission Owners argue that Delmarva had no way of knowing about the queue prioritization error, and should not be held responsible to TranSource for such an error.[599]

c. Trial Staff

187. Trial Staff argues that although PJM erred in prioritizing the Delmarva supplemental projects, TranSource's witness makes clear that the error did not materially impact TranSource's decision as to whether to continue in the IARR study process.[600]

4. Commission Determination

188. We affirm the Initial Decision's finding that PJM improperly prioritized the Delmarva supplemental projects ahead of TranSource's queue positions.[601] PJM admitted that this error occurred.[602] This error violated the Commission's Order Granting Waiver, which approved the conversion of TranSource's Attachment S requests

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[596] *Id.* at 21-22 (citing Ex. PJM-0022 at 1; Tr. 751:22-752:2, 764:7-765:1, 766:15-20 (Egan); Ex. PJM-0002A at 57:13-15 (Egan Answering Test.)).

[597] *Id.* at 22 (citing Tr. 468:13-18 (Rousselle)).

[598] *Id.* (citing Tr. 764:16-23, 766:12-20 (Egan)).

[599] *Id.* (citing Ex. PJM-0002A at 59:7-18 (Egan Answering Test.)).

[600] Trial Staff Brief Opposing Exceptions at 3, 22-23 (arguing that the effect of the error was immaterial and that TranSource would not have been able to obtain financing to move forward even if the error were fixed).

[601] Initial Decision, 162 FERC ¶ 63,007 at PP 80(b)-81(a).

[602] PJM Brief Opposing Exceptions at 60-61 ("PJM has admitted that it made a mistake in the prioritization of Delmarva's supplemental projects.").

to Attachment EE requests, while ordering PJM to maintain TranSource's original queue priority dates, which PJM failed to do.[603] However, while we find that this violation did occur, we agree with PJM, the PJM Transmission Owners, and Trial Staff that the violation was inadvertent and is immaterial in the context of TranSource's Upgrade Requests. PJM's witness Mr. Egan explains that the error resulted in an over-estimation of costs of about $16.125 million, or about 2.75 percent of the total cost assigned to the affected queue position.[604] The error therefore accounted for a relatively small percentage of the costs of the project affected.[605] In any event, TranSource witness Mr. Rousselle testified that, even had the total costs of TranSource's queue positions been reduced by $500 million, TranSource likely still would not have been able to get financing.[606] We address the related remedy granted by the Presiding Judge—restoration of TranSource's queue positions—below in section III.J.1.

H. Market Model and Execution of the Simultaneous Feasibility Test

1. Initial Decision

189. The Presiding Judge found that PJM's System Impact Study process for Attachment EE upgrade requests, including specific aspects of PJM's modeling, was not transparent.[607] For example, the Initial Decision found that TranSource was not aware that, in running the simultaneous feasibility test as part of the market model, PJM interprets "outstanding" ARRs to be "rights that were not granted or awarded, and that PJM added those non-granted, non-awarded rights *back into the modeling*," nor was this modified model published anywhere at the time TranSource filed its Upgrade Requests.[608] However, the Presiding Judge ultimately found that TranSource did not

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[603] Order Granting Waiver, 149 FERC ¶ 61,169 at P 1.

[604] Ex. PJM-0002A at 54:9-16 (Egan Answering Test.).

[605] PJM Transmission Owners Brief Opposing Exceptions at 22 ("This PJM error caused no harm to TranSource because the amount of the error at the SIS stage was immaterial, and PJM would have corrected the error in the facilities study, had there been one.").

[606] Tr. 468:13-18 (Rousselle).

[607] Initial Decision, 162 FERC ¶ 63,007 at PP 1, 39-47, 61-65.

[608] *Id.* P 62 (emphasis in original) (citing Ex. TS-101 at 34:5-16 (Eng Rebuttal Test.)); *see* PJM Operating Agreement, Schedule 1 § 7.8(b) (Elective Upgrade Auction

meet its burden by a preponderance of the evidence to show that PJM incorrectly modeled TranSource's Upgrade Requests.[609]

2. Briefs on Exception

a. TranSource

190. TranSource argues that PJM misapplied the simultaneous feasibility test, which adversely impacted TranSource's Upgrade Requests, and that the Initial Decision erred by not ensuring that PJM will apply the correct simultaneous feasibility test upon reinstatement of its queue positions.[610] TranSource states that in testimony and briefing, it and PJM presented differing views on how the simultaneous feasibility test should be conducted. TranSource then asserts that the Initial Decision "finds that PJM's approach to executing the [s]imultaneous [f]easibility [t]est was severely flawed" and appears to require implementation of the test in accordance with TranSource's position; however, contending that the Initial Decision is not entirely clear on this issue, TranSource requests clarification on whose methodology will apply upon TranSource's reinstatement in the queue.[611] TranSource further notes that the Initial Decision omits any analysis of TranSource's explanation and arguments on PJM's modeling and execution of the simultaneous feasibility test.[612]

191. TranSource explains that its primary issue with PJM's market model is that the base case provided to TranSource and used to model the TranSource Upgrade Requests was not simultaneously feasible, and therefore was inconsistent with the PJM Tariff.[613] TranSource states that the Initial Decision correctly explained that the "market model seeks to identify the incremental transmission upgrades that would be required to accommodate TranSource's IARR request while assuring that the current [ARR] holders

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Revenue Rights) (1.0.0) (requiring PJM to assess "the simultaneous feasibility of the requested [IARRs] and the *outstanding* [ARRs]").

[609] *Id.* P 80(d).

[610] TranSource Brief on Exceptions at 29, 31.

[611] *Id.* at 32.

[612] *Id.* at 35.

[613] *Id.* at 32-33.

maintain their financial position."[614] In other words, simultaneous feasibility in the market model means, according to TranSource, that all awarded ARRs fit within the physical constraints of the transmission system under normal system conditions.[615] TranSource states that unawarded ARRs were previously denied because they exceeded the physical capacity of the system, and that they must not be included in the base case market model. However, TranSource states that PJM violated its Tariff because it included those requested, but unawarded ARRs in its base case.[616] TranSource asserts that this directly led to unjust and unreasonable results in the TranSource System Impact Studies and is the primary reason underlying the Initial Decision's finding that PJM systemically denies IARR requests.[617]

192. Also, TranSource argues that PJM's implementation of the simultaneous feasibility test to include unawarded ARRs unjustly and discriminatorily reserves unusable capacity on the current system for earlier customers whose ARR requests were denied.[618] TranSource asserts that PJM's approach thus fails to recognize that certain existing system capability is unusable and will only be "unlocked" when a developer like TranSource is awarded IARRs equal to the complete system capacity that its upgrades unlock.[619] TranSource argues that PJM's approach to the simultaneous feasibility test thwarts merchant development, whereas TranSource's approach is Tariff-based, industry-

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[614] *Id.* at 34 (quoting Initial Decision, 162 FERC ¶ 63,007 at P 24 (emphasis added)).

[615] *Id.* at 33-34. TranSource states that the Commission has explained the simultaneous feasibility analysis as awarding ARRs and FTRs "'up to the physical capacity of the system.'" *Id*. at 33 (quoting *PJM*, 117 FERC ¶ 61,220 at P 81 (emphasis added); *see also Chambersburg*, 117 FERC ¶ 61,219 at P 60)).

[616] *Id.* at 34 (arguing that current ARR holders are entitled to their awarded rights, but are not entitled to unawarded rights that exceeded the physical system capacity).

[617] *Id.* at 33. TranSource argues that by starting its analysis of the TranSource Upgrade Request with a market model that was simultaneously infeasible, PJM's approach to the simultaneous feasibility test resulted in an outcome that identified 76 transmission upgrades and reinforcements costing $1.7 billion, while TranSource's approach to the simultaneous feasibility test resulted in the identification of only 10 transmission upgrades at a fraction of the cost. *Id.* at 29-30 (citing Initial Decision, 162 FERC ¶ 63,007 at P 7; Ex. TS-042 at 11-13 (Eng Direct Test.)).

[618] *Id.* at 34 (citing TranSource Reply Brief at 29-33).

[619] *Id.* (citing Ex. TS-101 at 4-6 (Eng Rebuttal Test.)).

consistent, and does not discriminate against merchant developers.[620] TranSource therefore requests that the Commission direct PJM to comply with its Tariff and not include unawarded ARR requests in the market model base case when performing the simultaneous feasibility test.[621]

b. PJM

193. PJM explains that IARR requests, like TranSource's, require that PJM first employ an adapted version of its ARR allocation model so as to identify where incremental grid capability is needed to issue the requested IARRs without degrading other ARRs or FTRs.[622] PJM states that section 7.8 of Schedule 1 of the PJM Operating Agreement requires that PJM "perform a simultaneous feasibility test to identify the upgrades that allow the requested incremental financial rights and all existing financial rights to all enjoy revenue adequacy together."[623] PJM argues that this modeling approach, in which it included requested, but unawarded ARRs, is consistent with the directive in Order No. 681.[624]

3. Brief Opposing Exceptions

a. TranSource

194. TranSource reiterates its argument that PJM's application of the simultaneous feasibility test was not consistent with its Tariff, because PJM's market model is not

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[620] *Id.* at 35 (citing Ex. TS-042 (Eng Direct Test.); Ex. TS-101 (Eng Rebuttal Test.)).

[621] *Id.*

[622] PJM Brief on Exceptions at 2. Only after that first step can PJM employ its customary planning techniques (used for all other New Service Requests) to estimate the particular facilities that would provide that additional capability. *Id*.

[623] *Id.* at 58-59 (citing PJM Operating Agreement, Schedule 1 § 7.8(a) (Elective Upgrade Auction Revenue Rights) ("[A]ny party may elect to fully fund Network Upgrades to obtain [IARRs] pursuant to this section, provided that [IARRs]granted pursuant to this section shall be simultaneously feasible with outstanding [ARRs] . . . .")).

[624] Order No. 681, 116 FERC ¶ 61,077 at P 20 (directing that "long-term firm transmission rights, once allocated remain feasible over their entire term").

simultaneously feasible as required by section 7.8.[625] TranSource states that PJM has admitted that a simultaneously feasible version of the market model does not exist.[626]

195. TranSource also reiterates its argument that PJM's application of the simultaneous feasibility test discriminated against IARR requestors like TranSource in favor of market participants that had requested (but not been awarded) ARRs.[627] TranSource asserts that revenue adequacy is a goal, not a right.[628] TranSource argues that the Tariff requires PJM to "assess the simultaneous feasibility of the requested [IARRs] and the outstanding [ARRs] against the existing base system."[629] However, TranSource asserts that, rather than following that requirement, PJM included *infeasible, already-rejected* ARR requests that could not even be granted if modeled transmission outages were removed, thus "reserving" infeasible transmission rights for ARR requestors and requiring merchants to "build on top of" nonexistent rights.[630] TranSource explains that this is inconsistent with the motivating factor for long-term transmission rights—that competitors identify and fix bottlenecks in the system that are constraining deliverability, causing congestion, and inflating Locational Marginal Prices—and compromises the efficiency of the transmission grid.[631] Further, TranSource argues that PJM's method dramatically increased TranSource's projected upgrade costs.

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[625] TranSource Brief Opposing Exceptions at 4, 9, 13, 17.

[626] *Id.* at 11, 17, 52 (citing Initial Decision, 162 FERC ¶ 63,007 at P 40 (citing Ex. TS-130) (PJM does not have a simultaneously feasible version of the model)).

[627] *Id.* at 50-52 (PJM prioritized "revenue adequacy" over an accurate, Tariff-compliant, and industry-consistent definition of simultaneous feasibility).

[628] *Id.* at 50-51.

[629] *Id.* at 51 (citing Ex. S-007 (PJM, Intra-PJM Tariffs, Operating Agreement, Schedule 1 § 7.8 (Elective Upgrade Auction Revenue Rights))).

[630] *Id.* at 51-52 (citing Ex. TS-084A at 17 (Rousselle Rebuttal Test.); Tr. 713:6-19, 714:10-17 (Horger)) (arguing that this prevented TranSource from "smoothing out the 'lumpiness' of the system" and denies IARR requests the benefit of system capacity that already exists).

[631] *Id.* at 51.

b. PJM and the PJM Transmission Owners

196. PJM and the PJM Transmission Owners argue that the Initial Decision did not find "flaws" with PJM's studies or with its approach to executing the simultaneous feasibility test, contrary to TranSource's assertions in its Brief on Exceptions.[632] PJM and the PJM Transmission Owners explain that the Initial Decision rejected TranSource's request for a finding that PJM incorrectly modeled the TranSource Upgrade Requests.[633] PJM asserts that the evidence presented in the record supports the Initial Decision's conclusions.[634]

197. PJM argues that it properly conducted the simultaneous feasibility test. PJM states that TranSource's core objection to how PJM implemented the market model is that it included ARRs requested by firm transmission customers in the annual ARR allocation that were ultimately not awarded, in violation of the simultaneous feasibility test.[635] PJM states that TranSource's position is unreasonable and unsupported, as the model PJM uses to award ARRs in the annual allocation includes *less transmission capability* than the corresponding model used to evaluate IARRs, for the sole reason that modeled outages in the one-year ARR model are removed in the 30-year IARR model.[636]

198. PJM states that the Commission has held that its "Tariff permits [it] to exercise discretion in its simultaneous feasibility determinations," which includes determinations about modeling available transmission capability.[637] Further, PJM explains that its Tariff expressly permits it to make reasonable assumptions about transmission system

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[632] PJM Transmission Owners Brief Opposing Exceptions at 3 (citing TranSource Brief on Exceptions at 32); PJM Brief Opposing Exceptions at 23 (citing TranSource Brief on Exceptions at 32).

[633] PJM Transmission Owners Brief Opposing Exceptions at 8-9, 19 (citing Initial Decision, 162 FERC ¶ 63,007 at P 80(d)); PJM Brief Opposing Exceptions at 23-24 (citing Initial Decision, 162 FERC ¶ 63,007 at PP 80(d)-80(e)).

[634] PJM Brief Opposing Exceptions at 24.

[635] *Id.* (citing TranSource Brief on Exceptions at 32-33).

[636] *Id.* (citing Ex. PJM-0001A at 31:9-21 (Horger Answering Test.)).

[637] *Id.* at 26 (citing *PPL EnergyPlus, LLC v. PJM Interconnection, L.L.C.*, 136 FERC ¶ 61,060, at PP 19, 41 (2011) (*PPL v. PJM*), *aff'd*, *PPL v. FERC*, 503 Fed. App'x 1).

configuration and availability.[638] Therefore, PJM argues that it is reasonable for PJM to model outages in its annual ARR allocation model, and then restore that capability in its IARR analysis, which is not limited to a year. PJM asserts that TranSource conceded that this transmission assumption is reasonable.[639]

199. PJM argues that because it is reasonable in the IARR analysis to restore transmission capability expected to be out only for the year addressed by the annual ARR allocation (i.e., remove the modeled outages), it is also reasonable to allocate that restored transmission capability to parties that pay for the existing transmission facilities through firm network transmission service charges and who previously requested ARRs in the annual allocation that were denied.[640] PJM explains that this does not mean that ARRs are retroactively awarded, but rather simply recognizes that an IARR is a 30-year right and thus the model must look beyond the one-year ARR allocation. PJM asserts that TranSource conceded that ARR requests that were denied in the annual ARR allocation because of the assumed annual transmission outages can reasonably be added back into the IARR model.[641]

200. PJM argues that TranSource ignores its concessions on brief and takes the position that the transmission assumed out of service in the annual allocation should be restored for the IARR analysis, but the ability of the restored transmission to accommodate

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[638] *Id.* (citing PJM Operating Agreement, Schedule 1 § 7.5(a) (Simultaneous Feasibility) (stating that PJM "shall make the simultaneous feasibility determinations specified herein using appropriate powerflow models of contingency-constrained dispatch. Such determinations shall take into account outages of both individual generation units and transmission facilities and shall be based on reasonable assumptions about the configuration and availability of transmission capability during the period covered by the auction . . . .''); *PPL EnergyPlus, LLC v. PJM Interconnection, L.L.C.*, 134 FERC ¶ 61,263, at P 43 (2011) ("Our interpretation that the Tariff provides for PJM to exercise discretion in modeling is supported by the purpose for which the simultaneous feasibility test is conducted. This analysis is not used to determine the physical capability of the system to flow power at a single point in time, but rather is being used in this case to determine the ARRs to be allocated for the entire yearly Planning Period . . . . Without the use of some reasonable discretion in modeling, PJM would be unable to determine the available ARRs to allocate for an entire year.")).

[639] *Id.* at 27 (citing Ex. TS-101 at 14:4-8 (Eng Rebuttal Test.); Tr. 566:3-17 (Eng)).

[640] *Id.* (citing Ex. PJM-0001A at 31:19-21 (Horger Answering Test.); Ex. S-001A at 18:3-19:8).

[641] *Id.* at 28 (citing Tr. 566:3-17, 568:6-9 (Eng)).

additional ARRs from the parties who paid for that transmission should be ignored.[642] PJM argues that TranSource's position would give TranSource something for nothing, in that TranSource would get 100 percent of the benefit of restoring the transmission, even though the restored transmission facilities already exist and were assumed out for the annual ARR auction only because of scheduled outages. PJM states that such a position is contrary to Order No. 681, which plainly stated that "parties that fund directly assigned upgrades *are not entitled to existing transmission capacity* that is held by others."[643] PJM asserts that its application of the simultaneous feasibility test honors the commitments of those who invested in existing capacity, while granting IARR requestors the incremental benefits for which they pay.[644]

201. PJM asserts that every time TranSource takes issue with the market model "not being simultaneously feasible," it is referencing the issue of adding back unawarded ARRs, which then puts the market model in a starting state that is not simultaneously feasible.[645] However, PJM argues that starting with an infeasible model does not harm the analysis, which is solely focused on "identifying the facilities needed to ensure, at the conclusion of the analysis, the requested IARRs are simultaneously feasible with the ARRs of existing customers that would be accommodated by the system with the transmission restored."[646] PJM explains that TranSource is not harmed by PJM's restoration of the requested ARRs in the market model, because TranSource is only responsible for paying for and constructing the incremental facilities above those already existing that are necessary to accommodate its IARR request.[647] PJM explains that

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[642] *Id.* at 28-29 (citing TranSource Brief on Exceptions at 33).

[643] *Id.* at 25 (citing *PJM*, 117 FERC ¶ 61,220 at P 46 (emphasis added); Order No. 681, 116 FERC ¶ 61,077 at P 215).

[644] *Id.* at 29 (citing *FirstEnergy Solutions Corp. v. PJM Interconnection, L.L.C.*, 140 FERC ¶ 61,019 (2012) (holding that for PJM's Tariff to be just and reasonable the ARRs associated with transmission facilities that were modeled on outages returning to service must be allocated to parties with historic rights over these paths)).

[645] *Id.* at 30 ("TranSource's 'simultaneous feasibility' argument therefore, is merely cover for an attempt by TranSource to get other customers to bear part of the costs of the upgrades that are needed solely to support TranSource's IARR request.").

[646] *Id.* at 29.

[647] *Id.* at 30-31. PJM explains that putting in "too much" of the ARR request does not harm an IARR request, because once those ARR requests reveal the new "choke point," it does not matter how far the ARR request would take the newly identified limiting facility past its market limit. PJM states that once the limiting facility is found,

TranSource's argument about PJM not awarding "unlocked" capacity is incorrect, because capacity from existing transmission facilities that are temporarily out-of-service is not capacity "unlocked" by TranSource—it is simply a matter of PJM adopting reasonable modeling assumptions.[648] PJM states that putting all ARR requests in the model is a reasonable way to find the limiting facilities in the system, because those ARR requests reflect how the firm transmission customers actually want to use the transmission system and recognize that firm transmission customers are entitled to use the existing transmission facilities.[649] PJM explains that because the IARR market model restores transmission capability that is assumed to be out-of-service, the limiting facilities with that transmission will be different than without that transmission; therefore, the ARRs need to be restored so that the model identifies all the limiting facilities.[650] PJM states that the end result of its method is to ensure that the IARR request would be simultaneously feasible with other market participants' ARRs, FTRs, and IARRs, which is explicitly required by the PJM Tariff and honors the requirements prescribed by the Commission when it approved the IARR upgrade request option in section 7.8.[651]

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the only request that matters for determining the extent of a market limit violation is the IARR request. *Id*. at 32-33 (citing Tr. 703:13-25, 705:1-6, 708:5-17, 719:21-720:1 (Horger); Tr. 561:19-22, 568:20-23 (Eng)).

[648] *Id.* at 30.

[649] *Id.* at 30-31.

[650] *Id.* at 30-31 (citing Ex. PJM-0001A at 31:3-21, 33:4-34:12 (Horger Answering Test.); Ex. TS-101 at 14:4-8 (Eng Rebuttal Test.); Tr. 565:14-566:17, 567:14-18 (Eng); Tr. 702:13-25, 706:13-25, 717:4-718:14 (Horger)).

[651] *Id.* at 34 (citing *PJM*, 117 FERC ¶ 61,220 at P 46); PJM Operating Agreement, Schedule 1 § 7.8(a) (Elective Upgrade Auction Revenue Rights) (1.0.0) ("In addition to any [IARRs] established under the PJM Tariff, any party may elect to fully fund Network Upgrades to obtain [IARRs] pursuant to this section, provided that [IARRs] granted pursuant to this section shall be simultaneously feasible with outstanding [ARRs], which shall include stage 1 and stage 2 [ARRs], and against stage 1A Auction Revenue Right capability for the future 10 year period, as determined by the Office of the Interconnection pursuant to Section 7.8(b) of Schedule 1 of this Agreement").

c. Trial Staff

202. Trial Staff argues that the Initial Decision properly found that TranSource failed to show that PJM incorrectly modeled TranSource's Upgrade Requests for IARRs.[652] Trial Staff points out that PJM has performed the same IARR analysis for more than 10 years with respect to 80 IARR requests.[653]

203. Further, Trial Staff argues that PJM properly applied the simultaneous feasibility test to determine the number of upgrades needed for TranSource's Upgrade Requests for IARRs and that TranSource's arguments to the contrary have no merit. Trial Staff asserts that, because ARRs and IARRs are financial rights involving the allocation of congestion revenues and do not affect the physical reliability of the system, the key issue in evaluating IARR requests is whether the upgrades required will "provide sufficient congestion revenues, or revenue adequacy, to satisfy the [ARRs] held by PJM's firm transmission service customers and the IARRs sought by TranSource."[654] Trial Staff argues that it is appropriate for PJM's process to be designed to protect, and not devalue, the ARRs of firm customers.[655]

204. Trial Staff explains that PJM makes two modifications to its market model when evaluating IARRs—it restores the outages reflected in the specific 12-month period for the annual ARRs and restores the ARR requests that were previously prorated and not awarded.[656] Trial Staff explains that it is appropriate to restore the previously prorated ARRs, because it is necessary to identify all limiting facilities in order to determine the

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[652] Trial Staff Brief Opposing Exceptions at 8.

[653] *Id.* at 9.

[654] *Id.* at 2-3, 10-12. Trial Staff explains that the principal purpose of FTRs is to protect firm transmission service customers from congestion costs, and ARRs allocated annually entitle the firm customers to receive an allocation of the revenue from the annual FTR auction. *Id*. at 11 (citing Ex. S-001A at 8:11-21).

[655] *Id.* at 3, 10-11 (noting that section 7.5 of Attachment K to the PJM Tariff provides that there should be sufficient congestion revenues to satisfy all ARR obligations, or, in other words, there must be simultaneous feasibility). Trial Staff points out that because IARRs have 30-year terms, it is especially critical that firm customers' ARRs are not adversely affected by a grant of IARRs. *Id*. at 9.

[656] *Id.* at 12. Trial Staff explains that PJM restores the outages, because IARRs can extend for up to 30-year periods, so PJM evaluates an IARR request as if the outages did not exist. *Id*. (citing Ex. S-001A at 19:6-7).

incremental impact of an IARR request, "'because these facilities have resulted in firm transmission service customers receiving less than their requested amount of ARRs.'"[657] Trial Staff states that a failure to identify all the limiting facilities would create "perceived headroom" on circuits that did not actually exist, and would result in IARR requestors getting a "free ride" to the detriment of firm transmission service customers.[658]

205. Further, Trial Staff asserts that TranSource made "significant modifications to the market model that fundamentally changed its nature" in an effort to make the model simultaneously feasible to test its IARR requests; however, starting with a simultaneously feasible market model prior to evaluating an IARR request is not required.[659] Trial Staff explains that the PJM Tariff provisions that TranSource cites for the requirement that the market model be simultaneously feasible (section 7.8 of Attachment K of the Tariff and section 7.8 of Schedule 1 of the Operating Agreement) simply provide that IARRs shall be simultaneously feasibly with "outstanding" ARRs.[660] Trial Staff explains that TranSource's interpretation of "outstanding" is contradictory, as TranSource claims that "outstanding" cannot include an "entitlement to a right that was never granted," while simultaneously admitting that "outstanding" includes "rights that would have been cleared and awarded under normal conditions, with all facilities in service" that were not in fact awarded.[661] Trial Staff argues that TranSource also contradicts itself with regard to whether it is appropriate for PJM to restore previously prorated ARRs in the model. Trial Staff explains that TranSource's witness admitted at hearing that it is proper to restore some prorated ARRs that were never granted, cleared, or awarded, but on brief

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[657] *Id.* at 12, 15 (citing Ex. PJM-0001A at 33:10-34:8 (Horger Answering Test.)).

[658] *Id.* at 12, 15-16 ("TranSource's approach would allow TranSource to utilize capacity over elements in the system that are still limiting and constraining, even though some other portion of the system is more limiting and thus restricted the flow over portions of the system below their market limit.") (citing Ex. S-001A at 32:22-33:7; Tr. 718:1-14 (Horger)).

[659] *Id.* at 13.

[660] *Id.* (citing Ex. TS-101 at 8:1-8 (Eng Rebuttal Test.); Ex. TS-084A at 18:2-15 (Rousselle Rebuttal Test.)).

[661] *Id.* at 14 (quoting Ex. TS-101 at 8:15-19 (Eng Rebuttal Test.) ("[O]utstanding" can only have meaning in the context of existing cleared and awarded rights (or rights that would have been cleared and awarded under normal conditions, with all facilities in service). One cannot have an entitlement to a share of the FTR auction proceeds for a right that was never granted.")).

TranSource now argues that unawarded ARRs should not be included in the IARR analysis.[662]

206. Finally, Trial Staff asserts that TranSource's approach to simultaneous feasibility would result in significant revenue inadequacy, noting that PJM calculated that, for just one of TranSource's three queue positions, PJM's firm customers would suffer revenue inadequacy of approximately $39-$43 million over just a three-year period.[663] Trial Staff argues that TranSource has not supported its claim that its proposed number of upgrades would produce revenue adequacy, noting that TranSource's witness Eng admitted that he did not have sufficient time to develop an example of revenue adequacy.[664] Trial Staff argues that if TranSource is not held responsible for the costs associated with its IARR requests, PJM's firm customers would be unfairly burdened with these costs and its markets would be undermined. Further, if PJM ignored the Tariff goal of revenue adequacy, it would be in violation of section 7.8 of Attachment K of its Tariff.[665]

4. Commission Determination

207. Contrary to TranSource's assertions,[666] the Presiding Judge did not find that PJM's approach to executing the simultaneous feasibility test was severely flawed. Rather, the Presiding Judge found generally that TranSource failed to meet its burden by a preponderance of the evidence to show that PJM incorrectly modeled TranSource's Upgrade Requests.[667] We affirm the Presiding Judge's finding that TranSource has failed to meet its burden to prove that PJM's models, or means of implementing those models, were flawed. Specifically, with regard to PJM's implementation of the simultaneous feasibility test, we find that TranSource failed to meet its burden to show that PJM's current method of implementing the simultaneous feasibility test is unjust and unreasonable.

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[662] *Id.* at 14-15 (citing Tr. 574:11-15 (Eng); Ex. TS-101 at 14:4-8 (Eng Rebuttal Test.); TranSource Brief on Exceptions at 33).

[663] *Id.* at 3, 16-18 (noting that the revenue inadequacy would likely be substantially greater if all three queue positions were considered over their 30-year term).

[664] *Id.* at 17 (citing Ex. TS-101 at 30:5 (Eng Rebuttal Test.)).

[665] *Id.* (citing *PJM,* 117 FERC ¶ 61,220 at P 46).

[666] TranSource Brief on Exceptions at 32.

[667] Initial Decision, 162 FERC ¶ 63,007 at P 80(d).

208. In Order No. 681, the Commission required that transmission organizations that are public utilities with organized electricity markets (such as PJM) make available long-term firm transmission rights that satisfy certain guidelines.[668] Guideline 3 of Order No. 681 required that "long-term firm transmission rights made feasible by transmission upgrades or expansions must be available upon request to the party that pays for such upgrades or expansions."[669] The Commission further clarified that parties that fund such upgrades/expansions are only entitled to obtain *incremental* transmission rights and "are *not entitled to obtain transmission rights to existing transmission capacity held by others*."[670] This led to PJM's creation of IARRs, which are granted to parties that fund certain transmission upgrades or expansions. In the orders on PJM's compliance with Order No. 681, the Commission made clear that "incremental rights awarded by directly funded upgrades must be feasible," i.e., financially supported by congestion revenues, so as not to create inequities among market participants.[671] Further, the Commission explained the purpose of Guideline 3 is to "ensure that entities that fund transmission upgrades that *expand* the transmission capacity receive rights commensurate with this *expanded* capacity" and that the incremental capacity would be "determined through the feasibility test."[672]

209. To determine what upgrades an IARR requestor has to complete to support the IARRs it requested, PJM uses its market model, which is an economic model that identifies limiting elements on the grid that would likely require upgrades. Following Order No. 681, PJM conducts its market model analysis in accordance with section 7.8 of its Tariff and Operating Agreement, which requires PJM "to assess the simultaneous feasibility of the requested IARRs with outstanding ARRs."[673] Section 7.5 of the Tariff and Operating Agreement explain that the goal of the simultaneous feasibility test is to

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[668] Order No. 681, 116 FERC ¶ 61,077 at P 1.

[669] *Id.* P 185.

[670] *Id.* P 215 (emphasis added).

[671] *PJM*, 117 FERC ¶ 61,220 at P 46.

[672] *PJM Interconnection*, *L.L.C.*, 119 FERC ¶ 61,144 at PP 19-20 (emphasis added).

[673] PJM Tariff, Attachment K, Appendix § 7.8(b) (Elective Upgrade Auction Revenue Rights) (1.0.0) ("The Office of the Interconnection shall assess the simultaneous feasibility of the requested [IARRS] and the outstanding [ARRs] . . . ."); PJM Operating Agreement, Schedule 1 § 7.8(b) (Elective Upgrade Auction Revenue Rights) (1.0.0) (identical language).

ensure that there are sufficient revenues from congestion charges to satisfy all FTR and ARR obligations under expected conditions.[674]

210. The disagreement among the parties regarding application of the simultaneous feasibility test boils down to whether PJM may include unawarded/prorated ARRs in the market model base case that it uses as the starting point for modeling an IARR request. As PJM witness Mr. Horger explained, firm transmission service customers can request ARRs in two stages.[675] In the first stage, firm transmission service customers can request ARRs based on generation resources that historically served load in each transmission zone. In Stage 1A, firm transmission customers are guaranteed an allocation of ARRs equal to their Zonal Base Load (the lowest daily zonal peak load for a defined 12-month period), and thus even infeasible ARRs will be granted.[676] In Stage 1B, firm transmission service customers can ask for ARRs up to the level of their Network Service Peak Load, less what was already allocated in Stage 1A.[677] In the final stage, Stage 2, firm transmission service customers can adjust their hedging paths through a three-round request process, with the limitation that a participant's total ARR amount to a transmission zone or load aggregation zone cannot exceed the participant's total network load in that zone or aggregation zone.[678] Stage 1B and Stage 2 ARRs are not guaranteed and therefore, in accordance with the simultaneous feasibility test, PJM will prorate the amount of ARRs awarded, as explained in the June 2017 Whitepaper:

> ARRs are prorated in Stage 1B and each round of Stage 2 of the Annual ARR Allocation based on the requested ARR paths and the impact on each constraint. Proration results in ARR requests not being fully awarded. For example, if there is a single line overloaded because of the requested ARRs then PJM will prorate the requested ARRs that have an impact on

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[674] PJM Tariff, Attachment K, Appendix § 7.5 (Simultaneous Feasibility) (2.0.0); PJM Operating Agreement, Schedule 1 § 7.5 (Simultaneous Feasibility) (2.0.0). Initial Decision, 162 FERC ¶ 63,007 at P 41.

[675] Ex. PJM-0001A at 19-20 (Horger Answering Test.).

[676] Ex. PJM-0033 at 9 (June 2017 Whitepaper). PJM develops transmission system upgrades through its RTEP process to maintain the feasibility of Stage 1A ARRs. *See* Ex. PJM-0001A at 23:12-16 (Horger Answering Test.); *see also* PJM Interconnection, L.L.C., *Manual 6: Financial Transmission Rights at 22* (eff. Dec. 6, 2018), https://www.pjm.com/-/media/documents/manuals/m06.ashx.

[677] Ex. PJM-0001A at 20 (Horger Answering Test.).

[678] *Id.*

> the this [sic] line until the flow is reduced at or below the limit of the facility. Within the Base Market Model, the capability of some facilities may be reduced to less than the line rating, identified as the market limit, to account for operational impacts. Such operational impacts in the Base Market Model could be a result of transmission or generator outages, switching, voltage surrogates, PAR impacts, and any other proxy type rating used to operate the system in a reliable and efficient manner. . . . In many instances, multiple facilities in the same electrical vicinity are overloaded because of the requested Annual ARRs. In these situations, PJM must select one of these overloaded facilities to use for prorating the requested Annual ARRs. The selection will be based on the degree of violation of the overloaded facilities because of the requested Annual ARRs. The impact of prorating Annual ARR requests for one facility may be a reduction of flow in the other overloaded facilities in that same electrical vicinity. The result may be that although multiple facilities were overloaded, only one facility was required to be prorated. The entire set of overloaded facilities is actually limiting in the allocation, and will be reported, although only one facility may have been prorated.[679]

211. To allocate IARRs based on upgrades to the transmission system, PJM modifies its annual ARR model by removing the modeled transmission outages.[680] PJM explains that it removes these modeled outages and restores the related transmission capability because the IARR analysis is not limited to a one year period like the ARR analysis, where it makes more sense to consider temporary outages.[681] We find that this modification to the model is consistent with the Commission's prior determination that PJM is allowed discretion in how it models transmission capability when making

[679] Ex. PJM-0033 at 12-13 (June 2017 Whitepaper).

[680] *Id.* at 11 (June 2017 Whitepaper). The market model also accounts for other operational considerations, such as loop flows. Ex. PJM-0033 at 9-10 (June 2017 Whitepaper). We find it reasonable for PJM to account for such operational considerations in its models.

[681] Ex. PJM-0001A at 31 (Horger Answering Test.).

simultaneous feasibility determinations.[682] Further, TranSource has agreed that this modification was appropriate.[683]

212. Then, once PJM has removed the modeled outages, PJM adds back in the ARRs that were previously unawarded/prorated, because the system model now includes more transmission capability as a result of the removal of the transmission outages.[684] We find that the modification to the model to add back unawarded/prorated ARRs is reasonable, given that the system model includes additional capacity once the modeled outages are removed; further, TranSource also has agreed on the record that adding back ARR requests that were previously unawarded/prorated because of assumed transmission outages was reasonable.[685]

213. Therefore, all TranSource takes issue with is that PJM adds back in all unawarded/prorated ARRs, including ARRs that were unawarded/prorated for reasons outside of modeled outages. First, TranSource has failed to show, as the Presiding Judge found, that any restoration of unawarded/prorated ARRs was an improper methodology or materially affected the analysis of TranSource's Upgrade Request. Second, we find that PJM's inclusion of unawarded/prorated ARRs in its simultaneous feasibility test does not violate the Tariff and is not unjust and unreasonable.

214. TranSource argues that when the Tariff says that IARRs must be simultaneously feasible with "outstanding" ARRs, outstanding must be interpreted as referring to only awarded ARRs, and not unawarded/prorated ARRs.[686] But PJM's Tariff does not define the term outstanding, and we find PJM's interpretation of "outstanding" to include unawarded/prorated ARRs reasonable. "Outstanding" is typically used to refer to something existing that is *unresolved* or still *owed*, which could encompass unawarded/prorated ARRs.[687] However, as Trial Staff points out, TranSource contradicts

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[682] *PPL v. PJM*, 136 FERC ¶ 61,060 at PP 19, 41.

[683] Ex. TS-101 at 14:4-8 (Eng Rebuttal Test.); Tr. 566:3-17 (Eng).

[684] Ex. S-001A at 19:6-7. The prorated ARRs that are restored can never be in excess of Network Service Peak Load Values. Ex. PJM-0033 at 26 (June 2017 Whitepaper).

[685] Tr. 568:6-9 (Eng).

[686] Ex. TS-101 at 8:12-9:8 (Eng Rebuttal Test.).

[687] *See* Merriam-Webster, Definition of "Outstanding," https://www.merriam-webster.com/dictionary/outstanding.

its own definition of "outstanding" by admitting that ARRs that were prorated due to modeled outages *should* be added back into the model—it does not explain why it believes this does not violate the Tariff's "outstanding" language, but modeling other prorated ARRs does.[688] Further, TranSource presents no evidence as to the magnitude of ARRs that are unawarded/prorated for reasons outside of modeled outages and thus presents no evidence that adding back in these unawarded/prorated ARRs has a material impact on the outcomes of System Impact Studies. In fact, the June 2017 Whitepaper indicates that prorations in the ARR model are "typically due to modeled outages," which indicates that there may in fact be *no* ARRs added back into the IARR model unrelated to the modeled outages.[689]

215. We also do not find sufficient record evidence that PJM's Tariff provisions regarding application of the simultaneous feasibility test are unjust and unreasonable. TranSource fails to explain why a merchant developer should be awarded IARRs for "unlocking" transmission capability already available on the system, most of which is "locked" simply because of modeled transmission outages, when firm transmission customers with unawarded/prorated ARRs have paid for that transmission capability and are entitled to the associated rights.[690] As the Commission stated in Order No. 681, incremental transmission rights are awarded for "expanding" capacity and incremental rights requestors are not entitled to obtain rights for "*existing transmission capacity held by others*."[691] We find that PJM's current methodology reasonably honors the prior investments of the firm transmission customers who built the existing system, while granting IARRs to requestors in amounts equal to their incremental investments. Further, PJM has made clear that an IARR requester is responsible only for upgrades to facilities where the IARR request creates a new market limit violation or adds to an existing market limit violation, and in each instance the IARR requester need not make infeasible

[688] Trial Staff Brief Opposing Exceptions at 13 (citing Ex. TS-101 at 8:1-8 (Eng Rebuttal Test.); Ex. TS-084A at 18:2-15 (Rousselle Rebuttal Test.)).

[689] Ex. PJM-0033 at 12 (June 2017 Whitepaper).

[690] TranSource Brief on Exceptions at 34 (arguing that it is unjust to reserve unusable capacity on the current system for earlier customers whose ARR requests were denied).

[691] Order No. 681, 116 FERC ¶ 61,077 at P 215 (emphasis added); *PJM Interconnection*, *L.L.C.*, 119 FERC ¶ 61,144 at PP 19-20 (emphasis added).

ARRs feasible, but rather is only responsible for upgrades equal to its incremental impact on those limited facilities.[692]

216. Finally, we find PJM's evidence compelling that TranSource's proposed method of implementing the simultaneous feasibility test would lead to significant revenue inadequacy.[693] PJM's Tariff states that the goal of the simultaneous feasibility test is revenue adequacy.[694] TranSource, as a merchant developer requesting IARRs pursuant to Attachment EE of the PJM Tariff, should not be permitted to utilize transmission capacity that diminishes the financial rights of other parties with existing rights in PJM.[695]

217. For these reasons, we find that TranSource has not met its burden to show by a preponderance of the evidence that PJM incorrectly modeled TranSource's Upgrade Requests.

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[692] PJM Brief Opposing Exceptions at 30-31; Ex. PJM-0033 at 17 (June 2017 Whitepaper) ("The upgrade does not need to remove any pre-existing violations or infeasibilities . . . which may have occurred from annual ARR requests."); Ex. PJM-0001A at 9, 34-35 (Horger Answering Test.) ("TranSource is *not* responsible to the extent of any pre-existing market limit violations in the ARR allocation base case, which are caused by the ARR request of other customers. When a market limit is already violated, TranSource is only responsible for the upgrade needed to resolve the MW impact of its requested IARRs.").

[693] Ex. TS-101 at 30 (Eng Rebuttal Test.) ("There was not sufficient time to develop an example of revenue adequacy for this rebuttal testimony.").

[694] PJM Tariff, Attachment K, Appendix § 7.5 (Simultaneous Feasibility) (2.0.0); PJM Operating Agreement, Schedule 1 § 7.5(a) (Simultaneous Feasibility) (2.0.0); *see also PJM*, 117 FERC ¶ 61,220 at P 46 ("incremental rights awarded by directly funded upgrades must be feasible"); *PJM Interconnection, L.L.C*, 156 FERC ¶ 61,180, at P 21 n.16 (2016) (noting that the simultaneous feasibility test models planned system conditions, which may differ from actual system capability at the time when congestion charges are incurred).

[695] *See PJM,* 117 FERC ¶ 61,220 at P 45 (summarizing PJM's arguments regarding the use of the simultaneous feasibility test for IARRs) and 46 (finding that PJM's proposal complies with the Commission's guidance in Order No. 681, which noted that "parties that fund directly assigned upgrades are not entitled to rights to existing transmission capacity that is held by others).

I. Undue Discrimination

1. Initial Decision

218. The Presiding Judge found that, pursuant to section 206 of the FPA, TranSource met its burden to show by a preponderance of the evidence that the System Impact Study phase of the Attachment EE process was unduly discriminatory as it was applied in this case and, therefore, unjust and unreasonable.[696] The Presiding Judge made this finding based on a "disparate impact" discrimination analysis. Analogizing to Congress' creation of classes under the civil rights statutes, the Presiding Judge found that, through Attachment EE, the Commission has "created a class" of merchant developers and established "benefits for the class."[697] The Presiding Judge stated that TranSource is a member of that merchant class created under the Attachment EE process.[698] The Presiding Judge then found that PJM's failure "to provide appropriate transparency deprive[d] the class member [TranSource] of a fair attempt to achieve the benefits that the Commission offers."[699] As evidence of this disparate impact class discrimination, the Presiding Judge cited to the fact that, since 2007, when the IARR program began, only one project (combining five queue positions) has been awarded IARRs pursuant to Attachment EE, of a total forty-one Attachment EE queue positions.[700] The Presiding Judge stated that the impact of the discrimination negates Commission policy for an open and competitive grid.[701]

219. The Presiding Judge rejected PJM's and the PJM Transmission Owners' argument that to show undue discrimination pursuant to the FPA, a party must show that two "similarly situated" customers were treated differently.[702] Rather, the Presiding Judge found that TranSource "makes the better argument in light of class discrimination," as showing that similarly situated merchants were treated the same does not negate

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[696] Initial Decision, 162 FERC ¶ 63,007 at PP 1, 67, 71, 73.

[697] *Id.* P 70.

[698] *Id.*

[699] *Id.*

[700] *Id.* P 67 (citing Ex. S-038 at 7:13-20, 8:1-7 (Norman Direct and Answering Test.)).

[701] *Id.* P 71.

[702] *Id.* PP 68-71.

discrimination by disparate impact.[703] The Presiding Judge explained that section 206 of the FPA contains a disjunctive—"discriminatory *or* preferential"—which indicates that each word is an alternative, and thus looking at "discriminatory" as a singular violation, not requiring a showing of preferential treatment, is a reasonable statutory interpretation.[704] The Presiding Judge stated that, under the System Impact Study phase as currently applied, all members of the Attachment EE merchant class "would be deprived of their fair opportunity to obtain the benefits that the Commission affords them."[705] The Presiding Judge found that PJM's intent to treat everyone the same has "no legal moment," as the discrimination is the impact, whether intended or not.[706]

2. Briefs on Exceptions

a. PJM

220. PJM asserts that the Initial Decision erred by holding that PJM's practices for assessing IARR requests under the System Impact Study phase of Attachment EE of the PJM Tariff are discriminatory, in violation of FPA section 206.[707] First, PJM argues that the Initial Decision employs a standard for undue discrimination under the FPA that "departs from the long-standing court and Commission definition of undue discrimination."[708] PJM argues that, under the Initial Decision's approach, Commission acceptance of a tariff service that establishes a "class" consisting of any party that uses or might use that service, endows that class with "benefits" related to expectations of commercial profit from such service, and then treats utility administration of the service that is deemed to "deny" those benefits as unlawful.[709] PJM notes that the Initial

[703] *Id.* PP 70-71.

[704] *Id.* P 72.

[705] *Id.* P 71.

[706] *Id.*

[707] PJM Brief on Exceptions at 12.

[708] *Id.* at 13, 41.

[709] *Id.* at 13.

Decision cites no precedent for this approach.[710] Further, PJM argues that this approach introduces a new source of risk and uncertainty to the administration of tariff services, in particular for RTOs that develop and implement complex services, because even if a utility follows its tariff, its manner of implementing a service could still be considered unlawful.[711]

221. PJM states that, pursuant to FPA section 206, discrimination is only unlawful if it is "undue."[712] Further, PJM states that undue discrimination can "occur *only* when two similarly situated customers are treated differently, and there is no justification for the differing treatment."[713] PJM states that the Commission has held "'that a finding of undue discrimination requires a showing that (1) two classes of customers are treated differently; and (2) the two classes of customers are similarly situated.'"[714] Thus, to show undue discrimination, PJM states that the complainant must "'demonstrate that the two classes of customers are similarly situated for purposes of the [provision at issue].'"[715] PJM argues that the Initial Decision explicitly sidesteps this analysis, recognizing that TranSource has not argued that some other entity was given preferential treatment over it, and the record lacks testimony as to any impact on other class

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[710] *Id.* at 41, 43 ("Notably absent from the Initial Decision is any citation to the FPA, court cases, Commission precedents, or Commission regulations supporting this [class discrimination] theory.").

[711] *Id.* at 13.

[712] *Id.* at 42 (citing 16 U.S.C. § 824e (2012)).

[713] *Id.* (quoting *PacifiCorp Elec. Operations*, 54 FERC ¶ 61,296, at 61,855 (1991) (emphasis added) (*PacifiCorp Electric*); *Market-Based Rates for Wholesale Sales of Electric Energy, Capacity and Ancillary Services by Public Utilities*, Order No. 697, 119 FERC ¶ 61,295, at P 963 (2007) ("The standard for judging undue discrimination or preference remains what it has always been: disparate rates or service for similarly situated customers.")).

[714] *Id.* at 42 (quoting Opinion No. 537, 151 FERC ¶ 61,173 at P 43 (quoting *Energy Transfer Partners, L.P.*, 120 FERC ¶ 61,086, at P 169 (2007) (*Energy Transfer*)).

[715] *Id.* (quoting *"Complex" Consol. Edison Co. v. FERC*, 165 F.3d 992, 1012 (D.C. Cir 1999) (*Complex*); *see DC Energy, LLC v. PJM Interconnection, L.L.C.*, 144 FERC ¶ 61,024, at P 89 (2013) (*DC Energy*) (denying complaint because "Complainants fail to provide details of these other market participants' transactions that show that they are similarly situated and therefore have been unduly discriminated against")).

participants.[716] Therefore, according to PJM, the Initial Decision has itself demonstrated TranSource's failure to prove undue discrimination under the Commission's well-established standard.[717] PJM states that the new, unsupported approach to undue discrimination taken by the Initial Decision dispenses with the key finding underlying a proper claim for undue discrimination—disparate treatment of two similarly situated entities—and instead assumes the existence of a class, without proof that such a class exists, evidence of how other class members were treated, or evidence that "class discrimination" occurred.[718]

222. PJM also notes that the Commission has never stated that Attachment EE created a class of customers or described any benefits for that class.[719] PJM states that the Initial Decision never identifies the benefits it claims were intended through Attachment EE, nor does it explain how the alleged "non-transparent practices" precluded TranSource from obtaining those benefits.[720] Further, PJM states that the Initial Decision itself demonstrates that TranSource was denied no cognizable benefits, because TranSource failed to meet its burden to show any flaw in the accuracy of the System Impact Studies.[721] PJM states that the only plausible "benefit" intended by the Commission when it approved the Attachment EE IARR process is the award of IARRs made possible by the incremental transmission facilities funded by the requestor; however, there is no guarantee that the IARRs justified by a particular set of upgrades will yield revenues in excess of the costs of those upgrades and the decision whether to proceed with a project is an economic calculus that properly rests solely with the market participant requestor.[722]

223. Finally, PJM argues that the Initial Decision's reliance on the fact that IARR

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[716] *Id.* at 42-43 (citing Initial Decision, 162 FERC ¶ 63,007 at PP 70, 72).

[717] *Id.*

[718] *Id.* at 43-44 (noting that the Initial Decision's repeated statements that the core issue is PJM's transparency toward a single party—TranSource—conflict with the notion that "class discrimination" occurred).

[719] *Id.* at 41, 44-45.

[720] *Id.* at 41. Further, PJM argues that the finding that PJM's practices were non-transparent, on which the undue discrimination finding is grounded, was also errant. *Id.*

[721] *Id.* at 45.

[722] *Id.* at 46-47.

requests have rarely resulted in the construction of facilities and awarded IARRs ignores the fact that requestors' decisions to move forward are entirely voluntary; the choice to not move forward most likely stems from requestors' private assessments of whether expected IARR revenues will exceed the upgrade costs.[723] PJM notes that the Initial Decision misperceives the PJM queue as results-oriented, rather than process-oriented.[724] Further, PJM notes that the Initial Decision misstates the facts on the rate of Attachment EE project completion. The Initial Decision states that since 2007, only one Attachment EE request has resulted in facility construction and an award of IARRs; however, accordingly to PJM, the exhibit cited by the Initial Decision in fact shows that out of 41 Attachment EE requests, 5 progressed to project completion. PJM states that this demonstrates a completion rate of 12 percent (5/41), which is not an unusual completion rate for interconnection projects.[725]

b. PJM Transmission Owners

224. The PJM Transmission Owners assert that the Initial Decision erred in finding that TranSource was subject to undue discrimination and that PJM's practices were therefore unjust and unreasonable in violation of the FPA, as this conclusion is unsupported and contrary to Commission precedent and the record evidence.[726]

225. The PJM Transmission Owners state that Commission precedent unambiguously states that for purposes of section 206 of the FPA, "undue discrimination" occurs only where "(1) entities are similarly situated; (2) these entities are treated differently; and (3) there is no justification for such differential treatment."[727] The PJM Transmission

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[723] *Id.* at 41, 47-48.

[724] PJM argues that the queue exists to provide a non-discriminatory vehicle for market-participants to receive a reasonable, good-faith, and progressively more refined estimate of the costs to upgrade or interconnect with the grid, and that decisions on whether to submit requests, drop out of the queue, or proceed with projects encompass many factors and ultimately are made based on the independent commercial judgments of the market participant. *Id.* at 48.

[725] *Id.* at 47-48.

[726] PJM Transmission Owners Brief on Exceptions at 2, 7-8, 19.

[727] *Id.* at 9, 15 ("Where two entities are not shown to be similarly situated, there can be no undue discrimination.") (citing *Transmission Agency of N. Cal. v. FERC*, 628 F.3d 538, 549 (D.C. Cir. 2010) (*Transmission Agency*); *Advanced Energy Mgmt. Alliance. v. FERC*, 860 F.3d 656, 670-71 (D.C. Cir. 2017) (*Advanced Energy*); *PacifiCorp Electric,* 54 FERC at 61,855 ("undue discrimination can occur only when two

Owners assert that the Initial Decision's finding of undue discrimination based on a disparate impact test disregards the Commission's established legal standard, is unprecedented at the Commission, and has been expressly rejected by the courts.[728] Specifically, the PJM Transmission Owners state that in *Advanced Energy*,[729] the DC Circuit recently rejected claims of undue discrimination under the FPA that were premised on disparate impact, holding that undue discrimination cannot be found under section 206 of the FPA based on disparate impact and reiterating that undue discrimination requires a finding that entities are similarly situated.[730] Also, the PJM Transmission Owners state that in *Connecticut Office*,[731] the Second Circuit held that a disparate impact discrimination analysis (a tool used under Title VII of the Civil Rights Act of 1964), is misplaced in the regulated utility context.[732] The PJM Transmission Owners note that the Attachment EE context is dissimilar to civil rights and the risks posed by non-detection of the discrimination are distinctly different.[733]

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similarly situated customers are treated differently, and there is no justification for the differing treatment") (citing 16 U.S.C. §824d(b) (1988)); *Cities of Newark v. FERC*, 763 F.2d 533, 546 (3d Cir. 1985) (*Cities of Newark*); *St. Michaels Utils. Comm'n v. FPC*, 377 F.2d 912, 915 (4th Cir. 1967) (*St. Michaels*); Opinion No. 537, 151 FERC ¶ 61,173 at P 43, n.105 (quoting *Energy Transfer*, 120 FERC ¶ 61,086 at P 169), *rev'd on other grounds*, 157 FERC ¶ 61,026 (2016); *Puget Sound Energy, Inc. v. All Jurisd. Sellers*, 153 FERC ¶ 61,386, at P 47 (2015) (affirming Initial Decision and finding that there is no merit to a claim of undue discrimination under section 206 of the FPA where the complainant was not similarly situated with another customer, and thus no undue discrimination could exist); *Midwest Indep. Transmission Sys. Operator, Inc.*, 155 FERC ¶ 61,082, at P 31 (2016) ("there is no undue discrimination or preference because we have identified appropriate reasons for it")).

[728] *Id.* at 9, 15-16.

[729] *Advanced Energy*, 860 F.3d at 670-71.

[730] PJM Transmission Owners Brief on Exceptions at 16-17 (citing *Advanced Energy*, 860 F.3d at 670-71).

[731] *Conn. Office of Consumer Counsel v. FCC.*, 915 F.2d 75, 80 (2d Cir. 1990) (*Connecticut Office*).

[732] PJM Transmission Owners Briefs on Exceptions at 17-18 (citing *Connecticut Office*, 915 F.2d at 80).

[733] *Id.* at 18 (citing Initial Decision, 162 FERC ¶ 63,007 at PP 38, 72).

226. The PJM Transmission Owners argue that the Initial Decision presented no coherent or cognizable theory of undue discrimination – it found no discrimination within the identified merchant class, or between that class and any other.[734] Further, the PJM Transmission Owners state that the fact that few requests for IARRs have resulted in transmission upgrade projects is not wrongful, surprising, or a meaningful metric for whether undue discrimination exists, given that queue positions are relatively risky investments facing multiple significant uncertainties, and that, pursuant to Attachment EE, a developer must find a "sweet spot" where the upgrade will reduce congestion, but enough congestion will remain such that the resulting award of financial rights (IARRs) will result in profits for the developer.[735]

c. Trial Staff

227. Trial Staff asserts that the Initial Decision incorrectly found that PJM's practices in evaluating TranSource's Upgrade Requests were unduly discriminatory, as it departs from Commission precedent governing unduly discriminatory conduct, and is incorrect as a matter of law and fact.[736]

228. Trial Staff asserts that Commission precedent dictates that a finding of treating similarly situated entities differently is a prerequisite to a determination of unduly discriminatory conduct.[737] Trial Staff asserts that the Initial Decision fails to satisfy this legal standard in several ways.[738] Trial Staff asserts that the record does not demonstrate

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[734] *Id.*

[735] *Id.* at 19 (citing Tr. 779:3-780:3, 814:9-815:15 (Egan); Ex. PJM-0001A at 46:1-6 (Horger Answering Test.); Ex. S-038 at 9:1-9 (Norman Direct and Answering Test.)).

[736] Trial Staff Brief on Exceptions at 2-3, 4, 8, 19-20.

[737] *Id.* at 3, 8, 20-21 (citing *PacifiCorp Electric*, 54 FERC at 61,855; *Cities of Newark*, 763 F.2d at 546; *see also* Opinion No. 537, 151 FERC ¶ 61,173 at P 43 ("Moreover, we agree with the Presiding Judge's conclusion on this issue. It is well established that a finding of undue discrimination requires a showing that '(1) two classes of customers are treated differently; and (2) the two classes of customers are similarly situated.'"); *City of Anaheim*, Opinion No. 483, 113 FERC ¶ 61,091, at P 130 (2005) ("Discrimination is undue when there is a difference in rates or services among similarly situated customers that is not justified by some legitimate factor."); *Transmission Access Policy Study Grp. v. FERC*, 225 F.3d 667, 721-22 (D.C. Cir. 2000); *St. Michael*, 377 F.2d at 914 ("Discrimination in rates is prohibited by § 205(b) of the Federal Power Act.")).

[738] *Id.* at 21.

that TranSource and other members of the Attachment EE merchant transmission developer class are similarly situated, nor that PJM processed or evaluated TranSource's request in a manner different from that of other merchant transmission developers' applications.[739] Indeed, Trial Staff argues that the record shows that TranSource's Upgrade Requests were treated in a similar manner to those of other non-incumbent merchant transmission developers.[740] Trial Staff asserts that the Commission should reaffirm its long-standing undue discrimination legal standard and dismiss the Initial Decision's undue discrimination finding based on class discrimination.[741]

229. Further, Trial Staff argues that IARR applicants are not entitled to any benefits, but rather are only entitled to a fair, nondiscriminatory review of their IARR proposals.[742] Trial Staff notes that Attachment EE only provides an opportunity to secure benefits, but the economics of the upgrade proposal must work for the project to proceed and any benefits to be secured.[743] Finally, Trial Staff argues that PJM's practices did not lack transparency, and therefore the foundation for the Initial Decision's finding of undue discrimination is absent.[744]

3. Briefs Opposing Exceptions

a. TranSource

230. TranSource asserts that the Initial Decision rightly found that undue discrimination may occur against entire classes or groups of entities and that PJM and the PJM Transmission Owners unduly discriminated against TranSource in the IARR study process.[745] TranSource states that Commission Order Nos. 888, 890, 2000, and 2003

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[739] *Id.* at 3, 21-23.

[740] *Id.* at 8, 21.

[741] *Id.* at 8.

[742] *Id.* at 3, 8, 21-22 ("Rather, the opportunity to secure IARRs is dependent upon the economics of proposed upgrades and the ability to fund the upgrades that PJM's IARR evaluation process determines are necessary.").

[743] *Id.* at 22.

[744] *Id.* at 19-20.

[745] TranSource Brief Opposing Exceptions at 3, 6, 38-39 (arguing that its opponents err by assuming undue discrimination can only occur on the individual level between two members of the same class, which is contrary to Commission and D.C.

explicitly recognized the potential for undue discrimination against and across classes and sought to remedy undue discrimination exercised by incumbent public utilities against merchant transmission developers, such as TranSource.[746] TranSource states that in Order No. 888, the Commission described a broadened undue discrimination analysis and acknowledged that undue discrimination may take the form of an incumbent transmission utility discriminating against third-party customers.[747] Then, TranSource asserts that, in Order Nos. 2000 and 2003, the Commission initiated sweeping reforms to remedy unduly discriminatory behavior against transmission customers as a class and generators as a class.[748] Finally, in Order No. 890, TranSource states that the Commission sought to further curtail the potential of entrenched utilities acting in a self-preferential manner, by proposing reforms to address "'the opportunities and incentives that transmission providers have to unduly discriminate.'"[749] TranSource argues that the common thread of all these landmark Commission orders is action to remedy undue discrimination against classes of market participants, which the PJM Transmission Owners and Trial Staff ignore.[750]

231. Further, in Order No. 1000, TranSource states that the Commission directly confronted the danger of undue discrimination by incumbent transmission owners against merchant transmission developers within regional transmission planning processes, specifically rejecting arguments that nonincumbent transmission developers are not

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Circuit precedent, and the plain text of Order No. 1000) (citing *Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities*, Order No. 1000, 136 FERC ¶ 61,051 (2011), *order on reh'g*, Order No. 1000-A, 139 FERC ¶ 61,132, *order on reh'g and clarification*, Order No. 1000-B, 141 FERC ¶ 61,044 (2012), *aff'd sub nom. S.C. Pub. Serv. Auth. v. FERC*, 762 F.3d 41 (D.C. Cir. 2014) (*SCPSA*)).

[746] *Id.* at 3, 39, 41-47.

[747] *Id.* at 42 (citing *Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities*, Order No. 888, FERC Stats. & Regs. ¶ 31,036, at PP 4, 35-37 (1996) (cross-referenced at 75 FERC ¶ 61,080).

[748] *Id.* at 43-44 (citing *Regional Transmission Organizations*, Order No. 2000, FERC Stats. and Regs. ¶ 31,089, at P 2 (1999); (cross-referenced at 89 FERC ¶ 61,285) Order No. 2003, 104 FERC ¶ 61,103 at PP 3-4, 7, 11, 696).

[749] *Id.* at 44 (quoting Order No. 890, 118 FERC ¶ 61,119 at P 26).

[750] *Id.* at 44-45.

"similarly situated" with incumbent transmission owners.[751] TranSource argues that in *SCPSA*,[752] the D.C. Circuit took a "high view of the Commission's mandate from Section 206 of the [FPA], describing the delegation of the authority as broad to remedy 'any practice that affects' an interstate transmission rate 'demanded or charged by any public utility if such practice is unjust, unreasonable, unduly discriminatory or preferential,'" and noted that use of the word "any" amplifies the breadth of the delegation to the Commission.[753] TranSource argues that the PJM Transmission Owners and Trial Staff construe undue discrimination so narrowly, that if their view was adopted, the Commission would never find undue discrimination where an incumbent transmission owner or another market participant was favored over a merchant transmission developer.[754]

232. TranSource asserts that the record is "replete with examples" demonstrating that PJM and the PJM Transmission Owners unduly discriminated against TranSource in favor of incumbent PJM Transmission Owners, other market participants, and entrenched interests.[755] TranSource argues that it was treated differently than incumbent PJM Transmission Owners, who were privy to significant amounts of information to which TranSource had no access, and which the PJM Transmission Owners sought to hide and protect, including ratings data, ratings methodologies, and the conditions of the facilities.[756] Also, TranSource argues that PJM failed to exercise reasonable diligence in reviewing the PJM Transmission Owners' cost estimates and facility ratings (in part because the PJM Transmission Owners can abuse their obligations in setting facility

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[751] *Id.* at 45-46 (citing Order No. 1000, 136 FERC ¶ 61,051 at PP 250-69, 256, 286; Initial Decision, 162 FERC ¶ 63,007 at P 69) ("Order No. 1000 identified and ordered an end to the very unequal treatment that TranSource received and the Initial Decision rightly condemned as undue discrimination."). TranSource also argues that its opponents err by assuming that TranSource is not similarly situated to the incumbent PJM Transmission Owners and other competitors. *Id.* at 39.

[752] 762 F.3d 41.

[753] TranSource Brief Opposing Exceptions at 46-47 (quoting *SCPSA*, 762 F.3d at 55).

[754] *Id.* at 40-41 (citing PJM Transmission Owners Brief on Exceptions at 18; Trial Staff Brief on Exceptions at 21).

[755] *Id.* at 4, 40, 47.

[756] *Id.* at 48-49 (noting that TranSource had to engage in litigation to obtain certain information).

ratings) and made material, non-transparent changes to their model (which placed the PJM Transmission Owners' interest above TranSource), which substantially disadvantaged TranSource and is evidence of undue discrimination.[757]

233. TranSource further asserts that PJM's application of the simultaneous feasibility test unduly discriminated against IARR requestors in favor of existing ARR requestors, by including infeasible, already-rejected ARR requests in its model when analyzing IARR requests.[758]

234. TranSource also argues that by failing to model its Upgrade Requests in accordance with the original queue priority dates, as required by the Commission's Order Granting Waiver,[759] and instead prioritizing Delmarva's supplemental projects, PJM and Delmarva (who TranSource alleges knew or should have known about the improper prioritization) unduly discriminated against TranSource.[760] Further, TranSource argues that PJM and PSE&G unduly discriminated against TranSource in favor of Exelon by providing a cost estimate to Exelon, for the same Readington-Roseland circuit over the same time period, of $14 million and a few months later providing an estimate to TranSource of $142 million.[761] TranSource also argues that PJM and PSE&G unduly discriminated against TranSource in favor of PSE&G through careless and unreasonable cost estimation, in particular in relation to the Readington-Roseland circuit, and then by seeking to prevent TranSource from accessing relevant information on the Readington-Roseland cost estimates.[762]

235. Finally, TranSource responds to PJM's argument that the Initial Decision's finding of undue discrimination creates "a new source of risk and uncertainty to the administration of tariff services" by arguing that non-compliance with the Tariff, particularly due to undue discrimination, cannot be excused for "administrative convenience" and that PJM has not explained how this new risk and uncertainty would prevent it from administering its Tariff.

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[757] *Id.* at 49-50.

[758] *Id.* at 50-52.

[759] Order Granting Waiver, 149 FERC ¶ 61,169 at P 1.

[760] TranSource Brief Opposing Exceptions at 52-56.

[761] *Id.* at 57.

[762] *Id.* at 57-59.

b. PJM

236. PJM argues that TranSource inappropriately attempts to expand the Initial Decision's finding that the System Impact Study phase was unreasonable for a lack of transparency, into findings regarding PJM's methodologies for cost estimation.[763] PJM reiterates that the Initial Decision's theory of undue discrimination relies solely on its finding that PJM "fail[ed] to provide appropriate transparency[,] depriv[ing] the class member of a fair attempt to achieve the benefits that the Commission offers,"[764] to which PJM excepts.

c. PJM Transmission Owners

237. The PJM Transmission Owners reiterate that the Initial Decision's disparate impact "class" discrimination analysis "misapplies the standard for discrimination."[765]

d. Trial Staff

238. Trial Staff states that the record contains no evidence demonstrating that PJM treated TranSource's Upgrade Requests in any manner differently than other such requests, and thus TranSource's claim of undue discrimination lacks record support.[766]

4. Commission Determination

239. We reverse the Presiding Judge's finding that the System Impact Study phase of the Attachment EE process was unduly discriminatory as it was applied in this case and therefore unjust and unreasonable. The Presiding Judge's finding of undue discrimination is unsupported by the facts and inconsistent with the Commission's legal standard for claims of undue discrimination.

240. The Presiding Judge's findings are inconsistent with the Commission's long-established legal standard governing claims of undue discrimination. In *PacifiCorp Electric*, the Commission stated:

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[763] PJM Brief Opposing Exceptions at 10-11 (citing TranSource Brief on Exceptions at 20, 25, 75).

[764] *Id.* at 11 (quoting Initial Decision, 162 FERC ¶ 63,007 at P 70).

[765] PJM Transmission Owners Brief Opposing Exceptions at 2, 32 (citing PJM Transmission Owners Brief on Exceptions at 14-19).

[766] Trial Staff Brief Opposing Exceptions at 2.

> [W]e note that section 205 does not prohibit discrimination *per se*. Only undue discrimination is prohibited. Moreover, undue discrimination can only occur when two similarly situated customers are treated differently, and there is no justification for the differing treatment.[767]

In other words, a finding of undue discrimination requires a showing that (1) two classes of customers are treated differently; and (2) the two classes of customers are similarly situated.[768] The courts have consistently upheld this longstanding approach to undue discrimination.[769]

241. The Initial Decision fails to satisfy this legal standard. While the Presiding Judge identifies a class of merchant developers created under Attachment EE of the PJM Tariff, the Presiding Judge fails to make any finding that PJM treated TranSource differently than other Attachment EE customers or that the class of Attachment EE customers is not treated similarly to other classes of customers. In fact, the record supports a finding that TranSource was treated the same as all other parties contemplating upgrades pursuant to

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[767] *PacifiCorp Electric*, 54 FERC at 61,855 (emphasis in original); *see also* Order No. 697, 119 FERC ¶ 61,295 at P 963 ("The standard for judging undue discrimination or preference remains what it has always been: disparate rates or service for similarly situated customers.").

[768] Opinion No. 537, 151 FERC ¶ 61,173 at P 43 (quoting *Energy Transfer*, 120 FERC ¶ 61,086 at P 169, n.105); *see DC Energy*, 144 FERC ¶ 61,024 at P 89 (denied complaint because "Complainants fail[ed] to provide details of . . . other market participants' transactions that show[ed] that they [were] similarly situated and therefore [had] been unduly discriminated against"); *but see Integration of Variable Energy Resources*, Order No. 764, 139 FERC ¶ 61,246 (2012) (asserting the Commission's authority to remedy undue discrimination in situations "where facially neutral operational practices result in a disparate impact on different market participants"), *reh'g*, Order No. 764-A, 141 FERC ¶ 61,232 (2012).

[769] *See*, *e.g.*, *Complex*, 165 F.3d at 1012; *Advanced Energy*, 860 F.3d at 670-71; *Transmission Agency*, 628 F.3d at 549 ("A rate is not 'unduly' preferential or 'unreasonably' discriminatory if the utility can justify the disparate effect. The court will not find a Commission determination to be unduly discriminatory if the entity claiming discrimination is not similarly situated to others.") (internal quotations and citations omitted).

Attachment EE and that Attachment EE applicants were treated the same as all other customer classes.[770]

242. Further, the Initial Decision cites no precedent for rejecting the "similarly situated" test and adopting a new disparate impact/class discrimination test, based on civil rights precedent, for undue discrimination.[771] The Presiding Judge's reasoning for rejecting the Commission's precedent on undue discrimination—that TranSource "made the better argument"—is unpersuasive.[772] The courts have made it clear that "agencies act arbitrarily when they depart from precedent without explanation."[773] Moreover, the D.C. Circuit recently rejected claims of undue discrimination under the FPA premised on the argument that application of the same standard to all entities fails to recognize differences between entities, stating that "[t]he court will not find a Commission

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[770] Ex. S-038 at 14:13-15:5 (Norman Direct and Answering Test.) ("Mr. Rousselle [TranSource's witness and consultant] has not shown that other queue entrants, particularly those with existing relationships with PJM, were routinely provided information that was not given to TranSource. . . . All parties contemplating IARR-generating investments had access to the same documentation from the ISO."); Ex. PJM-0002A at 47:14-48:2 (Egan Answering Test.) ("Q: Has PJM processed the TranSource Upgrade Requests differently, in any way, from how it processes all other Attachment EE requests? A: No. . . . A review of those studies will demonstrate that the System Impact Studies issued to other customers are in harmony with what PJM provided TranSource. . . . Indeed, if there is any difference in how PJM handled TranSource's requests, it is that PJM provided TranSource with much more guidance and counsel than it typically provides New Service customers . . . ."), 83:20-84:9 ("PJM's process for upgrade identification and cost estimates for TranSource, including involvement of the Transmission Owners, was the same estimate process PJM uses for hundreds of such studies every year. PJM's handling of TranSource's IARR requests also was dictated by PJM Tariff rules on non-discriminatory, first-come, first-served processing of New Service Requests."); Ex. PS-004 at 4:21-5:10 (Crouch Direct Test.) ("Q: Was there any difference between the cost estimating process for TranSource's IARR requests and the cost estimating process for any other system upgrade request? A: There is no difference in the cost estimating process and we did not follow any different approach for the TranSource requests. We estimated costs the way we always do.").

[771] Initial Decision, 162 FERC ¶ 63,007 at PP 67-72.

[772] *Id.* P 70.

[773] *Sacramento Mun. Util. Dist. v. FERC*, 474 F.3d 797, 803 (2007) (citing *Greater Boston Television Corp. v. FCC*, 444 F.2d 841, 852 (D.C. Cir. 1970)).

determination to be unduly discriminatory if the entity claiming discrimination is not similarly situated to others."[774]

243. We agree with PJM, the PJM Transmission Owners, and Trial Staff that even pursuant to the Presiding Judge's new disparate impact test for undue discrimination, which we reject, the facts presented do not support a finding of undue discrimination. The Presiding Judge does not explicitly explain who is a member of the Attachment EE class, whether the class includes all requesters, all requesters that complete a System Impact Study Agreement, or all customers who might consider using Attachment EE at some point in time. As PJM correctly states, the Commission has never defined such a class.[775] Also, we agree with Trial Staff that merchant developers pursuant to Attachment EE, are not entitled to any benefits, but rather are entitled only to the same not unduly discriminatory review of their request for IARRs as other customers submitting new service requests.[776] Even if one were to ignore the Initial Decision's flawed analysis of the purported class and benefits associated with Attachment EE, the Presiding Judge also does not explain how PJM's non-transparent processing of the TranSource System Impact Studies prevented TranSource from obtaining the benefits it was allegedly due. A lack of transparency does not by itself taint the accuracy of the System Impact Studies or demonstrate undue discrimination, and ultimately it was TranSource's decision not to move its projects forward to the Facilities Study phase of the Attachment EE process.

244. We agree with PJM, the PJM Transmission Owners, and Trial Staff, that the Presiding Judge's reliance on the fact that very few Attachment EE requests have resulted in IARRs being awarded is misplaced.[777] As PJM, the PJM Transmission Owners, and Trial Staff point out, numerous factors affect how many projects are granted IARRs pursuant to Attachment EE, and ultimately it is the customer's decision, based on its own independent commercial judgment, whether to move forward with a project.[778] The Presiding Judge ignores testimony from PJM witness Mr. Egan that to make a profit

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[774] *Advanced Energy*, 860 F.3d at 670.

[775] PJM Brief on Exceptions at 13, 41, 45.

[776] Trial Staff Brief on Exceptions at 8.

[777] Initial Decision, 162 FERC ¶ 63,007 at P 67.

[778] *See*, *e.g.*, PJM Brief on Exceptions at 41, 47 (the Initial Decision ignores the fact that customers' decision regarding whether to go forward in the Attachment EE process are "entirely voluntary" and "most likely stem from their private assessments of whether expected IARR revenues . . . will exceed the upgrade costs.").

under Attachment EE, a developer must find a "sweet spot" where the transmission upgrades reduce congestion, but enough congestion remains so that the resulting IARRs have value.[779]

245. Finally, while TranSource asserts that the record is "replete with examples" of PJM and the PJM Transmission Owners unduly discriminating against it in favor of incumbents, TranSource fails to provide any analysis of whether, in the context of the implementation of Attachment EE, TranSource and the incumbent PJM Transmission Owners are similarly situated.[780] TranSource's examples of undue discrimination primarily relate to alleged errors in PJM's processing of the TranSource System Impact Studies. Such errors, even if they occurred, relate to only one project and fail to demonstrate that the Attachment EE provisions in the Tariff are unduly discriminatory or that PJM has applied these provisions in an unduly discriminatory manner. As discussed previously, we find many of these alleged errors either would have been corrected at the Facilities Study phase, were immaterial, or were not in fact errors. Regardless, without any analysis of whether the parties were similarly situated, we cannot make a finding that TranSource was unduly discriminated against.

J. Remedies

1. Restoration of Queue Positions

a. Initial Decision

246. Having found that PJM's practices while processing TranSource's Upgrade Requests were nontransparent and unduly discriminatory, the Presiding Judge granted TranSource relief in the form of restoration of its original queue positions.[781] The Presiding Judge stated that this relief is warranted because TranSource has provided evidence that its queue positions were not preserved and that the PJM Transmission Owners' supplemental projects were modeled ahead of TranSource's queue positions.[782]

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[779] Tr. 779:3-780:3, 814:9-815:15 (Egan); Ex. PJM-0001A at 46:1-6 (Horger Answering Test.); *see also* Ex. S-038 at 9:1-9 (Norman Direct and Answering Test.) (explaining that the low completion rate is consistent with the likelihood that many queue positions are relatively risky investment possibilities facing multiple significant uncertainties).

[780] TranSource Brief Opposing Exceptions at 4, 40, 47-52.

[781] Initial Decision, 162 FERC ¶ 63,007 at PP 1, 80(b).

[782] *Id.* P 80(b).

Further, the Presiding Judge explained that, in briefing, PJM "suggest[ed] that restoring TranSource's queue positions . . . is possible."[783] The Presiding Judge stated that the Commission should grant TranSource's waiver request to restore TranSource's three queue positions (Z2-053, Z2-069, Z2-072), in line with the Commission's prior Order Granting Waiver.[784]

b. Briefs on Exceptions

i. TranSource

247. While TranSource agrees with the Initial Decision granting restoration of its queue positions, TranSource argues that the Initial Decision erred by not explaining how the "severe flaws" in the System Impact Study phase will be corrected upon TranSource's reinstatement into the queue.[785]

ii. PJM

248. PJM reaffirms that it is capable of implementing a Commission order to restore TranSource's queue position, but PJM excepts to the Initial Decision's failure to address the PJM Tariff waiver needed to restore the queue priority.[786] PJM states that the TranSource Upgrade Requests are no longer in the queue because TranSource declined to execute a Facilities Study Agreement in 2015, as required by the PJM Tariff.[787] PJM explains that restoring TranSource's queue positions requires waiver of the Tariff, and

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[783] *Id.* (citing PJM Reply Brief at 71).

[784] *Id.* (citing September 2015 Hearing Order, 152 FERC ¶ 61,229 at P 29 (stating that the Commission will address TranSource's waiver request following the completion of the hearing and settlement judge procedures); PJM Initial Brief at 88-89 ("Loss of queue position is dictated by the PJM Tariff . . . so the Commission would need to waive the PJM Tariff to put TranSource back in the queue.")).

[785] TranSource Brief on Exceptions at 30-31.

[786] PJM Brief on Exceptions at 5, 51-52. PJM notes that the Presiding Judge appears to rely heavily on PJM's statement that restoration of the queue positions is possible, when PJM said only that it was capable of implementing such a remedy, and not that the Commission should so decide. *Id.* at 52 (citing Initial Decision, 162 FERC ¶ 63,007 at P 80(b)).

[787] *Id.* (citing PJM Tariff, Part VI, Subpart A System Impact Studies and Facilities Studies § 206.2 (Retaining Queue Position)).

while the Presiding Judge advised the Commission to grant such a waiver, it did not discuss the Commission's standards for obtaining a tariff waiver.[788]

249. PJM argues that the Commission's tariff waiver policy requires consideration of adverse impacts on third parties, but the Initial Decision contains no such consideration, which is plain error.[789] PJM notes that the Commission has denied waiver in circumstances where the requested waiver would introduce uncertainty that could impact lower-queued interconnection customers and cause a cascading effect on the Facilities Study process.[790] PJM argues that restoring TranSource's queue positions three years later may adversely impact customers who originally had lower priority than TranSource, but have since proceeded with their projects.[791] However, PJM states that it is not taking a position on whether the interests of such third parties outweigh any legitimate interests of TranSource, only that the Commission should affirmatively address those interests.[792]

250. Finally, PJM argues that, even if the restoration of TranSource's queue positions is awarded, the Commission should offer two clarifications: (1) only the three specific IARR requests that were the subject of the Commission's Order Granting Waiver may be restored; and (2) that TranSource must abide by all PJM Tariff requirements to proceed with those requests, including executing Facilities Study Agreements and providing the required deposits.[793] PJM adds that restoration of TranSource's queue positions may be a moot point, given that the record reflects that TranSource is not likely to proceed with its Upgrade Requests even if the costs were substantially lowered.[794]

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[788] *Id.* at 53 (citing *PJM Interconnection, L.L.C.*, 150 FERC ¶ 61,122, at P 45 (2015)).

[789] *Id.* at 5, 52-53 (citing Initial Decision, 162 FERC ¶ 63,007 at P 80(b)).

[790] *Id.* at 53 (citing *Harvest Wind Energy, LLC*, 162 FERC ¶ 61,096, at P 32 (2018)).

[791] *Id.*

[792] *Id.* at 5, 53.

[793] *Id.* at 5, 53-54.

[794] *Id.* at 54 (citing Tr. 436:19-24, 468:9-18, 1281:6-9 (Rousselle); Initial Decision, 162 FERC ¶ 63,007 at P 80(e)).

c. Briefs Opposing Exceptions

i. TranSource

251. TranSource argues that the restoration of its queue positions granted by the Presiding Judge is an appropriate remedy, because TranSource's exit from the queue was due to the nontransparent and unduly discriminatory practices of PJM and the PJM Transmission Owners.[795] TranSource argues, in response to PJM, that the Commission's guidance was to minimize the impact on other market participants when fashioning appropriate relief for TranSource, not that such impacts serve as an absolute bar to meaningful relief.[796] In response to PJM's request that the Commission orders be confined to "one or more of the three specific IARR requests" in the Commission's Order Granting Waiver, TranSource argues that basic fairness and common sense require that TranSource have the opportunity to amend its Upgrade Requests, while preserving its place in the queue.[797]

252. TranSource states that the Commission has recently explained that it has discretion when fashioning remedies, and recently declined a remedy to re-run capacity markets in the Midcontinent Independent System Operator region.[798] TranSource argues that its request for relief does not require the Commission to re-run any markets, and is instead a limited and discrete request for restoration of its queue positions.[799] TranSource also states that its requested restoration into the queue does not involve a reallocation of costs and that the relief sought by TranSource is narrow and does not inequitably impact other customers.[800] Further, TranSource adds that such relief would also prevent market

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[795] TranSource Brief Opposing Exceptions at 65-66 (citing Initial Decision, 162 FERC ¶ 63,007 at PP 1, 21, 66-67, 80(b)).

[796] *Id.* at 66 (citing PJM Brief on Exceptions at 53; May 2016 Hearing Order, 155 FERC ¶ 61,154 at PP 4, 38; September 2015 Hearing Order, 152 FERC ¶ 61,229 at P 19).

[797] *Id.* at 67 (quoting PJM Brief on Exceptions at 52).

[798] *Id.* at 67-68 (citing *Midcontinent Indep. Transmission Sys. Operator, Inc.*, 162 FERC ¶ 61,173, at PP 17-18 (2018)).

[799] *Id*.

[800] *Id.* at 69.

participants, such as Delmarva, from being unjustly enriched as a result of TranSource's exit from the queue.[801]

ii. PJM Transmission Owners

253. The PJM Transmission Owners assert that PJM's improper prioritization of the Delmarva queue positions ahead of TranSource's did not harm TranSource because the overestimation of costs that resulted was immaterial and would have been corrected in the Facilities Studies, had there been any.[802] Further, the PJM Transmission Owners assert that there was plainly no intent to disadvantage TranSource or enrich Delmarva, as Delmarva did not even know, and could not have known, when it announced its supplemental projects, whether it was proposing upgrades to the same facilities that PJM would later determine would require upgrades to satisfy TranSource's request for IARRs.[803]

iii. Trial Staff

254. Trial Staff urges the Commission to award no remedies because it should uphold the Presiding Judge's finding that PJM's System Impact Study phase was performed correctly and reverse the Presiding Judge's findings on undue discrimination and insufficient transparency.[804] Trial Staff argues that even if the Commission upholds the Presiding Judge's findings on undue discrimination and transparency, it should uphold that the FPA "'does not authorize the Commission to award reparations to those

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[801] *Id.* at 68.

[802] PJM Transmission Owners Brief Opposing Exceptions at 22 (citing Tr. 468:13-18 (Rousselle) (acknowledging that TranSource would not have moved forward with the upgrades, even if the cost estimates were reduced by $500 million); Tr. 764:16-23, 766:12-20, 801:15-20 (Egan)).

[803] *Id.* ("'There certainly was nothing improper done by PJM or the affected Transmission Owner. . . . [Delmarva] had no way of knowing that TranSource's waiver request may ultimately overlap their work.'") (quoting Ex. PJM-0002A at 59:7-18 (Egan Answering Test.)).

[804] Trial Staff Brief Opposing Exceptions at 23-24.

subjected to unreasonable rates' nor provide the authority 'to confer damages to those injured by violations of the Act.'"[805]

d. Commission Determination

255. As detailed above, we find that TranSource met its burden to show that PJM improperly prioritized queue positions ahead of TranSource's, in violation of the Commission's Order Granting Waiver, which allowed TranSource to retain its original Attachment S priority dates for its queue positions. We also find that TranSource met its burden to show that, in processing the TranSource System Impact Studies, PJM violated its Tariff by failing to perform refined and comprehensive studies.

256. Although these violations occurred, we find that the evidence shows that these errors ultimately had an immaterial impact on the results of the TranSource System Impact Studies. Thus, TranSource failed to meet its burden to show that the results of the TranSource System Impact Studies were unjust and unreasonable.

257. For example, the queue prioritization error resulted in an over-estimation of cost of about $16.125 million, or only about 2.75 percent of the total cost assigned to the upgrades for TranSource's queue position Z2-072.[806] This is well within PJM's plus or minus 40 percent margin of error guideline for cost estimates in System Impact Studies, which, as we described above, is consistent with the Tariff's description of a System Impact Study at Attachment N-1,[807] and PJM could have corrected this error at the Facilities Study phase.[808] Further, the failure to complete refined and comprehensive studies, which we find was a Tariff violation,[809] was also immaterial and does not

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[805] *Id.* at 24 (citing Initial Decision, 162 FERC ¶ 63,007 at P 74; *Montana-Dakota Utils. Co. v. Nw. Pub. Serv. Co.*, 341 U.S. 246, 260 (1951) (*Montana-Dakota*)).

[806] Ex. PJM-0002A at 57:13-16 (Egan Answering Test.). PJM explained that the queue prioritization error was the largest error it identified in its internal audit, and even so, it only had a minimal impact on the study results. *Id*. at 57:7-11.

[807] *See supra* section III.D.4; PJM Tariff, Attachment N-1 Form of System Impact Study Agreements § 6 (5.0.0); Ex. PJM-0002A at 14:10-14 (Egan Answering Test.).

[808] Ex. PJM-0002A at 63:9-12 (Egan Answering Test.) ("Correcting [the queue prioritization] error would have changed the proposed conductor type and the cost of those conductors. This difference would have been corrected at the Facilities Study stage had TranSource maintained its projects in the New Services Queue.").

[809] *See supra* section III.D.4.

warrant the extraordinary step of restoring TranSource's queue positions years after the fact. Despite the extensive record in this case, TranSource has not demonstrated that alternative study results would have resulted in different cost estimates, or that the cost estimates were not within a reasonable margin of error. Given the potential harm to third parties that could occur if TranSource's queue positions were restored, which we note was not discussed on the record, and the lack of record evidence as to the impact of the errors on TranSource, we find that TranSource is not entitled to a remedy for PJM's violation of the Commission Order Granting Waiver and Tariff violations, namely PJM's queue prioritization error and failure to provide refined and comprehensive studies. Also, to the extent the record demonstrates that PJM made other errors in processing the TranSource System Impact Studies, such as those identified in the PJM audit,[810] those errors had a minimal impact on the outcome of the studies and were well within a reasonable margin of error,[811] and likely would have been corrected at the Facilities Study phase.[812]

258. Moreover, we find that even if all the errors were corrected, the evidence shows that TranSource still would not have proceeded with its queue positions. TranSource's witness Mr. Rousselle admitted that even if PJM's cost estimates were reduced by $500 million, TranSource still would not have been able to get the funding necessary to move forward with its queue positions.[813]

259. Therefore, we reverse the Initial Decision's order granting TranSource restoration of its queue positions and deny all other relief related to the errors we find occurred with regard to the TranSource System Impact Studies. As noted above, TranSource requested

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[810] Ex. PJM-0022.

[811] Ex. PJM-0002A at 57:2-3 (Egan Answering Test.) ("I found no errors inconsistent with the broad estimating accuracy range expected of a System Impact Study."), 57:4-6 (errors identified in the TranSource Z2-072 report were under 5 percent of total costs), 62:13-15 (errors identified in the TranSource Z2-069 report were under 1 percent of total costs), 62:15-18 (errors identified in the TranSource Z2-072 report were under 5 percent of total costs).

[812] *Id.* at 62:23-63:2 (Egan Answering Test.) ("[A]ll of the errors that I identified are of a type that would have been easily caught and corrected in the Facilities Study had TranSource elected to continue pursuing its Upgrade Requests.").

[813] Tr. 468:9-18 (Rousselle) ("Q: The [System Impact Studies] at issue here for the [TranSource] queue positions, in total, they estimated a total project cost of about $1-1/2 billion? A: Yes, sir. . . Q: If the total cost estimate had been a billion dollars, would TranSource have been able to get financing? A: Likely not, sir.").

waiver of section 206.2 of PJM's Tariff to submit its executed Facilities Study Agreement and deposits.[814] Having found that TranSource's queue positions should not be restored, we further find that TranSource's request for waiver of the Tariff deadlines is moot, as the only reason to waive the deadlines would be to allow the queue positions to be restored.

2. Refund of System Impact Study Deposits

a. Initial Decision

260. Based on a finding that PJM's practices while processing the TranSource Upgrade Requests were nontransparent and discriminated against TranSource, the Presiding Judge ordered PJM to refund all monies TranSource paid in connection with the System Impact Study phase of the Attachment EE process.[815] Specifically, TranSource paid a $50,000 deposit for each of its three queue positions (i.e., a total deposit of $150,000).[816]

b. Briefs on Exceptions

i. PJM

261. PJM argues that the Initial Decision erred in requiring PJM to refund TranSource's System Impact Study deposits, as such remedy is unsupported and contrary to PJM's Tariff, the facts of the case, and Commission precedent.[817] PJM asserts that, under its Tariff, PJM directly bills customers for the costs PJM incurs to conduct transmission studies on their behalf.[818] PJM further states that the Commission explicitly authorized this practice because PJM's cost to perform such a study arises directly from the

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[814] Second Motion to Supplement Initial Complaint at 2.

[815] Initial Decision, 162 FERC ¶ 63,007 at PP 1, 80(c).

[816] *Id.* P 7 (citing Ex. PJM-0040 (TranSource System Impact Study Agreements); PJM Tariff, Part VI, Subpart A System Impact Studies and Facilities Studies § 204.2.1 (Upgrade Requests)).

[817] PJM Brief on Exceptions at 5-6, 12, 49.

[818] *Id.* at 5-6, 49 (citing PJM Tariff, Part VI, Subpart B Agreements and Cost Responsibility § 213.1 (Cost Reimbursement)). In its brief, PJM errantly cites section 213.1 of its Tariff. Rather, for upgrade customers, it is section 204.2 of the Tariff that requires the customer to pay PJM for the costs incurred in completing a System Impact Study.

customer's request.[819] Specifically, PJM states that, for System Impact Studies, it collects a deposit from the customer, and upon completion of the study, returns any funds in excess of its costs to perform the study.[820] In this case, PJM states that, in accordance with its Tariff, PJM collected $50,000 for each of the three TranSource System Impact Study requests (a total of $150,000), and then returned to TranSource all amounts exceeding the actual expenses incurred.[821] PJM argues that a refund of all monies connected with the TranSource System Impact Studies would require PJM to forego recovery of its actual expenses and shift the cost burden to its members.[822]

262. Additionally, PJM asserts that there is no factual basis on which to base a refund, because the Presiding Judge found that TranSource failed to demonstrate that the System Impact Studies were incorrect and TranSource obtained good-faith, non-binding estimates of the costs of the upgrades needed to support its Upgrade Requests, as required by the PJM Tariff.[823] PJM adds that it incurred, for TranSource's direct benefit, the costs of preparing the TranSource System Impact Studies, and those costs are fairly recovered from TranSource regardless of whether TranSource agrees with the result or implementation of the studies.[824] PJM states that the Commission disallows recovery of actual costs incurred only when the complainant shows that the costs were imprudent, and TranSource has not attempted to make such a showing in this case.[825]

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[819] *Id.* at 49-50 (citing Order No. 2003, 104 FERC ¶ 61,103 at PP 36-37 ("The Interconnection Customer will pay the actual costs for performing each of the Interconnection Studies and restudies.")).

[820] *Id.* at 50.

[821] *Id.* (citing Ex. PJM-0040 at 4, 10, 16 (Section 10 of TranSource System Impact Study Agreements)).

[822] *Id.* at 6, 50 (citing *Black Oak Energy, L.L.C. v. PJM Interconnection, L.L.C.*, 155 FERC ¶ 61,013, at P 12 (2016) ("RTOs which are not-for-profit entities. . . . . like PJM, have no retained earnings or other source of funds to pay refunds."); *Atlantic City*, 115 FERC ¶ 61,132 at P 23 ("[T]he over collection will be returned to market participants, since PJM is a not-for-profit entity, and cannot retain such over collections.")).

[823] *Id.* at 5-6, 50-51 (citing Initial Decision, 162 FERC ¶ 63,007 at P 80(e)).

[824] *Id.* at 51.

[825] *Id.* (citing *New England Power Co.*, Opinion No. 231, 31 FERC ¶ 61,047, at 61,084 (1985) (setting forth Commission prudence standard); *see Violet v. FERC*, 800

ii. Trial Staff

263. Trial Staff argues that PJM's actions in processing the TranSource System Impact Studies were fully consistent with its Commission-approved Tariff obligations and that this alone would generally be sufficient to immunize PJM against any penalties or refund obligations.[826] Trial Staff adds that the Commission should reject the remedies ordered by the Presiding Judge, including the refund of the System Impact Study deposits, based on the fact that PJM's practices neither lacked transparency nor were unduly discriminatory.[827]

c. Briefs Opposing Exceptions

i. TranSource

264. TranSource states that the Presiding Judge correctly found that TranSource is entitled to a refund of all monies paid to PJM for the System Impact Studies.[828] TranSource argues that Trial Staff offers no support or rationale for its argument that TranSource should not receive a refund, other than Trial Staff's generic statement that PJM should not be found to have engaged in nontransparent, discriminatory practices.[829] TranSource further states that PJM should not be able to charge TranSource for System Impact Studies that were not in conformance with the PJM Tariff, particularly since the Initial Decision found the studies to be "severely flawed."[830]

265. Responding to PJM's argument that a refund would shift the cost burden for the studies to its members, TranSource asserts that PJM's not-for-profit status should not

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F.2d 280, 282 (1st Cir. 1986) (prudence judged on what utility management "knew, or could have known"); *Panhandle E. Pipe Line Co. v. FERC*, 777 F.2d 739, 745 (D.C. Cir. 1985) (prudence judged based on what pipeline management "knew or should have known")).

[826] Trial Staff Brief on Exceptions at 2.

[827] *Id.* at 24.

[828] TranSource Brief Opposing Exceptions at 75 (citing Initial Decision, 162 FERC ¶ 63,007 at P 80(c)).

[829] *Id.* at 72-73 (citing Trial Staff Brief on Exceptions at 24).

[830] *Id.* at 73-74 (citing Initial Decision, 162 FERC ¶ 63,007 at P 72; PJM Brief on Exceptions at 50 (arguing it is entitled to recover actual study costs incurred)).

disallow reasonable relief to entities that are harmed by its FPA violations.[831] Further, TranSource notes that PJM did not argue that it did not have the funds in its budget to pay such a refund.[832]

266. Additionally, TranSource explains that if its queue positions are reinstated, it is committed to paying the cost of new, properly performed System Impact Studies for its queue positions.[833]

ii. Trial Staff

267. Trial Staff excepts to the remedies the Initial Decision awarded TranSource and states that TranSource should be awarded no remedies, including monetary remedies, because the Commission should reverse the Presiding Judge's findings of undue discrimination and non-transparency.[834]

d. Commission Determination

268. We reverse the Presiding Judge's order requiring PJM to refund all monies that it received from TranSource in connection with the System Impact Study phase of the Attachment EE process.[835] The PJM Tariff provides that, for an Upgrade Request to retain its queue position, the upgrade customer must execute a System Impact Study Agreement and pay a $50,000 deposit, to be applied to the study costs.[836] Further, the System Impact Study Agreements TranSource signed state that unless a request is withdrawn within 10 days of the request or within 10 days of receiving an estimate of the study costs, the customer "agrees to pay the amount of its actual System Impact Study

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[831] *Id.* at 74-75 (arguing that if PJM can invoke its non-profit status to avoid legal and financial responsibility for FPA violations, then it will be less incentivized to ensure the justness and reasonableness of its practices).

[832] *Id.* at 74 ("If PJM cannot find the funds in its budget, then PJM must recoup those funds from its members.").

[833] *Id.* at 5, 75.

[834] Trial Staff Brief Opposing Exceptions at 23-25.

[835] Initial Decision, 162 FERC ¶ 63,007 at PP 1, 80(c).

[836] PJM Tariff, Part VI, Subpart A System Impact Studies and Facilities Studies § 204.2 (Upgrade Requests) (0.0.0) (effective Sept. 17, 2010; superseded Apr. 1, 2018).

cost responsibility."[837] Neither the Presiding Judge, nor TranSource on exceptions, has cited any precedent indicating that it is appropriate to refund the System Impact Study deposits, when the evidence shows that PJM incurred costs in performing, in good faith, the TranSource System Impact Studies. As a result, we see no reason to shift the cost of the TranSource System Impact Studies to other PJM members.[838] Further, we note that granting a refund of System Impact Study costs any time non-material errors or Tariff violations are made in the study process could create uncertainty in PJM's interconnection study processes.[839]

3. Monetary Relief

a. Initial Decision

269. The Presiding Judge denied TranSource's request for monetary relief,[840] noting that "the power of the Commission to make a party whole is circumscribed by the FPA" and no party has cited precedent authorizing monetary relief (for lost business opportunities or other tort claims) pursuant to the FPA.[841] Further, the Presiding Judge

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[837] Ex. PJM-0040 at 4, 10, 16 (TranSource System Impact Study Agreements).

[838] PJM Brief on Exceptions at 6, 50 ("Moreover, relieving TranSource of PJM's costs would simply shift those costs to other PJM customers—a result that is not warranted on this record.").

[839] May 2016 Hearing Order, 155 FERC ¶ 61,154 at PP 38-39 (ordering the Presiding Judge to "consider remedies that will have the least effect on the predictability of PJM's interconnection process"); *see also* PJM Brief on Exceptions at 50-51 (arguing that refunding the costs of the study to TranSource would unreasonably shift the cost burden to PJM's members), 53 (noting that restoring TranSource's position in the queue could cause uncertainty).

[840] In its Amended Complaint, TranSource sought "any monetary relief available, including disgorgement of any monies obtained by any participant to this proceeding that would not have been obtained but for PJM's improper conduct with respect to TranSource's Upgrade Requests." Amended Complaint at P 57.

[841] Initial Decision, 162 FERC ¶ 63,007 at PP 74, 81 (citing *Montana-Dakota*, 341 U.S. at 260 ; *LSP-Cottage Grove, L.P. v. N. Natural Gas Co.*, 111 FERC ¶ 61,108, at P 45 (2005) (*LSP-Cottage Grove*) (finding that monetary damages and other contractual

denied TranSource's request for "disgorgement of any monies obtained by any participant to this proceeding that would not have been obtained but for PJM's alleged improper conduct with respect to the [TranSource Upgrade Requests]," finding that no evidence demonstrates that PJM or the PJM Transmission Owners achieved any monetary gain by misconduct.[842] Finally, the Presiding Judge also rejected remedies requested by TranSource for the first time on brief and not supported by evidence presented in the case, including: disgorgement from Delmarva of unjust profits;[843] monetary relief from the PJM Transmission Owners for systematic facility ratings and cost estimation process failures;[844] monetary relief from PJM as a result of its violations;[845] and monetary and equitable relief from PSE&G for its pattern of misconduct and concealment of the actual condition of its Readington-Roseland circuit.[846]

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remedies are a matter of state law); *S.C. Pub. Serv. Auth. v. FERC*, 850 F.2d 788, 794-95 (D.C. Cir. 1988) (*SCPSA v. FERC*) (potential liability for damages caused by licensees for damages caused by their projects is a matter left by Congress to state law)).

[842] *Id.* P 80(m).

[843] The Presiding Judge found no evidence that Delmarva received any unjust profits from its supplemental projects. *Id.* P 81(a).

[844] The Presiding Judge found no evidence that the PJM Transmission Owners incompetently or deliberately reported false ratings. *Id.*

[845] The Presiding Judge found that TranSource presented no precedent showing that the Commission can grant monetary relief under the FPA on the facts of this case. *Id.* P 81(c).

[846] The Presiding Judge found that TranSource did not prove any monetary damage was suffered as a result of the "kerfuffle that occurred over [the Readington-Roseland] line," thus any monetary award would be speculative, and TranSource also did not provide any evidence that equitable relief would be appropriate. *Id.* P 81(d).

270. With regard to the limitation on liability provisions in the PJM Tariff[847] and the System Impact Study Agreement that TranSource signed,[848] the Presiding Judge found that the provisions have "no legal moment in this case" and do not bar TranSource from obtaining monetary relief from PJM.[849] The Presiding Judge explained that the provisions do not apply, because TranSource's claims are pursuant to "section 206 of the FPA [and] alleg[e] that certain acts were jointly and severally unjust and unreasonable because they were nontransparent and discriminatory," which are causes of action not included in the waiver provisions.[850]

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[847] *See* PJM Tariff, Part I, § 10.2 (Liability) (2.0.0) ("Neither the Transmission Provider [PJM], a Transmission Owner, PJMSettlement, nor a Generation Owner acting in good faith to implement or comply with the directives of the Transmission Provider shall be liable, whether based on contract, indemnification, warranty, tort, strict liability or otherwise, to any Transmission Customer, third party or other person for any damages whatsoever, including, without limitation, direct, incidental, consequential, punitive, special, exemplary, or indirect damages arising or resulting from any act or omission in any way associated with service provided under this Tariff or any Service Agreement hereunder, including, but not limited to, any act or omission that results in an interruption, deficiency or imperfection of service, except to the extent that the damages are direct damages that arise or result from the gross negligence or intentional misconduct of the Transmission Provider, the Transmission Owner, PJMSettlement, or the Generation Owner, as the case may be.").

[848] *See* Ex. PJM-0040 at 4-5, 10-11, 16-17 (TranSource System Impact Study Agreements). Section 12 of the System Impact Study Agreements states in part: "In no event will the Transmission Provider [PJM], Transmission Owner(s) or other subcontractors employed by the Transmission Provider be liable for indirect, special, incidental, punitive, or consequential damages of any kind including loss of profits, whether arising under this System Impact Study Agreement or otherwise . . . ." *Id.* at 5, 11, 17.

[849] Initial Decision, 162 FERC ¶ 63,007 at P 78.

[850] *Id.* (stating that the question in this case is what remedies are allowed under the FPA for violations of its provisions, not what remedies are allowed pursuant to collateral contractual provisions).

b. Briefs on Exceptions

i. TranSource

271. TranSource argues that the Initial Decision erred by not granting its request for monetary relief.[851] Because the Initial Decision found that PJM and the PJM Transmission Owners committed multiple statutory violations and discriminated against TranSource, causing TranSource substantial harm, TranSource argues it should be awarded appropriate, meaningful relief that makes it whole for both the opportunity it was wrongfully denied and the costs it incurred to challenge and prove PJM's and the PJM Transmission Owners' unlawful activities.[852] TranSource, describing itself as "essentially" a whistleblower, argues that it expended "substantial time and funds before and during litigation" to expose the discriminatory, non-transparent, unjust and unreasonable practices of PJM and the PJM Transmission Owners when studying IARR requests, and that equity and justice compel a ruling that ensures TranSource is made whole through monetary relief.[853]

272. TranSource argues that a failure to provide TranSource with meaningful relief that compensates it fully undermines merchant development and the Commission's open-access and pro-competition policies.[854] Further, TranSource asserts that the remedy granted to TranSource must be sufficient to deter similar discriminatory and non-

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[851] TranSource Brief on Exceptions at 3, 15-17, 20, 57-61.

[852] *Id.* at 3, 15-17, 20, 23, 57-61. TranSource asserts that being "made whole" means that TranSource should be compensated for "(1) the value of the opportunity to which TranSource was entitled when it was forced to withdraw from the queue as a result of PJM's and the Transmission Owners' unjust, unreasonable, and discriminatory conduct, either by virtue of reinstating TranSource into the queue and properly applying the Simultaneous Feasibility Test, facility ratings, and cost estimates or ordering monetary relief; and (2) for the resources that TranSource was required to expend to prove that PJM and the Transmission Owners engaged in such unlawful activities." *Id.* at 15 n.58 (citing Initial Decision, 162 FERC ¶ 63,007 at P 74 ("A perusal of the facts shows that TranSource is out-of-pocket for some fees for the [System Impact Study] reports; fees for experts who were hired to follow the methodologies and replicate the results; the lost business opportunity that resulted from not going into business within a reasonable time; attorney fees and other sundries.")); *see also* TranSource Brief Opposing Exceptions at 88-89.

[853] *Id*. at 57-61.

[854] *Id.* at 20-22.

transparent behavior in the future.[855] TranSource argues that the Commission has broad authority, flexibility, and discretion to fashion remedies to address FPA violations.[856]

273. TranSource argues that the Initial Decision correctly found that Delmarva's supplemental projects were improperly prioritized ahead of TranSource's queue positions in violation of the Commission's Order Granting Waiver and appropriately found that the Commission should reinstate the TranSource queue positions with the proper priority, but the Initial Decision erred by not providing additional meaningful relief for the improper prioritization.[857] TranSource states that if reinstatement of its queue positions is not feasible,[858] Delmarva should be held responsible for any unjust enrichment it has realized or could realize from the construction of its unlawfully prioritized supplemental projects.[859] TranSource argues that monetary relief is justified and the least-disruptive remedy for such unlawful prioritization; therefore, the Commission should require Delmarva to pay TranSource a lump-sum payment equal to the returns on equity that Delmarva would have earned on the supplemental projects over time and transfer to TranSource any ARRs associated with the supplemental projects, consistent with the Commission's authority to order disgorgement of unjust profits.[860] TranSource states that pursuant to section 309 of the FPA, the Commission enjoys broad remedial powers

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[855] *Id.* at 22-23.

[856] *Id.* at 58.

[857] *Id.* at 47, 51-54.

[858] For example, reinstatement may not be feasible if Delmarva has already begun or completed construction of the supplemental projects. *Id.* at 16 n.64.

[859] *Id.* at 16, 51; *see also* TranSource Brief Opposing Exceptions at 71-72. TranSource asserts that prioritizing the supplemental projects in the queue gave Delmarva the opportunity to construct facility upgrades and earn associated profits ahead of, and in lieu of, the higher-priority TranSource queue positions. TranSource Brief on Exceptions at 49.

[860] *Id.* at 51-54 (citing *Enforcement of Statutes, Regulations and Orders*, 123 FERC ¶ 61,156, at P 6 (2008) (explaining that the Commission's myriad enforcement tools gives it "great flexibility in fashioning the most appropriate and effective remedies and sanctions for each violation, both to deter future violations and to compensate injured entities in those cases where profits have been wrongfully gained in violation of a statute, regulation, or order"); *Sellers of Energy and Ancillary Services*, 158 FERC ¶ 61,076, at PP 18-19 (2017); *Enron Power Mktg.*, 113 FERC ¶ 63,025, at P 5 (2005)); *see also* TranSource Brief Opposing Exceptions at 88.

to direct the disgorgement of unjust profits acquired as a result of a tariff or filed rate violation.[861] TranSource further states that the disgorgement of unjust profits, which is "akin to restitution," hinges on the violation, not on whether there was quantifiable harm to any particular customer, and that the disgorgement amount need only be a reasonable approximation of the profits causally connected to the violation.[862]

274. Additionally, TranSource argues that while the Initial Decision correctly recognized PSE&G's lack of transparency with regard to the conditions of the Readington-Roseland circuit, the Presiding Judge erred by not holding PSE&G accountable for its misrepresentations.[863] TranSource argues that, in order to deter misrepresentations by PJM Transmission Owners in the future, PSE&G should be required to pay TranSource's attorneys' fees and consultant fees as to all litigation related to PSE&G in this proceeding.[864]

ii. PJM

275. With regard to the limitation on liability provision in the System Impact Study Agreement, PJM asserts that the Initial Decision erred by concluding that the provision is irrelevant to proceedings under the FPA, and requests that the Commission hold that the provision is valid and precludes TranSource's requested monetary relief.[865] PJM states

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[861] TranSource Brief on Exceptions at 52 (quoting *La. Pub. Serv. Comm'n v. Entergy Corp.*, 160 FERC ¶ 63,009, at PP 27-28 (2017) (*LPSC*)).

[862] *Id.* at 53 (quoting *El Paso Elec. Co.*, 112 FERC ¶ 61,256, at PP 8-9 (2005); *ETRACOM LLC*, 155 FERC ¶ 61,284, at P 197 (2016)). TranSource further argues that the Commission has explained that its enforcement tools give it great flexibility in fashioning a remedy to compensate injured entities in cases where profits have been wrongfully gained. *Id.* (quoting *Enforcement of Statutes, Regulations and Orders*, 123 FERC ¶ 61,156, at P 6 (2008)).

[863] *Id.* at 17, 61, 73.

[864] *Id.* at 73 (arguing that TranSource was forced to expend significant additional litigation resources through attorney and consultant fees to fight for the information and data that PSE&G hid from TranSource); *see also* TranSource Brief Opposing Exceptions at 82, 88.

[865] PJM Brief on Exceptions at 55-56; *see also* PJM Brief Opposing Exceptions at 57 (asserting that the waiver provisions in the System Impact Study Agreements, which TranSource voluntarily signed and agreed to be bound by, bar TranSource from obtaining monetary relief under a contract theory).

that TranSource is seeking monetary damages for numerous claims, including lost profits and monetary relief for process failures, Tariff violations, and PSE&G's alleged pattern of misconduct and misrepresentation.[866] PJM argues that TranSource's waiver of its right to consequential damages, including lost profits, is relevant and should preclude TranSource's requested monetary relief related to activities performed under the System Impact Study Agreements.[867] Further, PJM notes that the fact that TranSource is not entitled to the requested monetary relief pursuant to the FPA "may make the limitation of liability provision redundant," but not irrelevant to FPA section 206 actions.[868]

c. Briefs Opposing Exceptions

i. TranSource

276. TranSource asserts that any monetary relief from parties who were unjustly enriched as a result of the FPA violations by PJM and the PJM Transmission Owners would be limited to the "facilities and upgrades impacted by TranSource's Queue Positions Z2-053, Z2-069, and Z2-072."[869] TranSource explains that for any upgrades that would have been constructed pursuant to the TranSource Upgrade Requests that have subsequently been constructed, the PJM Transmission Owners benefitted from the return on equity earned for those additions to rate base and other market participants may have benefitted from lower congestion and from ARR revenues.[870] TranSource explains that for any upgrades that would have been constructed pursuant to the TranSource Upgrade Requests that were not constructed, FTR holders benefitted from increased congestion

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[866] PJM Brief on Exceptions at 55 (citing TranSource Post-Hearing Reply Brief at 86-89; TranSource Reply Brief at 89-90).

[867] *Id.* (citing Ex. PJM-0040 at 5, 11, 17 (TranSource System Impact Study Agreements) ("In no event will Transmission Provider [PJM], Transmission Owner(s) or other subcontractors employed by the Transmission Provider be liable for indirect, special, incidental, punitive, or consequential damages of any kind including loss of profits, whether arising under this System Impact Study Agreement or otherwise.")); *see also id.* at 56 (citing TranSource Reply Brief at 90-93; Ex. TS-001A at 93:9-15 (Rousselle Direct Test.); Ex. TS-080 at 13:12-19 (Seelhof Direct Test.); Ex. TS-109 at 4:17-5:3 (Seelhof Rebuttal Test.); Initial Decision, 162 FERC ¶ 63,007 at P 74).

[868] *Id.* at 55-56.

[869] TranSource Brief Opposing Exceptions at 72.

[870] *Id.*

(i.e., congestion that would have been resolved by the TranSource upgrades).[871] Further, TranSource argues that other entities may have been unjustly enriched by the FPA violations, and the Commission should employ its discretionary powers to fashion an appropriate remedy that addresses the unjust enrichment and makes TranSource whole.[872]

277. With regard to the limitation on liability provisions in the PJM Tariff and the System Impact Study Agreements, TranSource asserts that the Initial Decision appropriately found that the System Impact Study Agreement waiver provisions have "no legal moment" in this case.[873] TranSource argues that the waiver provisions do not insulate PJM from liability when PJM violates the FPA, by engaging in nontransparent and discriminatory behavior, and that the PJM Transmission Owners were unjustly enriched.[874] Further, TranSource argues that PJM failed to perform the TranSource System Impact Studies consistent with its Tariff, which negates the legal effect of the System Impact Study Agreement.[875] TranSource argues, therefore, that appropriate monetary relief should be granted.[876]

ii. PJM

278. PJM asserts that TranSource cannot obtain monetary damages under a contract theory, because the TranSource's Upgrade Requests were submitted under Part VI of the PJM Tariff, and thus are subject to the limitation of liability in section 10.2 of the Tariff.[877] PJM states that the Commission has held that section 10.2 of the Tariff "is a

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[871] *Id.*

[872] *Id.*

[873] *Id.* at 70-72.

[874] *Id.* at 70-71 (citing *High Island Offshore System, L.L.C.*, 88 FERC ¶ 61,266, at 61,832 (1999) ("parties bear responsibility for their own negligence and misconduct"); *PJM Interconnection, L.L.C.*, 139 FERC ¶ 61,183, at PP 11-12 (2012) (PJM's Tariff does not protect PJM from "gross negligence or intentional misconduct")).

[875] *Id.* at 70.

[876] *Id.* at 71-72 (arguing that the equities in this case justify an award of monetary relief and that such relief should come from all parties that were unjustly enriched as a result of the FPA violations by PJM and the Transmission Owners).

[877] PJM Brief Opposing Exceptions at 56.

broad limitation of liability that protects PJM from liability, other than due to gross negligence or intentional misconduct."[878] PJM argues that TranSource has not alleged gross negligence or intentional misconduct by PJM, and therefore section 10.2 bars TranSource from obtaining any monetary relief under the PJM Tariff.[879]

iii. PJM Transmission Owners

279. The PJM Transmission Owners argue that TranSource has failed to articulate any basis for monetary relief,[880] and TranSource is not entitled to monetary relief for lost business opportunities.[881] Further, the PJM Transmission Owners argue that TranSource previously conceded that the monetary damages it seeks are beyond the scope of Part II of the FPA.[882]

280. The PJM Transmission Owners assert that TranSource is not entitled to monetary relief on the basis of the Commission's enforcement authority, as the civil penalty authority under section 222 of the FPA in enforcement proceedings does not create a private right of action.[883] Also, the PJM Transmission Owners argue that TranSource is not entitled to any monetary relief, because TranSource put forth no evidence of any specific, actual damages and "[n]o evidence points to any monetary gain by PJM or the [PJM Transmission Owners] that [was] achieved by misconduct."[884]

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[878] *Id.* at 56-57 (quoting *PJM Interconnection, L.L.C.*, 139 FERC ¶ 61,183 at P 34.

[879] *Id.* at 57.

[880] PJM Transmission Owners Brief Opposing Exceptions at 32-33 (arguing that TranSource has failed to prove its claims and failed to satisfy the burden of a section 206 complaint).

[881] *Id.* at 32 ("TranSource failed to identify a single precedent that would support monetary relief for a lost business opportunity.").

[882] *Id.* at 32-33 (citing May 2016 Hearing Order, 155 FERC ¶ 61,154 at P 29 (2016) ("TranSource does not dispute that monetary damages are beyond the scope of the Commission's authority under Part II of the FPA.")).

[883] *Id.* at 33 (citing TranSource Brief on Exceptions at 58-61 (citing *Enforcement of Statutes, Regulations and Orders*, 123 FERC ¶ 61,156 at P 6); 16 U.S.C. § 824v(b) (2012)).

[884] *Id.* (quoting Initial Decision, 162 FERC ¶ 63,007 at P 80(m)).

281. With regard to TranSource's claim that Delmarva earned "unjust profits" as a result of the prioritization of its supplemental projects, the PJM Transmission Owners argue that the Initial Decision found correctly that the evidence does not show that Delmarva received any unjust profits; moreover, TranSource failed to take exception to this finding of fact.[885] Further, the PJM Transmission Owners argue that there was no intent to harm PJM, as Delmarva did not know, and could not have known, that TranSource's Upgrade Requests would require upgrades to the same facilities on which Delmarva had previously proposed supplemental projects.[886] Thus, the PJM Transmission Owners assert there is no evidence that Delmarva received any unjust profits from its supplemental projects.

iv. Trial Staff

282. Trial Staff argues that TranSource's request for monetary relief should be denied, because TranSource has failed to provide any precedent for awarding substantial monetary damages.[887]

283. Further, Trial Staff argues that no monetary relief is due TranSource for the erroneous prioritization of the Delmarva supplemental projects. Trial Staff explains that no unjust profits flowed to Delmarva as a result of the mistake because TranSource would not have been able to secure financing to pursue its project even if the prioritization error (which overestimated TranSource's costs by about $16.125 million) had not been made.[888] Trial Staff points to TranSource witness Mr. Rousselle's testimony that TranSource would not have been able to retain financing even if the total project cost had been reduced by $500 million.[889]

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[885] *Id.* at 19-20.

[886] *Id.* at 22 ("'There certainly was nothing improper done by PJM or the affected Transmission Owner . . . . [Delmarva] had no way of knowing that TranSource's waiver request may ultimately overlap their work.'") (quoting Ex. PJM-0002A at 59:7-18 (Egan Answering Test.)).

[887] Trial Staff Brief Opposing Exceptions at 4.

[888] *Id.* at 22-23 (citing Ex. PJM-0002A (Egan Answering Test.) (explaining that the prioritization error overestimated TranSource's costs by $16.125 million, which is less than 1.6 percent of the entire amount in controversy)).

[889] *Id.* at 23 (citing Tr. 468:13-18 (Rousselle)).

284. Finally, Trial Staff argues that the Commission should affirm that the power of the Commission to make a party whole is circumscribed by the FPA, and the FPA does not authorize reparations to those subjected to unreasonable rates nor damages to those injured by violations of the Act.[890] Trial Staff notes that the Commission has never exercised its broad remedial authority under section 309 of the FPA to order compensation to prevailing litigants not explicitly authorized by statute, in the absence of compelling circumstances such as legal error by the Commission.[891]

d. Commission Determination

285. We affirm the Presiding Judge's denial of TranSource's request for monetary relief, including relief for lost business opportunities and litigation-related expenses.[892] Further, because we reverse the Presiding Judge's finding of undue discrimination, we need not consider TranSource's arguments that it should be "made whole" for the alleged discrimination it endured.[893] Commission precedent recognizes that, while the Commission has broad remedial authority, it does not have the authority to grant monetary damages.[894] The Supreme Court has established that the FPA "does not authorize the Commission to award reparations to those subjected to unreasonable rates" nor "to award damages to those injured by violations of the Act."[895] Indeed, TranSource

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[890] *Id.* at 24 (citing Initial Decision, 162 FERC ¶ 63,007 at P 74 (citing *Montana-Dakota*, 341 U.S. at 260; *SCPSA v. FERC*, 850 F.2d at 794-95; *LSP-Cottage Grove*, 111 FERC ¶ 61,108 at P 45)).

[891] *Id.* (citing *TNA Merchant Projects, Inc. v. FERC*, 857 F.3d 354 (D.C. Cir. 2017) (and cases cited therein)).

[892] Initial Decision, 162 FERC ¶ 63,007 at PP 74, 80-81.

[893] TranSource Brief on Exceptions at 3, 23, 57-61.

[894] *Bachofer v. Calpine Corp.*, 134 FERC ¶ 61,100, at P 9 (2011) ("Monetary damages are also beyond the scope of the Commission's authority under Part II of the [FPA]."); *New England Power Pool*, 98 FERC ¶ 61,299, at 62,290 n.6 (2002) ("Under the [FPA], it is well established that the Commission has no authority to order reparations and can only set rates for the future.") (citing *Gulf States Utils. Co. v. Ala. Power Co.*, 824 F.2d 1465, 1471 (5th Cir. 1987)).

[895] *Montana-Dakota*, 341 U.S. at 260.

itself recognized that monetary damages are beyond the scope of the Commission's authority under Part II of the FPA.[896]

286. We also affirm the Presiding Judge's denial of TranSource's request for disgorgement of unjust profits, both from Delmarva for the queue prioritization error and from other participants to the proceeding who were unjustly enriched by the FPA violations.[897] The Commission does recognize an implied power to order disgorgement of unjust profits pursuant to section 309 of the FPA, when a party violates a rule, statute, regulation, or order and the violation is causally connected to unjust profits obtained by the violator.[898] However, we agree with the Presiding Judge that TranSource has not presented evidence that PJM or the PJM Transmission Owners received any monetary gain as a result of the alleged FPA violations. TranSource does not identify specific facilities constructed by the PJM Transmission Owners, on which they earned a return, that otherwise would not have been constructed if TranSource's queue positions had been properly prioritized.[899] Nor does TranSource provide any evidence on the specific

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[896] TranSource, LLC, Answer in Opposition to the PJM Interconnection, LLC's Motion to Dismiss the Amended and Restated Complaint, and Request for Leave to Answer and Answer to the PJM Transmission Owners' Protest to the Amended and Restated Complaint, Docket No. EL15-79-000, at 16 (filed Mar. 15, 2016) ("TranSource does not dispute that monetary 'damages' are beyond the scope of the Commission's authority under Part II of the FPA.") (Answer in Opposition); *see also* May 2016 Hearing Order, 155 FERC ¶ 61,154 at P 29. When it made the concession that the FPA does not provide for monetary "damages," TranSource asserted that it was not requesting "damages," but rather "any monetary relief available," including unjust profits. Answer in Opposition at 16-17. Commission precedent does not recognize a distinction between "monetary damages" and "monetary relief." We believe that lost business opportunities and other litigation-related expenses, whether described as "monetary damages" or "monetary relief" are outside of the scope of the FPA. We address TranSource's request for unjust profits separately, above.

[897] Initial Decision, 162 FERC ¶ 63,007 at P 80(m).

[898] *LPSC*, 160 FERC ¶ 63,009 at P 26 ("[T]he Commission's remedy of choice for violations of the FPA other than violations of the requirement that rates be just, reasonable, and non-discriminatory is to mandate that the entity that committed the violation pay restitution of profits that it gained as a result of that violation. The authority for this remedy is section 309 of the FPA . . . .").

[899] Further, the evidence shows that Delmarva announced its queue positions before TranSource filed to convert its Attachment S projects to Attachment EE requests for IARRs. Tr. 470-74 (Rousselle). TranSource admits that there is no evidence that

amount of money it alleges the PJM Transmission Owners unjustly earned. In particular, as Trial Staff points out, even if the error in prioritizing the Delmarva supplemental projects in the queue had not been made, TranSource would not have been able to retain financing and move forward with its queue positions; thus there is no evidence unjust profits flowed to Delmarva or any other participant as a result of the mistake.[900]

287. Because we find that monetary damages are not available pursuant to the FPA and that TranSource failed to demonstrate that any party unjustly profited, we need not reach the question of the applicability of the limitation on liability provisions in Section 10.2 of the PJM Tariff and Section 12 of the TranSource System Impact Study Agreements to TranSource's claims for monetary relief.

The Commission orders:

(A) The Initial Decision is hereby affirmed in part and reversed in part, as discussed in the body of this order.

(B) PJM is hereby directed to make a compliance filing within 45 days, as discussed in the body of this order.

By the Commission. Commissioner McNamee is not participating.

(S E A L)

Kimberly D. Bose,
Secretary.

Delmarva knew when it announced its supplemental projects that TranSource would later request to convert its projects to Attachment EE requests for IARRs. *Id.* at 474:5-9.

[900] Trial Staff Brief Opposing Exceptions at 22-23 (citing Ex. PJM-0002A at 57:13-15 (Egan Answering Test.) (explaining that the prioritization error overestimated TranSource's costs by $16.125 million, which is less than 1.6 percent of the entire amount in controversy); Tr. 468:13-18 (Rousselle) (admitting that even if the cost estimates for the TranSource queue positions had been reduced by $500 million, TranSource would not have been able to retain financing)). Further, TranSource has not explained exactly how modeling TranSource's projects after Delmarva's in the queue affected the potential return Delmarva would earn on its supplemental projects, which are not RTEP projects, but rather are projects identified directly by the Transmission Owners to meet their own needs within their respective zones.