195 FERC ¶ 61,209
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Laura V. Swett, Chairman;
David Rosner, Lindsay S. See,
Judy W. Chang, and David LaCerte.

PJM Interconnection, L.L.C. Allegheny Electric Cooperative, Inc. American Transmission Systems, Incorporated Atlantic City Electric Company Baltimore Gas and Electric Company Delmarva Power & Light Company Duke Energy Ohio, Inc. Duke Energy Kentucky, Inc. East Kentucky Power Cooperative, Inc. Essential Power Rock Springs, LLC Hudson Transmission Partners, LLC Jersey Central Power & Light Company Mid-Atlantic Interstate Transmission, LLC Neptune Regional Transmission System, LLC Old Dominion Electric Cooperative PECO Energy Company PPL Electric Utilities Corporation Potomac Electric Power Company Public Service Electric and Gas Company Rockland Electric Company Trans-Allegheny Interstate Line Company Transource West Virginia, LLC UGI Utilities, Inc. Monongahela Power Company The Potomac Edison Company Commonwealth Edison Company Commonwealth Edison Company of Indiana, Inc. The Dayton Power and Light Company AEP Appalachian Transmission Company, Inc. AEP Indiana Michigan Transmission Company, Inc. AEP Kentucky Transmission Company, Inc. AEP Ohio Transmission Company, Inc. AEP West Virginia Transmission Company, Inc. Appalachian Power Company Indiana Michigan Power Company	Docket Nos. EL25-49-002 EL25-49-000

Kentucky Power Company
Kingsport Power Company
Ohio Power Company
Wheeling Power Company
Duquesne Light Company
Virginia Electric and Power Company
Linden VFT, LLC
City of Cleveland, Department of Public Utilities,
Division of Cleveland Public Power
City of Hamilton, OH
Southern Maryland Electric Cooperative, Inc.
Ohio Valley Electric Corporation
AMP Transmission, LLC
Silver Run Electric, LLC
NextEra Energy Transmission MidAtlantic Indiana, Inc.
Wabash Valley Power Association, Inc.
Keystone Appalachian Transmission Company

Large Loads Co-Located at Generating Facilities	AD24-11-001
Constellation Energy Generation, LLC v. PJM Interconnection, L.L.C.	EL25-20-001 (consolidated)
PJM Interconnection, L.L.C.	ER26-1479-000

ORDER ON REHEARING, CLARIFICATION, COMPLIANCE FILING, AND PAPER HEARING

(Issued June 18, 2026)

1. On December 18, 2025, the Commission issued an order in the show cause proceeding in Docket No. EL25-49-000, et al., pursuant to section 206 of the Federal Power Act (FPA),[1] finding PJM Interconnection, L.L.C.'s (PJM) Tariff unjust and unreasonable because it does not contain provisions addressing with sufficient clarity or consistency the rates, terms, and conditions of service that apply to generators serving

[1] 16 U.S.C. § 824e.

Co-Located Load and Eligible Customers taking transmission service on behalf of Co-Located Load.[2]

2. The Commission directed PJM to file, within 60 days of the date of issuance of the order, a compliance filing to revise its Tariff to set forth specific terms and conditions that an Interconnection Customer in PJM seeking to serve Co-Located Load must follow to effectuate a Co-Location Arrangement. In addition, the Commission directed PJM to submit in its compliance filing revisions to its Tariff to require that the Eligible Customer taking transmission service on behalf of the Co-Located Load takes one of three transmission services: (1) Network Integration Transmission Service (NITS), including a new interim, non-firm transmission service available until all Network Upgrades necessary to provide the requested NITS are complete (Interim NITS), (2) a new Firm Contract Demand (FCD) transmission service, or (3) a new Non-Firm Contract Demand (NFCD) transmission service.[3] The Commission established a paper hearing to determine the just and reasonable rates, terms, and conditions for these new transmission services.

3. The Commission also found the Behind the Meter Generation (BTMG) rules in the Tariff to be no longer just and reasonable, and the Commission directed PJM to submit in its compliance filing revisions to its Tariff to revise the retail BTMG netting rules and to implement a transition process for existing BTMG participants.[4]

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[2] *PJM Interconnection, L.L.C.*, 193 FERC ¶ 61,217, at P 2 (2025) (December Order). The December Order defined the Tariff as PJM's Open Access Transmission Tariff (OATT), the Amended and Restated Operating Agreement of PJM, and the Reliability Assurance Agreement Among Load Serving Entities in the PJM Region. See Appendix for tariff records accepted in this order.

[3] Capitalized terms used but not otherwise defined in this order have the meanings ascribed to them in the Tariff.

[4] PJM defines BTMG as "a generation unit that delivers energy to load without using the Transmission System or any distribution facilities (unless the entity that owns or leases the distribution facilities has consented to such use of the distribution facilities and such consent has been demonstrated to the satisfaction of the Office of the Interconnection); provided, however, that [BTMG] does not include: (i) at any time, any portion of such generating unit's capacity that is designated as a Generation Capacity Resource; or (ii) in an hour, any portion of the output of such generating unit that is sold to another entity for consumption at another electrical location or into the PJM Interchange Energy Market." PJM, Intra-PJM Tariffs, OATT, § I.1 Definitions – A-B (21.0.0) (defining BTMG).

4. On January 16, 2026, Exelon and FirstEnergy[5] timely filed a request for rehearing of the December Order. On January 20, 2026, Industrials[6] timely filed a request for clarification or, in the alternative, rehearing. On January 20, 2026, Constellation Energy Generation, LLC (Constellation) filed a request for clarification or, in the alternative, rehearing. On January 20, 2026, PIOs[7] filed a limited request for clarification. On January 20, 2026, Joint Parties[8] filed a request for clarification. On February 9, 2026, Andrew Hinz filed a late request for rehearing.

5. On February 23, 2026, in Docket No. ER26-1479-000, PJM filed its second compliance filing as directed by the December Order.

6. On February 23, 2026, in Docket No. EL25-49-000, PJM and the Indicated TOs[9] each submitted an initial brief to address the Commission's paper hearing questions with

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[5] The request for rehearing was filed only by (1) Exelon Corporation (Exelon), on behalf of Atlantic City Electric Company, Baltimore Gas and Electric Company, Commonwealth Edison Company, Commonwealth Edison Company of Indiana, Inc., Delmarva Power & Light Company, PECO Energy Company, and Potomac Electric Power Company; and (2) FirstEnergy Service Company, as agent for its affiliates American Transmission Systems, Incorporated, Jersey Central Power & Light Company, Mid-Atlantic Interstate Transmission LLC, Keystone Appalachian Transmission Company, The Potomac Edison Company, Monongahela Power Company and Trans-Allegheny Interstate Line Company (collectively, FirstEnergy).

[6] As to the request for clarification or, in the alternative, rehearing, Industrials are the PJM Industrial Customer Coalition (PJM ICC) and the Industrial Energy Consumers of America (IECA).

[7] As to the request for clarification, PIOs are EarthJustice, Environmental Defense Fund, and Sierra Club.

[8] As to the request for clarification, Joint Parties are Eolian LP, Antora Energy LLC, and Verrus LLC.

[9] We refer to the Indicated PJM Transmission Owners that submitted briefing jointly in the paper hearing as Indicated TOs. The transmission owners that submitted briefing jointly in the paper hearing are: American Electric Power Service Corporation on behalf of its affiliates, Appalachian Power Company, Indiana Michigan Power Company, Kentucky Power Company, Kingsport Power Company, Ohio Power Company, Wheeling Power Company, AEP Appalachian Transmission Company, AEP Indiana Michigan Transmission Company, AEP Kentucky Transmission Company, AEP Ohio Transmission Company, and AEP West Virginia Transmission Company; The Dayton Power and Light Company d/b/a AES Ohio; Dominion Energy Services, Inc. on behalf of Virginia Electric and Power Company d/b/a Dominion Energy Virginia; Duke

respect to the new transmission services. On March 25, 2026, and on April 24, 2026, parties submitted response briefs and reply briefs, respectively.

7. In this order, we address the requests for rehearing and clarification of the December Order, PJM's compliance filing, and the paper hearing on the new transmission services. Pursuant to *Allegheny Defense Project v. FERC*,[10] the rehearing requests filed in this proceeding may be deemed denied by operation of law. However, as permitted by section 313(a) of the FPA,[11] we are modifying the discussion in the December Order and setting aside the order, in part, as discussed below.[12] In addition, we are granting, in part, and denying, in part, the requests for clarification.

8. Next, we find that PJM's compliance filing partially complies with the directives of the December Order. As such, we accept in part and reject in part PJM's proposed Tariff revisions, and we direct PJM to file, within 60 days of the date of issuance of this order, a further compliance filing.

9. Finally, in response to the record developed in the paper hearing, we establish as just and reasonable certain rates, terms, and conditions for the new transmission services directed in the December Order (i.e., Interim NITS, FCD transmission service, and NFCD transmission service). We direct PJM to file, within 60 days of the date of issuance of this order, a compliance filing to revise its Tariff. We also direct the PJM transmission owners to file, within 60 days of the date of issuance of this order, a compliance filing to revise the Tariff.

Energy Business Services, LLC for Duke Energy Kentucky, Inc. and Duke Energy Ohio, Inc.; Duquesne Light Company; East Kentucky Power Cooperative; Exelon; FirstEnergy; PPL Electric Utilities Corporation; Public Service Electric and Gas Company; Rockland Electric Company; and the Southern Maryland Electric Cooperative.

[10] 964 F.3d 1 (D.C. Cir. 2020) (en banc).

[11] 16 U.S.C. § 825*l*(a) ("Until the record in a proceeding shall have been filed in a court of appeals, as provided in subsection (b), the Commission may at any time, upon reasonable notice and in such manner as it shall deem proper, modify or set aside, in whole or in part, any finding or order made or issued by it under the provisions of this chapter.").

[12] *Allegheny Def. Project*, 964 F.3d at 16-17.

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I. Background

A. February Order

10. In February 2025, the Commission instituted a new proceeding in Docket No. EL25-49-000 to examine whether the Tariff remains just and reasonable and not unduly discriminatory or preferential without provisions addressing with sufficient clarity or consistency the rates, terms, and conditions of service that apply to co-location arrangements.[13] The February Order defined Co-Located Load as a "'configuration [that] refers to end-use customer load that is physically connected to the facilities of an existing

[13] *PJM Interconnection, L.L.C.*, 190 FERC ¶ 61,115, at P 2 (2025) (February Order).

or planned Customer Facility on the Interconnection Customer's side of the Point of Interconnection to the PJM Transmission System.'"[14] As in the February Order, when referring to both the Co-Located Load and the associated generator, we will use the term Co-Location Arrangement.

11. As explained in the February Order, Co-Location Arrangements are becoming increasingly common in PJM and, since the issuance of the February Order, entities continue to raise issues involving Co-Location Arrangements with the Commission.[15] The Commission set forth, in the February Order, the principles relating to the Commission's jurisdiction over the matters relevant to Co-Location Arrangements.[16] The Commission also made several preliminary findings about the justness and reasonableness of the Tariff. First, the Commission found that the Tariff appears to be unjust and unreasonable or unduly discriminatory or preferential because it does not contain provisions addressing with sufficient clarity or consistency the rates, terms, and

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[14] *Id.* P 3 & n.4. We note that, in the February Order, the Commission adopted this definition from the Guidance Document that PJM developed on Co-Located Load. *See id.* PJM rescinded this document pending Commission guidance in this docket. PJM March 24, 2025 Response at 33. Prior to PJM's transition to its new interconnection process, PJM used the terms Interconnection Customer and Generation Interconnection Customer. The Tariff defines Generation Interconnection Customer as "an entity that submits an Interconnection Request to interconnect a new generation facility or to increase the capacity of an existing generation facility interconnected with the Transmission System in the PJM Region." PJM, Intra-PJM Tariffs, OATT, § I.1 Definitions – G – H) (9.0.1) (defining Generation Interconnection Customer). The Tariff's new rules for generation interconnection, effective January 3, 2023, utilize the terms Project Developer and Generation Project Developer. The Tariff defines Generation Project Developer as "an entity that submits a Generation Interconnection Request to interconnect a new generation facility or to increase the capacity of an existing generation facility interconnected with the Transmission System in the PJM Region." PJM, Intra-PJM Tariffs, OATT, § VIII subpt. A 400 (Definitions G) (0.1.0) (defining Generation Project Developer). For simplicity, in this order, and consistent with the February Order and December Order, the Commission will use the term Interconnection Customer to refer to both the Tariff definitions of Generation Interconnection Customer and Generation Project Developer.

[15] *See, e.g.*, *PJM Interconnection, L.L.C.*, 191 FERC ¶ 61,112 (2025) (accepting necessary studies agreement). The February Order consolidated the new show cause proceeding with a pending complaint proceeding in Docket No. EL25-20-000 involving Co-Located Load.

[16] February Order, 190 FERC ¶ 61,115 at P 66.

conditions of service that apply to Co-Location Arrangements.[17] In addition, the Commission preliminarily found that this lack of applicable Tariff provisions raises the potential for undue discrimination or preferential treatment.[18]

12. As to specific concerns raised regarding Co-Location Arrangements, the Commission found that the Tariff may be unjust, unreasonable, unduly discriminatory, or preferential because it does not specify the transmission service that Co-Location Arrangements must take, if any, or otherwise provide a process to ensure that Co-Location Arrangements are paying for the benefits they receive from the transmission system consistent with cost causation principles, which provide that all Commission-jurisdictional rates and charges must "reflect to some degree the costs actually caused by the customer who must pay for them," and that costs must be allocated in a manner that is at least roughly commensurate with the benefits that entity receives.[19] The Commission also found that the absence of rates, terms, and conditions of interconnection service specific to Co-Location Arrangements, and, especially regarding studies of the impacts of those arrangements, may render the Tariff unjust and unreasonable or unduly discriminatory or preferential.[20] Moreover, the Commission found that the absence of rates, terms, and conditions governing the use and sale of ancillary services and black start services by Co-Location Arrangements may render the Tariff unjust and unreasonable or unduly discriminatory or preferential.[21] The Commission directed briefing to build a record on these issues as well as a possible replacement rate.

B. <u>December Order</u>

13. In the December Order, the Commission found the Tariff unjust and unreasonable because it does not contain provisions addressing with sufficient clarity or consistency the rates, terms, and conditions of service that apply to Interconnection Customers serving Co-Located Load and Eligible Customers taking transmission service on behalf

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[17] *Id.* P 74.

[18] *Id.* P 75.

[19] *Id.* PP 74-78 (citing *Midwest ISO Transmission Owners v. FERC*, 373 F.3d 1361, 1368 (D.C. Cir. 2004); *Ill. Com. Comm'n v. FERC*, 576 F.3d 470, 476 (7th Cir. 2009)).

[20] *Id.* P 79.

[21] *Id.* P 82.

of Co-Located Load.[22] The Commission explained that the absence of such provisions leaves entities unable to determine what steps they must take to effectuate Co-Location Arrangements and creates uncertainty that has resulted in disparate treatment in PJM because transmission owners have taken different approaches to performing the necessary steps that apply to Interconnection Customers seeking to serve Co-Located Load through a Co-Location Arrangement.[23] The Commission found that the absence of such provisions also introduces the risk that Co-Located Load may benefit from regulation and black start services without contributing to cost recovery for such services.[24]

14. Specifically, the Commission found the Tariff unjust and unreasonable because there is a lack of sufficient clarity or consistency as to the rates, terms, and conditions of service that apply to Interconnection Customers serving Co-Located Load.[25] As part of the replacement rate, the Commission directed PJM to file revisions to the generation interconnection procedures of the Tariff, including to require an Interconnection Customer who will use its generator to serve Co-Located Load to specify an Eligible Customer who will take transmission service on behalf of the Co-Located Load, and revisions to clarify its Necessary Study process.[26] The Commission also directed PJM to revise its Tariff to clarify that an Interconnection Customer seeking to serve a Co-Located Load with a newly interconnecting generator may: (1) request interconnection service at a level below its maximum facility output; (2) use existing procedures in the Tariff to accelerate the study of the interconnection service request if the request has no cost allocation for Network Upgrades and does not require further studies; (3) request provisional interconnection service; and (4) request Surplus Interconnection Service.[27]

15. The Commission also found the Tariff unjust and unreasonable because it does not include transmission services that reflect Eligible Customers taking service on behalf of Co-Located Loads that are willing and able to limit their energy withdrawals from the transmission system under certain conditions.[28] The Commission further found the Tariff

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[22] December Order, 193 FERC ¶ 61,217 at P 175.

[23] *Id.*

[24] *Id.*

[25] *Id.* P 176.

[26] *Id.* PP 176, 187-192, 225-230.

[27] *Id.* PP 176, 231-235.

[28] *Id.* PP 177, 193.

unjust and unreasonable because it does not address charges related to Co-Located Loads' use of regulation and black start services, which introduces the risk that Co-Located Load may benefit from regulation and black start services without contributing to cost recovery for such services and, thereby, the risk that costs may be allocated entirely to other transmission customers and passed through to residential customers, among others.[29] The Commission found that NITS charged on a gross demand basis is one just and reasonable transmission service option for Eligible Customers taking transmission service on behalf of Co-Located Loads, but it is not the only option.[30] The Commission thus directed PJM to revise its Tariff to create three new transmission services (i.e., Interim NITS, FCD transmission service, and NFCD transmission service) that reflect that Eligible Customers taking service on behalf of Co-Located Loads are willing and able to limit their energy withdrawals from the transmission system under certain conditions.[31] Specific to these new transmission services, the Commission established paper hearing procedures to determine the just and reasonable rates, terms, and conditions for such services.[32]

16. The Commission also found the existing retail BTMG netting rules in the Tariff to be unjust and unreasonable. PJM's existing Tariff allows load serving entities (LSE) that provide service to loads with qualifying BTMG to reduce their costs by netting output from BTMG in the calculation of their peak demand for the purpose of determining NITS charges.[33] The Commission explained that these retail BTMG netting rules may lead to both reliability and resource adequacy risks because PJM, per its Tariff, is obligated to serve transmission customers using BTMG but does not consider such customers' full gross load in transmission and resource adequacy planning.[34] Thus, the Commission directed PJM to revise its retail BTMG netting rules.[35] In recognizing concerns about the potential impacts on existing BTMG customers, the Commission directed PJM to maintain the current retail BTMG netting rules for customers that fall below a new MW materiality threshold for the amount of load at a particular electrical location that Network Customers may net using BTMG and to implement a two-part transition process

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[29] *Id.* P 177.

[30] *Id.* PP 195-196.

[31] *Id.* PP 178, 200-202, 206, 208-218.

[32] *Id.* PP 178, 194, 203, 207, 219.

[33] *Id*. P 7.

[34] *Id.* PP 179, 186.

[35] *Id.* PP 179, 221.

for retail BTMG including: (1) the establishment of a three-year transition period; and (2) the ability to grandfather certain entities with existing contracts.[36]

II. Notice of Filings and Responsive Pleadings

A. PJM's Compliance Filing

17. Notice of PJM's compliance filing in Docket No. ER26-1479-000 was published in the *Federal Register*, 91 Fed. Reg. 9849 (Feb. 27, 2026) with interventions and protests due on or before March 16, 2026.

18. Timely motions to intervene were filed by American Forest & Paper Association (AF&PA); PJM Industrial Customer Coalition (PJM ICC); Industrial Energy Consumers of America (IECA); Monitoring Analytics, LLC, acting in its capacity as the Independent Market Monitor for PJM (Market Monitor); LS Power Development, LLC; Enchanted Rock, LLC (Enchanted Rock); Illinois Municipal Electric Agency; American Clean Power Association; New Jersey Division of Rate Counsel; PJM Power Providers Group; American Electric Power Service Corporation; Exelon Corporation; Constellation Energy Generation, LLC (Constellation); Public Citizen, Inc.; East Kentucky Power Cooperative, Inc.; Clean Energy Buyers Association; Edison Electric Institute; Maryland Office of People's Counsel (Maryland OPC); EDF Power Solutions, Inc. (EDFps); Solar Energy Industries Association (SEIA); Advanced Energy United (AEU); Buckeye Power, Inc.; Electric Power Supply Association; Duquesne Light Company; North Carolina Electric Membership Corporation; New Jersey Board of Public Utilities; Appalachian Voices; Pennsylvania Office of Consumer Advocate; Public Service Electric and Gas Company, PSEG Power LLC and PSEG Energy Resources & Trade LLC (collectively, PSEG Companies); Old Dominion Electric Cooperative (ODEC); National Railroad Passenger Corporation (Amtrak); Dominion Energy Services, Inc.; Crusoe Energy Systems, Inc. (Crusoe); Consolidated Edison Company of New York, Inc.; PPL Electric Utilities Corporation (PPL); Rockland Electric Company; Illinois Industrial Energy Consumers; American Municipal Power, Inc. (AMP); Grid Reform; Invenergy Renewables LLC and Invenergy Thermal LLC (Invenergy); Data Center Coalition (DCC); Eastman Chemical Company (Eastman); Northern Virginia Electric Cooperative, Inc. (NOVEC); Vistra Corp. (Vistra); Mainspring Energy; Northeastern REMC; Borough of Chambersburg, Pennsylvania; Capital Power Corporation; Eolian, L.P. (Eolian); Antora Energy, Inc. (Antora); Calibrant Energy (Calibrant); Convergent Energy and Power (Convergent); and Verrus, LLC (Verrus).

19. Motions to intervene out of time were filed by Arkon Energy Hannibal and Office of the Illinois Attorney General.

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[36] *Id.* PP 179, 221, 223-224.

20. Timely comments and/or protests were filed by Eastman; EDFps; Digital Power Network; Vistra; Maryland OPC; AEU/SEIA; Eolian, Antora, Calibrant, Convergent, Mainspring, and Verrus (together, Joint Parties); Calibrant, Antora, Convergent, Eolian, and Mainspring (together, BTMG Parties); Invenergy; Energy Artisans, LLC (Energy Artisans); DCC; PJM ICC, IECA, AF&PA (collectively, Industrials) and Amtrak (Industrials/Amtrak); Digital Power Network; Crusoe; AMP; Appalachian Voices; and Constellation.

21. On April 8, 2026, Constellation filed a motion for leave and supplemental protest in this compliance proceeding and in Docket No. ER26-1088-000. On April 14, 2026, Exelon filed an answer to Constellation's motion. On April 24, 2026, Indicated TOs filed a motion for leave to answer and answer to certain protests and comments. On May 8, 2026, the BTMG Parties and Industrials/Amtrak each filed a motion for leave to answer and answer the Indicated TOs' April 24 answer. On May 12, 2026, Eastman filed a motion for leave to answer and answer the Indicated TOs' April 24 answer. On June 3, 2026, Indicated TOs filed a motion for leave to answer and answer.

22. Several parties filed briefs for the paper hearing in Docket No. EL25-49-000 and filed these submissions in this compliance proceeding as well. Specifically, in this compliance proceeding: on March 25, 2026, Enchanted Rock filed its reply brief; on March 26, 2026, Alliance to Save Energy filed comments; and on April 24, 2026, Earthjustice filed its reply brief.

B. <u>Paper Hearing on New Transmission Services</u>

23. On February 23, 2026, in Docket No. EL25-49-000, PJM and Indicated TOs each submitted an initial brief. On March 25, 2026, response briefs were submitted by: Market Monitor; Geronimo Power, LLC; AEU/SEIA; Constellation; Eolian, Antora, Calibrant, Convergent, Mainspring, Verrus, and U.S. Energy Storage Coalition (collectively, Joint Co-Location Developers); Vistra; ODEC; Enchanted Rock; Indicated TOs; Industrials/Amtrak; NOVEC; DCC; and Alliance to Save Energy (Alliance). On April 24, 2026, reply briefs were submitted by: Earthjustice; ODEC; PJM; Maryland OPC; Constellation; Indicated TOs; Joint Co-Location Developers; and Industrials/Amtrak. On May 7, 2026, Enchanted Rock filed a motion for leave to answer and answer to PJM's reply brief. On May 11, 2026, Constellation filed a motion for leave to answer and answer to PJM's and Indicated TOs' reply briefs. On May 21, 2026, Geronimo Power filed a motion for leave to answer and answer to PJM's and Indicated TOs' reply briefs. On May 28, 2026, Indicated TOs filed a motion for leave to answer and answer to various reply briefs and Constellation's May 11 answer.

24. On December 29, 2025, American Clean Power Association filed a motion to intervene out of time in this proceeding. On January 12, 2026, Vitol, Inc. filed a motion to intervene out of time in this proceeding. On January 13, 2026, Pennsylvania Office of

Consumer Advocate filed a motion to intervene out of time in this proceeding. On January 16, 2026, Voltus, Inc. filed a motion to intervene out of time in this proceeding. On January 16, 2026, Emerald AI submitted comments out-of-time in Docket No. EL25-49-000. On January 26, 2026, Andrew D. Hinz filed a motion to intervene out of time and comments. On March 20, 2026, Amtrak and AF&PA each filed a motion to intervene out of time in this proceeding. On March 25, 2026, Calibrant, Convergent, Verrus, and U.S. Energy Storage Coalition filed a motion to intervene out of time in this proceeding.

III. <u>Procedural Matters</u>

25. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2025), the notices of intervention and timely, unopposed motions to intervene in Docket Nos. ER26-1479-000 and EL25-49-000 serve to make the entities that filed them parties to these proceedings.

26. Pursuant to Rule 214(d) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214(d), we grant the late-filed motions to intervene in Docket Nos. ER26-1479-000 and EL25-49-000 given these entities' interests in the proceedings, the early stage of the proceedings, and the absence of undue prejudice or delay. Interventions in Docket No. EL25-49-000 are prospective only and such entities may not challenge the December Order.

27. We note that Verrus did not intervene until after the December Order. When, as here, late intervention is sought after the issuance of a dispositive order, the prejudice to other parties and burden upon the Commission of granting the late intervention may be substantial. Thus, movants bear a higher burden to demonstrate good cause for granting such late intervention.[37] Verrus indicates the proceeding has changed significantly with the initiation of the paper hearing proceeding.[38] We do not find this explanation to be sufficient to meet the higher burden to show good cause for granting intervention following a dispositive order. As discussed above, we grant Verrus's motion to intervene as-of the filing date (March 25, 2026); however, we dismiss it to the extent Verrus joins Eolian and Antora in the request for clarification of the December Order.[39]

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[37] *PJM Interconnection, L.L.C.*, 167 FERC ¶ 61,209, at P 24 (2019); *PJM Interconnection, L.L.C.*, 157 FERC ¶ 61,193, at P 10 (2016).

[38] Reply Brief of Joint Co-Location Developers and Motion to Intervene Out-of-Tome of Calibrant, Convergent, U.S. Energy Storage Coalition, and Verrus at 6.

[39] *PJM Interconnection, L.L.C.*, 157 FERC ¶ 61,193 at P 10; *Pac. Gas & Elec. Co.*, 100 FERC ¶ 61,097, at P 5 (2002).

28. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2025), prohibits an answer to a protest or answer unless otherwise ordered by the decisional authority. We accept the answers submitted in Docket Nos. EL25-49-000 and in ER26-1479-000, as well as Constellation's supplemental protest, because they have provided information that assisted us in our decision-making process.

29. On February 2, 2026, Constellation filed a motion for leave and answer to Exelon and FirstEnergy's request for rehearing. On February 12, 2026, Exelon and FirstEnergy filed an answer in opposition to that motion. On February 19, 2026, the Pennsylvania Office of Consumer Advocate filed a motion for leave to answer and answer in support of Industrials' request for clarification or rehearing.[40] On February 5 and March 9, 2026, respectively, Market Monitor and PJM filed answers and motions for leave to answer Constellation's request for clarification or rehearing. On February 20 and March 24, 2026, Constellation filed motions for leave and answers to, respectively, Market Monitor's and PJM's answers. Rule 713(d) of the Commission's Rules of Practice and Procedure[41] prohibits an answer to a request for rehearing.[42] Accordingly, we deny these motions and we reject these answers filed by Constellation, Exelon and FirstEnergy, Pennsylvania Office of Consumer Advocate, Market Monitor, and PJM.[43]

30. On February 9, 2026, Andrew Hinz filed a request for rehearing. Pursuant to section 313(a) of the FPA,[44] an aggrieved party must file an application for rehearing within 30 days after the issuance of the Commission's order; in this case, that deadline is

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[40] Pennsylvania Office of Consumer Advocate is not a party to this proceeding with respect to rehearing or clarification of the December Order and therefore may not file an answer to a request for rehearing or clarification.

[41] 18 C.F.R. § 385.713(d)(1) (2025).

[42] *Id.*

[43] We note that the Pennsylvania Office of Consumer Advocate's, Market Monitor's, and PJM's motions and answers responded to requests for clarification and, in the alternative, rehearing. Because the Commission has discretion in how to characterize pleadings and examines the substance of pleadings, we construe these pleadings as ultimately functioning in substance to respond to requests for rehearing and thus treat them as such. *Sw. Power Pool, Inc.*, 182 FERC ¶ 61,083, at P 14 (2023).

[44] 16 U.S.C. § 825*l*(a).

no later than 5:00 PM U.S. Eastern Time[45] on January 19, 2026. Because the 30-day rehearing deadline is a statutory requirement, it cannot be waived or extended.[46] Therefore, we reject Andrew Hinz's request for rehearing as untimely.

IV. Requests for Rehearing and/or Clarification

31. As discussed further below, we sustain our finding that the Tariff is unjust and unreasonable because it does not contain provisions addressing with sufficient clarity or consistency the rates, terms, and conditions of service that apply to Interconnection Customers serving Co-Located Load and Eligible Customers taking transmission service on behalf of Co-Located Load.[47] We also sustain our finding that the Tariff is unjust and unreasonable because it does not include transmission services that reflect the willingness and ability of an Eligible Customer taking service on behalf of a Co-Located Load to limit its energy withdrawals from the transmission system under certain conditions.[48] As a replacement rate, we continue to direct PJM to establish the new transmission services discussed in the December Order.[49]

32. We also set aside, in part, the December Order; we find that requiring Eligible Customers taking transmission service on behalf of load with BTMG to take NITS, without the option to instead take such alternative transmission services, would be unjust and unreasonable for the same reasons we made the same finding in the December Order with respect to Eligible Customers taking transmission service on behalf of Co-Located Load. As a replacement rate, we direct PJM to revise its Tariff to extend the new transmission services to Eligible Customers taking service on behalf of load with BTMG.

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[45] The Commission's regular business hours end at 5:00 p.m., U.S. Eastern Time. 18 C.F.R. § 375.101(c) (2025); 18 C.F.R. § 385.2003(c) (2025); FERC, *eFiling User Guide* (May 23, 2024), https://www.ferc.gov/media/efiling-user-guide.

[46] *See, e.g.*, *City of Campbell v. FERC*, 770 F.2d 1180, 1183 (D.C. Cir. 1985) ("The 30-day time requirement of the [FPA] is as much a part of the jurisdictional threshold as the mandate to file for a rehearing."); *Bos. Gas Co. v. FERC*, 575 F.2d 975, 977-98, 979 (1st Cir. 1978) (describing identical rehearing provision of Natural Gas Act as "a tightly structured and formal provision" and holding that "[n]either the Commission or the courts are given any form of jurisdictional discretion").

[47] December Order, 193 FERC ¶ 61,217 at P 159.

[48] *Id.*

[49] *Id.* P 160.

33. We also continue to find that PJM's retail BTMG netting rules are unjust and unreasonable.[50] We continue to direct PJM to revise the Tariff's retail BTMG netting rules.[51] We also set aside, in part, the December Order; we find that it is just and reasonable to allow certain cogeneration Qualifying Facilities (QFs) that are Network Customers to be able to net by using BTMG, without being subject to the new materiality threshold, if they demonstrate that they are integrated with load such that, when their generating facility trips offline, the load follows.

34. We also continue to direct PJM to clarify its interconnection procedures and agreements to ensure that it is clear to both new and existing Interconnection Customers how to interconnect in a Co-Location Arrangement.[52]

A. Jurisdiction

1. Sales for Resale in Interstate Commerce

a. December Order

35. In the December Order, the Commission found that several aspects of Co-Location Arrangements fall squarely within the jurisdiction of the states. In particular, the Commission affirmed that "states have authority over their generation resource mix, including through their siting authority" and further explained that "[t]his authority means that which generating facilities are sited and allowed to serve Co-Located Load is also a question of state law."[53] In addition, the Commission "decline[d] in this proceeding to comprehensively address jurisdictional matters regarding the interconnection of retail loads served through a Co-Location Arrangement to the interstate transmission system."[54]

b. Request for Clarification and/or Rehearing

36. Constellation requests that the Commission clarify that the Commission has jurisdiction over the wholesale sale of energy by a generator to a retail supplier even if the retail supplier then resells that energy to a Co-Located Load. Constellation states that

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[50] *Id.* P 186.

[51] *Id.* PP 221-224.

[52] *Id.* P 161.

[53] *Id.* P 169.

[54] *Id*. P 170.

the December Order is unclear in that it states that "states have authority over their generation resource mix, including through their siting authority" and that "which generating facilities are sited *and allowed to serve Co-Located Load* is also a question of state law."[55] Constellation explains that generators often do not serve Co-Located Load directly and instead sell electricity at wholesale to an entity, such as a retail supplier, that will then engage in the ultimate retail sale to the Co-Located Load. In such circumstances, Constellation argues that such sales for resale are exclusively within the Commission's jurisdiction.[56]

c. Determination

37. In response to Constellation's request for clarification or rehearing, we reiterate that, where a generator sells electricity at wholesale in interstate commerce to another entity that then resells that electricity at retail to a Co-Located Load, the generator's sale for resale is exclusively within the Commission's jurisdiction.[57] Thus, state authority does not extend to the wholesale sale of energy by a generator to a retail supplier, regardless of the specific type of ultimate retail customer. However, as the Commission explained in the December Order, both "which generating facilities are sited" and which generating facilities are "allowed to serve Co-Located Load" are "question[s] of state law."[58]

2. Retail Allocation of Commission-Jurisdictional Rates

a. December Order

38. In the December Order, the Commission held that "states have exclusive jurisdiction over how the costs assigned to Eligible Customers on behalf of Co-Located Load taking Commission-jurisdictional transmission services," including the new transmission services, "are allocated to individual retail consumers that are Co-Located Load, just as states have exclusive jurisdiction over how to allocate the costs of all

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[55] Constellation Request for Clarification or Rehearing at 6-7 (citing December Order, 193 FERC ¶ 61,217 at P 169) (emphasis in original).

[56] *Id.* at 6-7 (citing 16 U.S.C. § 824(b)(1); *Orangeburg v. FERC*, 862 F.3d 1071, 1086-87 (D.C. Cir. 2017)).

[57] *Orangeburg*, 862 F.3d at 1086-87 ("FERC—not state commissions—has 'exclusive authority to regulate the . . . sale at wholesale of electric energy in interstate commerce.'") (quoting *New Eng. Power Co. v. N.H.*, 455 U.S. 331, 340 (1982)).

[58] December Order, 193 FERC ¶ 61,217 at P 169.

Commission-jurisdictional rates (including for energy, capacity, and transmission) among retail customers, including allocating costs among different classes of retail customers."[59]

b. Request for Clarification and/or Rehearing

39. Constellation requests that the Commission clarify that states do not have unlimited authority over how to allocate the costs of all Commission-jurisdictional rates and that they cannot use their authority over retail allocation to indirectly regulate the interconnection of generators serving Co-Located Load.[60] For example, Constellation claims that a state cannot impose via the exercise of its jurisdiction over retail sales a requirement that attempts to prohibit a transaction that the Commission says is permitted.[61] Constellation asserts that some utilities have asked their state commission for authority to condition retail service in the state on the load's acceptance of a Transmission Security Agreement that calculates its security requirement based on a gross NITS rate despite the fact that the Commission has said that other rates must be made available.[62] Constellation argues that the December Order is unclear in that it provides that "states have exclusive jurisdiction over how to allocate the costs of *all* Commission-jurisdictional rates (including for energy, capacity, and transmission) among retail customers, including allocating costs among different classes of retail customers."[63]

c. Determination

40. In response to Constellation's request, we deny clarification and sustain the December Order. In the December Order, the Commission appropriately explained that "states have exclusive jurisdiction over how to allocate the costs of *all* Commission-jurisdictional rates (including for energy, capacity, and transmission) among retail customers, including allocating costs among different classes of retail customers."[64] On the other hand, we note that states "may not seek to achieve ends, however legitimate, through regulatory means that intrude on FERC's authority over interstate wholesale

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[59] *Id.* P 167.

[60] Constellation Request for Clarification or Rehearing at 8 (citing *Hughes v. Talen Energy Mktg., LLC*, 578 U.S. 150, 164-65 (2016); *Nantahala Power & Light Co. v. Thornburg*, 476 U.S. 953, 966 (1986)).

[61] *Id.*

[62] *Id.*

[63] *Id.* at 7 (citing December Order, 193 FERC ¶ 61,217 at P 167).

[64] December Order, 193 FERC ¶ 61,217 at P 167 (emphasis added).

rates . . . ."[65] While Constellation frames its request around the jurisdictional findings in the December Order, Constellation raises a specific matter that is not the subject of and is otherwise outside the scope of this proceeding, i.e., the terms of transmission security agreements. We nonetheless reiterate that: (1) Eligible Customers taking transmission service on behalf of Co-Located Load must have the option to take one of three transmission services, i.e., NITS or Interim NITS, FCD transmission service, or NFCD transmission service;[66] and (2) while it remains just and reasonable for an Eligible Customer taking transmission service on behalf of Co-Located Load to take NITS charged on a gross demand basis,[67] an Eligible Customer may instead choose to take another transmission service.[68]

3. Retail BTMG

a. December Order

41. In the December Order, the Commission found that circumstances have changed since the Commission approved PJM's retail BTMG netting rules such that these rules are no longer just and reasonable. In particular, the Commission found that PJM's existing retail BTMG netting rules do not limit the amount of qualifying load that a Network Customer may net by using BTMG and do not provide any protections against potential transmission and resource adequacy planning problems or against the costs of maintaining sufficient resources to serve these loads being shifted onto other customers.[69] The Commission concluded that PJM's retail BTMG netting rules are no longer consistent with cost causation principles because large loads configured in a BTMG arrangement with significant generation will raise cost-shifting concerns compared to loads pursuing smaller amounts of netting.[70]

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[65] *Hughes v. Talen Energy Mktg., LLC*, 578 U.S. 150, 164.

[66] December Order, 193 FERC ¶ 61,217 at P 193.

[67] *Id.* P 195.

[68] *Id.* P 199.

[69] *Id.* P 186.

[70] *Id.*

b. Request for Clarification and/or Rehearing

42. Industrials argue that the Commission failed to explain and justify its assertion of jurisdiction over "retail BTMG that merely offsets retail load."[71] Industrials contend that "retail BTMG [is not within] the Commission's jurisdiction over the transmission of electric energy in interstate commerce" because "[b]y definition, BTMG is produced by a generation unit 'that delivers energy to load without using the Transmission System.'"[72] Industrials assert that the Commission's finding "necessarily entails piercing the retail meter veil, which serves as the bright-line boundary of the Commission's statutory authority."[73] Industrials further maintain that the Commission failed to provide a well-reasoned basis for the assertion of jurisdiction over the configurations of retail customers whose BTMG is not selling wholesale power and is not using the transmission system.[74] Industrials argue that, here, "retail BTMG involves neither jurisdictional sales nor jurisdictional transmission."[75]

c. Determination

43. We disagree with Industrials that the BTMG netting rules are outside of the Commission's jurisdiction. Industrials misunderstand the December Order as targeting retail sales from BTMG or the delivery of energy from BTMG to load, but this is not the case. The BTMG netting rules instead allow PJM to calculate the charges for

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[71] Industrials Request for Clarification or Rehearing at 39.

[72] *Id.* at 40 (citing PJM, Intra-PJM Tariffs, OATT, § I.1 (Definitions – A-B) (22.0.0)).

[73] *Id.*

[74] *Id.* at 40-41 (citing *Nat'l Ass'n of Regul. Util. Comm'rs v. FERC*, 475 F.3d 1277, 1280 (D.C. Cir. 2007); *Detroit Edison Co. v. FERC*, 334 F.3d 48, 53 (D.C. Cir. 2003)).

[75] *Id.* at 41-42.

transmission service in interstate commerce.[76] The calculation of such transmission charges is squarely within the Commission's jurisdiction under the FPA.[77]

4. Retail Backup Service

a. December Order

44. In the December Order, the Commission required that PJM modify its Tariff to require that an Eligible Customer taking transmission service on behalf of a Co-Located Load take one of three transmission services: (1) NITS or Interim NITS; (2) FCD transmission service; or (3) NFCD transmission service.[78]

b. Request for Rehearing

45. Exelon and FirstEnergy contend that the Commission's new FCD and NFCD transmission services infringe on state retail authority, asserting that the states, not the Commission, have jurisdiction to decide when and in what circumstances retail load will be curtailed, and how utilities should charge and treat retail customers in those circumstances.[79] Exelon and FirstEnergy claim that, for example, states might require the provision of backup service to retail customers who lost supply from their contracted supplier, would regulate the distribution system costs associated with such service that would be charged to the retail customer, and would regulate the costs and terms of the backup service.[80] Exelon and FirstEnergy assert that the Commission's order appears to create a new federal construct because it defines the extent and terms of backup service to

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[76] PJM, Intra-PJM Tariffs, OATT, § III, § 34.2 (Netting of Behind the Meter Generation) (0.0.0); *see* December Order, 193 FERC ¶ 61,217 at P 7 ("[T]he Tariff allows load serving entities . . . that provide service to loads with qualifying BTMG to reduce their costs by netting output from BTMG *in the calculation of their peak demand for the purpose of determining NITS charges*.") (emphasis added).

[77] *Orangeburg*, 862 F.3d at 1086-87 ("FERC—not state commissions—has 'exclusive authority to regulate the transmission . . . of electric energy in interstate commerce.'") (quoting *New Eng. Power Co.*, 455 U.S. at 340); *Calpine Corp. v. FERC*, 702 F.3d 41, 50 (D.C. Cir. 2012) ("[T]he regulation of transmission charges is undoubtedly within FERC's jurisdiction . . . .").

[78] December Order, 193 FERC ¶ 61,217 at P 193.

[79] Exelon and FirstEnergy Request for Rehearing at 53.

[80] *Id.*

retail customers who lose their contracted retail power supplier.[81] Exelon and FirstEnergy argue that the Commission's new transmission services lack the limitation in the Commission's wholesale demand response programs, which allow states to prohibit retail consumers from participating in wholesale demand response.[82]

c. **Determination**

46. We are not persuaded by Exelon and FirstEnergy's assertions that FCD and NFCD transmission services infringe on state retail authority. In the December Order, the Commission held that Eligible Customers taking transmission service on behalf of a Co-Located Load must have the option to take one of three transmission services: (1) NITS or Interim NITS; (2) FCD transmission service; or (3) NFCD transmission service.[83] Exelon and FirstEnergy do not explain how FCD and NFCD *transmission* services define the extent and terms of backup service to retail customers who lose their contracted power supplier and cite no specific aspect of the December Order that does so.[84] As such, we find that Exelon and FirstEnergy fail to demonstrate that the Commission's replacement rate regulates the terms of retail service.[85]

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[81] *Id.* at 53, 55.

[82] *Id.* at 54 (citing *FERC v. EPSA*, 577 U.S. 260, 275 (2016)).

[83] December Order, 193 FERC ¶ 61,217 at P 193.

[84] FPA section 313(a) requires that an "application for rehearing shall set forth *specifically*" its grounds. 16 U.S.C. § 825*l*(a) (emphasis added). We follow Commission practice, with which courts have agreed, and reject arguments, like this one, on rehearing lacking sufficient specificity. *PJM Interconnection, L.L.C.*, 171 FERC ¶ 61,040, at P 22 (2020); *see also Ind. Util. Regul. Comm'n v. FERC*, 668 F.3d 735, 736 (D.C. Cir. 2012); *LA Storage, LLC*, 182 FERC ¶ 61,026, at P 25 & n.75 (2023).

[85] Exelon and FirstEnergy argue that the Commission's new transmission services lack the limitation in the Commission's wholesale demand response programs, which allows states to prohibit retail consumers from participating in wholesale demand response. Exelon and FirstEnergy Request for Rehearing at 54 (citing *FERC v. EPSA*, 577 U.S. at 275). The considerations that led the Commission to include that "opt-out" in the rulemakings that led to Order Nos. 719 and 745, such as a confluence of federal and state jurisdiction with respect to demand response, are not present in this proceeding. Moreover, the Commission was not required to include the "opt-out" even in those rulemakings. *See Nat'l Ass'n of Regul. Util. Comm'rs v. FERC*, 964 F.3d 1177, 1187 (D.C. Cir. 2020) ("But because FERC has the exclusive authority to determine who may

B. Show Cause Findings

1. Overview, Transmission Service, Regulation and Black Start

a. December Order

47. As relevant here, the Commission found in the December Order that the Tariff is unjust and unreasonable because it does not contain provisions addressing with sufficient clarity or consistency the rates, terms, and conditions of service that apply to Interconnection Customers serving Co-Located Load and Eligible Customers taking transmission service on behalf of Co-Located Load. The Commission also found that the Tariff is unjust and unreasonable because it does not include transmission services that reflect Eligible Customers taking service on behalf of Co-Located Loads that are willing and able to limit their energy withdrawals from the transmission system under certain conditions.[86]

b. Request for Rehearing

48. Exelon and FirstEnergy argue that the Commission did not meet its burden under FPA section 206 to show that the existing PJM Tariff is unjust and unreasonable.[87] Exelon and FirstEnergy argue that the Commission provides no evidentiary support for its finding that the Tariff is unjust and unreasonable because it does not contain provisions addressing with sufficient clarity or consistency the rates, terms, and conditions of service that apply to Interconnection Customers serving Co-Located Load and Eligible Customers taking transmission service on behalf of Co-Located Load.[88] Exelon and FirstEnergy allege that the Tariff already has provisions explaining how to serve load in PJM and the Commission does not even mention them.[89]

49. Exelon and FirstEnergy dispute that the Constellation Complaint supports the Commission's finding of uncertainty.[90] Exelon and FirstEnergy contend that the actual

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participate in the wholesale markets, the Supremacy Clause—not Order No. 841—requires that States not interfere.").

[86] December Order, 193 FERC ¶ 61,217 at P 177.

[87] Exelon and FirstEnergy Request for Rehearing at 13.

[88] *Id.* at 14 (citing December Order, 193 FERC ¶ 61,217 at P 175).

[89] *Id.* at 15 (discussing and citing Tariff provisions).

[90] *Id.*

situation described in the Constellation Complaint giving rise to the purposed uncertainty revealed that "any delay resulted from a decision made by Constellation in its attempt to bypass retail service requirements and to obtain service in violation of Illinois law."[91] Exelon and FirstEnergy argue that, if any clarification was necessary, the Commission has now clarified that Co-Location Arrangements must be properly metered and designate and involve transmission service to an Eligible Customer. Exelon and FirstEnergy allege that service can proceed in an orderly fashion. Exelon and FirstEnergy argue that the Commission ignored record evidence that customers' load service requests proceed on a timely basis when customers take service through an Eligible Customer.[92] Exelon and FirstEnergy also maintain that Talen Energy's recent changes to its Co-Location Arrangement with Susquehanna Nuclear, LLC show that the Tariff works.[93]

50. Exelon and FirstEnergy next challenge the Commission's finding that the Tariff is unjust and unreasonable because it does not include transmission services that reflect that an Eligible Customer taking service on behalf of a Co-Located Load that is willing and able to limit its energy withdrawals from the transmission system under certain conditions.[94] Exelon and FirstEnergy allege that there is no evidence that the cost of NITS deters service or impacts data center development. Exelon and FirstEnergy also argue that there is no evidence to support the Commission's statement that requiring NITS could necessitate inefficient and costly transmission buildout and costs paid by transmission customers that may not be necessary if Eligible Customers taking transmission service on behalf of Co-Located Loads are willing to limit their energy withdrawals and take a transmission service that requires fewer Network Upgrades.[95] Exelon and FirstEnergy maintain that charging load on a contract demand basis does not change the physical and engineering impacts of the load.[96] Exelon and FirstEnergy acknowledge that installing systems to limit grid usage might change system impacts and the need for upgrades, but there is nothing in the record demonstrating that such systems are more beneficial for Co-Located Load than other loads or that such systems warrant

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[91] *Id.* at 15-16 (citing Constellation, Docket No. EL25-20-000, Complaint, Ex. 5, attach. 1).

[92] *Id.* at 17.

[93] *Id.* at 17-18 (citing PJM, Docket No. ER24-2172-000, Amended ISA, attach. A, Schedule F, Part F.4 (filed June 3, 2024)).

[94] *Id.* at 18 (citing December Order, 193 FERC ¶ 61,217 at P 159).

[95] *Id.* at 19 (citing December Order, 193 FERC ¶ 61,217 at P 199).

[96] *Id.*

the use of different ratemaking principles for Co-Located Load as compared to other loads.[97] Exelon and FirstEnergy argue that system impacts may be reduced when a load is located near a generator, but that is true whether the load contracts with remote generation or an abutting generator. Exelon and FirstEnergy assert that the study process can determine how to site to reduce transmission upgrades for the customer using the customer's gross load.

51. Exelon and FirstEnergy argue that the Commission provides no support for its statement that Co-Located Loads may be able to receive transmission service faster with use of a new, limited transmission service product than they would if they selected NITS, to the extent that providing NITS would require Network Upgrades that the limited transmission service would not.[98] Exelon and FirstEnergy assert that the transmission system is affected even when no net power is withdrawn from the system.[99] Exelon and FirstEnergy contend that the Commission endorses an unsound approach by suggesting that loads that do not withdraw from the system can be interconnected on a fast track without studying physical impacts.

52. Exelon and FirstEnergy highlight the Commission's statement that, while the Commission finds that NITS charged on a gross demand basis is one just and reasonable transmission service option for Eligible Customer taking transmission service on behalf of Co-Located Loads, it is not the only option.[100] Exelon and FirstEnergy state that the Commission itself acknowledges that the existing service options are feasible and just and reasonable, but the Commission merely wants more options. Exelon and FirstEnergy argue that when the Commission finds a tariff not unjust and unreasonable under the first prong of FPA section 206, as it suggests here, the Commission does not need to set a remedy.

53. Exelon and FirstEnergy disagree with the Commission's assessment that Co-Located Loads merit a different rate based on the combination of transmission system burdens and benefits. Exelon and FirstEnergy first state that Co-Located Loads benefit from regulation and black start, as the Commission recognized.[101] Exelon and FirstEnergy argue that transmission interconnections provide an avenue for data center loads to readily acquire back-up power when co-located generators are not available.

[97] *Id.* at 19-20.

[98] *Id.* at 20 (citing December Order, 193 FERC ¶ 61,217 at P 205).

[99] *Id.* at 21.

[100] *Id.* at 22 (citing December Order, 193 FERC ¶ 61,217 at P 195).

[101] *Id.* at 30 (citing December Order, 193 FERC ¶ 61,217 at PP 209, 219).

Exelon and FirstEnergy argue that, based solely on these uses of the transmission system, Co-Located Loads have no greater claim to preferential rates than other similarly situated transmission customers. Exelon and FirstEnergy argue that the Commission failed to consider the many advantages to Co-Located Loads when they connect to the transmission system. For example, Exelon and FirstEnergy assert that, if the project were islanded instead of grid connected, all back-up generation would sit idled when not needed, forgoing significant revenues from selling surplus power into the wholesale market. Exelon and FirstEnergy also allege that it is very difficult to supply islanded generation with black start and regulation.[102]

54. Exelon and FirstEnergy argue that the Commission failed to respond to arguments about the unique aspects of co-location with nuclear plants. Exelon and FirstEnergy state that a nuclear facility must be interconnected to the grid as a Nuclear Regulatory Commission licensing obligation, and thus a Co-Location Arrangement with a nuclear unit depends on the grid.[103] Exelon and FirstEnergy assert that, in a Co-Location Arrangement with a nuclear unit, Co-Located Load depends on services such as regulation, voltage support, black start, and other ancillary services delivered over the grid all the time because nuclear units cannot provide these services.[104]

c. Determination

55. On rehearing, we sustain the Commission's finding in the December Order that the Tariff is unjust and unreasonable.[105] First, we continue to find that the Tariff does not contain provisions addressing with sufficient clarity or consistency the rates, terms, and conditions of service that apply to Interconnection Customers serving Co-Located Load

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[102] *Id.* at 31.

[103] *Id.* at 32-33 (citing Exelon, Docket No. EL25-20-000, Comments, attach. 1, ¶¶ 11-13, 16)).

[104] *Id.* at 32 (citing Exelon, Docket No. EL25-20-000, Comments, attach. 1, ¶¶ 14-19)).

[105] December Order, 193 FERC ¶ 61,217 at PP 175-177. As discussed in the December Order, we continue to find the Tariff also unjust and unreasonable in additional related ways—for example, we continue to find that the Tariff is unjust and unreasonable because it does not address charges for black start and regulation service to Eligible Customers taking transmission service on behalf of Co-Located Load. *Id.* P 159. We do not interpret Exelon and FirstEnergy, however, to be disputing this finding. Separate portions of this order address our findings in this proceeding that additional aspects of the Tariff are unjust and unreasonable.

and Eligible Customers taking transmission service on behalf of Co-Located Load.[106] Second, we continue to find that the Tariff does not include transmission services that reflect Eligible Customers taking service on behalf of Co-Located Loads that are willing and able to limit their energy withdrawals from the transmission system under certain conditions.[107]

56. Substantial evidence supports the Commission's finding that the Tariff lacks sufficient clarity as to the rules governing Interconnection Customers serving Co-Located Load and Eligible Customers taking transmission service on behalf of Co-Located Load.[108] There is significant support in the record for this finding.[109] In particular, PJM recognizes that its Tariff lacks sufficient clarity in this area.[110] We also find persuasive the comments in the record from a range of stakeholders reflecting the uncertainty facing entities seeking to effectuate Co-location Arrangements within PJM.[111]

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[106] *Id.* P 175.

[107] *Id.* P 177.

[108] *Id.* PP 175-176.

[109] *Id.* P 176 n.376.

[110] PJM March 24, 2025 Response at 32 (noting that its "Tariff provisions d[o] not contemplate the type of arrangements at issue in this docket"); *id.* at 35 ("The extent to which netting [rules under the Tariff] could . . . apply to co-located data center load is not clear at this time."); *see also* Vistra April 23, 2025 Reply Comments at 11 (arguing that PJM has "effectively conceded" that the Tariff does not contain sufficient clarity).

[111] *See* Constellation May 8, 2025 Answer at 3-9 (collecting record support and concluding "[i]n sum, the record in this proceeding unequivocally supports the . . . finding that the PJM Tariff lacks clear co-location rules"); AEU April 23, 2025 Reply Comments at 19 ("Loads and generators pursuing [C]o-[L]ocation [A]rrangements need clarity as to how these arrangements will be studied, and how those studies will be evaluated. There must be a level of uniformity and detail outlining study requirements to ensure regulatory certainty for large loads and new generation and storage resources seeking to serve large loads. This level of uniformity is currently lacking in PJM's interconnection procedures and cost allocation methodology . . . ."); Electric Power Supply Association (EPSA)/PJM Power Providers Group (P3) April 23, 2025 Reply Comments at 2 ("EPSA and P3 agree with the Commission that PJM needs to establish tariff provisions and rules to accommodate the array of [C]o-[L]ocated [L]oad arrangements that will facilitate the timely and effective integration of large loads locating in the region."); DCC April 23, 2025 Reply Comments at 7 (". . . [T]he Commission should direct PJM to develop clear, enforceable tariff language that affirms

57. Further, there has been significant confusion and dispute over what rules govern Co-Location Arrangements in PJM. As the Commission found in the December Order, the absence of clear tariff provisions creates uncertainty that has resulted in disparate treatment of potential Co-Location Arrangements in PJM, where transmission owners have taken different approaches to performing the necessary steps that apply to Interconnection Customers seeking to serve Co-Located Load through a Co-Location Arrangement, leading to no consistent understanding of entities' responsibilities with respect to their planned Co-Location Arrangements.[112] Further, in 2024, PJM developed a now-rescinded "Guidance Document," which included non-binding guidance for generators and loads seeking to enter into Co-Location Arrangements[113]—further suggesting that PJM's existing Tariff did not provide sufficient clarity resulting in a lack of consistent understanding among stakeholders. Indeed, parties have raised varying interpretations of the rules that apply to Co-Location Arrangements across Commission proceedings.[114]

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the permissibility of multiple co-location configurations, including those where load is served directly from a generation resource located on or near the same site. Tariff clarity is essential to reduce unnecessary disputes, avoid case-by-case confusion, and enable transmission providers to process interconnection and load addition requests efficiently and predictably.").

[112] December Order, 193 FERC ¶ 61,217 at P 175 & n.375 (citing Constellation, Complaint, Docket No. EL25-20-000 (filed Nov. 22, 2024); Baltimore Gas & Electric Company and PECO Energy Company, Petition for Declaratory Order, Docket No. EL24-149-000 (filed Sept. 30, 2024); Constellation April 23, 2025 Reply Comments at 4 n.4).

[113] PJM, *PJM Guidance on Co-Located Load* (Mar. 22, 2024) (updated Apr. 17, 2024), https://www.pjm.com/-/media/DotCom/markets-ops/rpm/rpm-auction-info/pjm-guidance-on-co-located-load.pdf.

[114] For instance, an amended ISA to which PPL was a party stated that "The Co-Located Load is not Network Load, and it is intended that the Co-Located Load will never consume capacity and/or energy from the PJM Transmission System." *PJM Interconnection, L.L.C.* (*Susquehanna*), Amended Susquehanna ISA, Docket No. ER24-2172, Schedule F, Part F (filed June 3, 2024); *see also, e.g.*, *PJM Interconnection, L.L.C.*, 189 FERC ¶ 61,078, at PP 14, 26 (2024). On the other hand, there are allegations in the record that Exelon has delayed work on Constellation's requests to co-locate load with certain of its generators due to Exelon's concerns that such requests are not allowed under the Tariff without arranging for wholesale

58. In fact, based on our review of the Tariff, the Tariff indeed does not contain provisions specifying the rules governing Co-Location Arrangements.[115] For instance, the Tariff lacks provisions specifying: the terms and conditions for Interconnection Customers seeking to use their generators to serve Co-Located Load;[116] that an Interconnection Customer who will use its generator to serve Co-Located Load must designate an Eligible Customer who will take transmission service on behalf of the Co-Located Load;[117] the rules governing transmission service—including the rates, terms, and conditions of that service—taken by an Eligible Customer on behalf of Co-Located Load;[118] and the charges for black start and regulation service to Eligible Customers taking transmission service on behalf of Co-Located Load.[119] In sum, due to the absence of these provisions, the Tariff lacks sufficiently clear answers to important questions about how to effectuate Co-Location Arrangements.

59. The finding that the Tariff is unjust and unreasonable due to the lack of sufficient clarity is bolstered by several factors. First, the lack of sufficient clarity leaves entities unable to determine what steps they can or must take to effectuate or administer Co-Location Arrangements of various configurations.[120] Interconnection Customers seeking to use their generators to serve Co-Located Load have no means of knowing their responsibilities with respect to serving Co-Location Arrangements and the terms and conditions that apply to these arrangements.[121] Without an Eligible Customer designated to take transmission service on behalf of a Co-Located Load, the Tariff lacks a mechanism to address and ensure proper charges for situations in which a Co-Located Load withdraws energy from the transmission system.[122] Second, an absence of

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transmission or retail distribution service. February Order, 190 FERC ¶ 61,115 at PP 51, 75.

[115] December Order, 193 FERC ¶ 61,217 at P 175.

[116] *Id.* P 176.

[117] *Id.*

[118] *Id.*; *see also, e.g.*, *id.* P 175.

[119] *Id.* P 177; *see also id.* PP 159, 181-185.

[120] *Id.* P 175.

[121] *Id.* P 176.

[122] *Id.* Indeed, Exelon and FirstEnergy concede that they agree that "[a]n Eligible Customer serving a co-located load must be designated because it is the Eligible

sufficient clarity in these circumstances creates regulatory uncertainty, thus undermining a "central purpose" of the FPA—"predictability."[123] Third, the lack of sufficient clarity leads here to the potential for undue discrimination, preferential treatment, or otherwise unjustifiable disparate conduct. As discussed above, disparate treatment has occurred in PJM, where transmission owners have taken different approaches to addressing Co-Location Arrangements.[124] Finally, the lack of sufficient clarity introduces the risk that costs related to Co-Location Arrangements may not be allocated consistent with cost causation principles because, for instance, Eligible Customers taking transmission service on behalf of Co-Located Load could benefit from regulation and black start services without contributing to cost recovery for such services, thus risking that costs may be allocated entirely to other transmission customers and passed through to residential customers, among others.[125] In total, these factors are magnified by the facts that Co-Location Arrangements are becoming increasingly common in PJM, entities continue to raise issues involving Co-Location Arrangements with the Commission,[126] and Co-Location Arrangements may include large amounts of load and generation. Given these ramifications and consistent with precedent,[127] the Commission appropriately found that the lack of sufficient clarity in the Tariff has rendered it unjust and unreasonable.

Customer that seeks and obtains transmission service and pays for it." Exelon and FirstEnergy Request for Rehearing at 2.

[123] *PJM Power Providers Grp. v. FERC*, 96 F.4th 390, 401-02 (3d Cir. 2024) (describing a central purpose of the filed rate doctrine: predictability). Ensuring predictability ultimately supports a primary purpose of the FPA, "encourag[ing] the orderly development of plentiful supplies of electricity . . . at reasonable prices." *Pub. Utils. Comm'n of Cal. v. FERC*, 367 F.3d 925, 929 (D.C. Cir. 2004) (quoting *NAACP v. FPC*, 425 U.S. 662, 670 (1976); *see EPSA*, 577 U.S. at 290 ("The statute aims to protect 'against excessive prices' and ensure effective transmission of electric power." (citations omitted)).

[124] December Order, 193 FERC ¶ 61,217 at P 175; February Order, 190 FERC ¶ 61,115 at P 75.

[125] December Order, 193 FERC ¶ 61,217 at P 177; *see also id.* PP 181-185.

[126] *Id.* P 4.

[127] *E.g.*, *Invenergy Transmission LLC v. Midcontinent Indep. Sys. Operator, Inc.*, 193 FERC ¶ 61,033, at P 53 (2025) (finding tariff unjust and unreasonable because it did not address when and how certain transmission projects are incorporated into a transmission planning model and because existing provisions lacked "sufficient specificity and certainty"); *PJM Interconnection, L.L.C.*, 167 FERC ¶ 61,030, at PP 22, 41, 59 (2019) ("[W]e find that the PJM Operating Agreement is unjust and unreasonable

60. Notwithstanding the Commission's findings, Exelon and FirstEnergy argue that because the Tariff provides for NITS and point-to-point service (PTPS)—with terms governing them—"[t]here is no inability to determine how to serve [co-located] load in PJM."[128] Yet, the existence of provisions governing NITS and PTPS does not undermine our findings that the Tariff both lacks sufficient clarity and does not contain provisions specifying the rules governing Co-Location Arrangements. The applicability, operation, and/or interpretation of the cited general provisions (among others) *with respect to* Eligible Customers taking transmission services on behalf of Co-Located Load and Co-Location Arrangements are the issues that, in part, give rise to the lack of sufficient clarity we target here.

61. Next, Exelon and FirstEnergy respond to the Commission's citation of the Constellation Complaint by blaming "any delay" giving rise to uncertainty on Constellation.[129] But this response misunderstands the Commission's reasoning. The Commission cited the Constellation Complaint as one piece of evidence to demonstrate that there is "no consistent understanding" of the rules governing Co-Location Arrangements.[130]

62. Similarly, Exelon and FirstEnergy allege that "in 2025, [Commonwealth Edison Company] received more than 25 customer service applications for large load service, representing new load in excess of 20 GW" and "[t]here is no suggestion in the record that any customer is encountering problems with those requests."[131] Beyond the fact there is no representation that any of those applications relate to Co-Located Load, this limited set of applications before a single Transmission Owner does not demonstrate

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because it fails to provide a sufficient level of clarity regarding the permissible components of energy market cost-based offers"); *N.Y. Indep Sys. Operator, Inc.*, 162 FERC ¶ 61,107, at PP 160, 173 (2018) ("We find this difference in definitions to be unclear and, therefore, unjust and unreasonable"); *Dominion Energy Mktg., Inc., v. ISO New Eng. Inc.*, 155 FERC ¶ 61,121, at P 17 (2016) ("We find that [the] existing Tariff is unclear as to whether new incremental capacity and existing capacity at the same generating station must submit a composite offer in order to participate in [a capacity auction]. As a result of this lack of clarity, the Tariff fails to provide adequate notice of what the requirement is and, thus, we find the Tariff is unjust and unreasonable.").

[128] Exelon and FirstEnergy Request for Rehearing at 14-15.

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

[130] December Order, 193 FERC ¶ 61,217 at P 175.

[131] Exelon and FirstEnergy Request for Rehearing at 17.

sufficient clarity even if those requests "proceed on a timely basis."[132] As explained above, the Commission continues to be concerned about disparate treatment by different Transmission Owners in this context.[133]

63. Exelon and FirstEnergy also state that in one proceeding pertaining to Co-Located Load, a load and generator entered into a "front-of-the-meter" arrangement and thus "conceded that PJM Network Service works . . . and is a service upon which all customers may rely."[134] A decision in one proceeding to abandon a Co-Location Arrangement does not undermine the Commission's finding that there is a lack of sufficient clarity related to Co-Location Arrangements writ large (and, in fact, might support it).

64. Finally, Exelon and FirstEnergy contend that "[t]o the extent clarification was needed, the Commission has now clarified . . . that these arrangements must be properly metered and must designate and involve transmission service to an Eligible Customer."[135] This argument is misplaced. Exelon and FirstEnergy's argument that the *replacement rate* should be narrower—that only part of it would be sufficient—should be directed not to the finding that the Tariff is unjust and unreasonable but to the determination of a just and reasonable replacement rate. Further, the portions of the replacement rate that Exelon and FirstEnergy reference—requiring proper metering and involving transmission service to an Eligible Customer—do not resolve the Commission's concerns as to a lack of sufficient clarity in the Tariff. For example, the Commission found a lack of sufficient clarity as to the terms and conditions for Interconnection Customers seeking to use their generators to serve Co-Located Load.[136]

65. We also continue to find that the Tariff is unjust and unreasonable because it does not include transmission services that reflect Eligible Customers taking service on behalf of Co-Located Loads that are willing and able to limit their energy withdrawals from the transmission system under certain conditions.[137] Requiring Eligible Customers taking

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[132] *Id.*

[133] *See supra* notes 114, 126.

[134] Exelon and FirstEnergy Request for Rehearing at 17-18 (discussing the proceedings in Docket Nos. ER24-2172-000 and ER24-2171-001).

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

[136] December Order, 193 FERC ¶ 61,217 at P 176.

[137] *Id.* P 177; *see also S.C. Pub. Serv. Auth. v. FERC*, 762 F.3d 41, 64-68 (D.C. Cir. 2014) (explaining that to find a practice unjust and unreasonable, the Commission need not rely on "empirical evidence" and can rely on "reasonable economic

transmission service on behalf of Co-Located Load to take NITS, without the option to instead take such alternative transmission services, is economically inefficient. Here, the record demonstrates that some Eligible Customers taking service on behalf of Co-Located Loads are willing and able to limit their energy withdrawals. With only the current services offered, having found that Eligible Customers taking NITS will be charged based on gross load, prospective Eligible Customers taking transmission service on behalf of Co-Located Load would have to take a transmission service that does not reflect the load's willingness and ability to limit use of the transmission system—which is an inefficient result. The Commission has long recognized that providing differentiated service options can produce more efficient results because customers can choose the service that is most closely tailored to their specific needs, rather than a one-service-fits-all approach.[138] Requiring Eligible Customers taking service on behalf of Co-Located Loads to take NITS creates an unacceptable risk of more costly Network Upgrades that would be unnecessary if such Eligible Customers were willing and permitted to take a transmission service that reflects Co-Located Loads that are willing

propositions" "likely enough to be within the Commission's authority" and noting that the use of words such as "might, may, or could" does not make its determination legally deficient (internal quotation marks omitted)).

[138] *See, e.g.*, *Integration of Variable Energy Res.*, Order No. 764, 139 FERC ¶ 61,246, at PP 2, 22, *order on reh'g & clarification*, Order No. 764-A, 141 FERC ¶ 61,232 (2012), *order on clarification & reh'g*, Order No. 764-B, 144 FERC ¶ 61,222 (2013) (explaining that the Commission sought "to provide all transmission customers the option of using more frequent transmission scheduling intervals within each operating hour, at 15-minute intervals," which will allow them "the flexibility to adjust their transmission schedules, thus limiting their exposure to imbalance charges" and lead to "more efficient utilization of transmission and generation resources"); *Standardization of Generator Interconnection Agreements & Procs.*, Order No. 2003, 104 FERC ¶ 61,103 (2003), *order on reh'g*, Order No. 2003-A, 106 FERC ¶ 61,220, at P 534, *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 Regul. Util. Comm'rs v. FERC*, 475 F.3d 1277 (D.C. Cir. 2007) (explaining that "an Interconnection Customer that elects to be studied for Network Resource Interconnection Service has the option also to be studied for Energy Resource Interconnection Service and proceed with Network Resource Interconnection Service or a lower level Interconnection Service whereby only certain Network Upgrades will be completed" and finding that "[t]his option thus allows the Interconnection Customer to avoid having to fund Network Upgrades that it does not need").

and able to limit their energy withdrawals.[139] We further reiterate that there is support in the record for the foregoing analysis.[140]

66. On rehearing, Exelon and FirstEnergy dispute the Commission's finding that the Tariff is unjust and unreasonable because it does not include transmission services that reflect Eligible Customers taking transmission service on behalf of Co-Located Loads that are willing and able to limit their energy withdrawals from the transmission system under certain conditions.[141] First, Exelon and FirstEnergy argue that "there is no evidence that the cost of paying for Network Service deters service or has any impact whatsoever on development of data centers" because "data center development interest in PJM is overwhelming."[142] But the Commission was not required to show that its FPA section 206 step one findings would have a particular effect on data centers. Instead, as explained in the prior paragraph, the Commission's findings relate to economic and other harms from a lack of transmission services that reflect Eligible Customers taking service on behalf of Co-Located Loads that are willing and able to limit their energy withdrawals from the transmission system.[143] In any event, we continue to reason that requiring Eligible Customers taking transmission service on behalf of Co-Located Load to take NITS *does* have a negative impact relative to transmission services that reflect these loads' willingness and ability to limit energy withdrawals. These negative impacts could include unnecessary Network Upgrade costs, which cause an unjust and unreasonable increase in transmission rates. The assertion that "development interest" in data centers may currently be high, or will remain high if Eligible Customers taking transmission service on behalf of Co-Located Loads that are willing and able to limit their withdrawals from the transmission system are required to take NITS on a gross basis, does not address the counterfactual at issue (i.e., requiring Eligible Customers taking transmission service on behalf of Co-Located Load to take NITS relative to transmission services that reflect these loads' willingness and ability to limit energy withdrawals).

67. Second, Exelon and FirstEnergy contend that the Commission has no evidence[144] to support the risk of "costly and inefficient transmission system buildout" under NITS

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[139] December Order, 193 FERC ¶ 61,217 at PP 177, 199, 205.

[140] *Id.* PP 199 & n.423, 205, 434; *see also* PP 160, 177-178.

[141] Exelon and FirstEnergy Request for Rehearing at 18.

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

[143] December Order, 193 FERC ¶ 61,217 at P 177.

[144] Exelon and FirstEnergy Request for Rehearing at 19-20 (citing, among other things, December Order, 193 FERC ¶ 61,217 at P 199).

compared to “fewer Network Upgrades” and “lower Network Upgrade costs” under an alternative service.[145] To the contrary, the Commission has provided a robust rationale for this risk, as explained above. Exelon and FirstEnergy state that “network studies are based on physics and engineering” so NITS cannot “impose[] unnecessary transmission upgrade costs.”[146] We agree with the premise that studies are based on physics and engineering, but not the conclusion. Many Network Upgrades are caused by the amount of MW flow on the transmission system but certain Network Upgrades are not (e.g., they may be caused by stability or voltage-related issues).[147] Therefore, as Exelon and FirstEnergy concede, under a transmission service designed to reflect load’s willingness and ability to limit energy withdrawals, “if the load installs systems aimed at limiting its use of the grid, those might change the system impacts and need for upgrades.”[148] Conversely, NITS requires PJM to plan the transmission system to deliver power to load,[149] even if that load does not intend to ever withdraw power from the system, which could result in unnecessary Network Upgrades. Exelon and FirstEnergy also claim that “[t]he fact that a load is located near a generator may well reduce system impacts . . .

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[145] December Order, 193 FERC ¶ 61,217 at P 177.

[146] Exelon and FirstEnergy Request for Rehearing at 19.

[147] Exelon and FirstEnergy additionally contend that “even when no net power is being withdrawn from the system . . . the transmission system is affected and needed by the load—indeed, the Commission agreed with this proposition when it found that co-located loads do utilize load-following based on gross rather than net load.” *Id.* at 19-21. Again, we do not find that the need for Network Upgrades is based only on withdrawals; instead, we find that reducing the amount of MW flow can lead to the need for fewer or less costly Network Upgrades. The December Order does not promote ignoring impacts when no net power is being withdrawn.

[148] *Id.* at 19-20. We note that Exelon and FirstEnergy also state that “the same can be said for similar systems applied to other loads. Nothing in the record [supports] that such systems are more beneficial for co-located load projects than for any other load [or] the use of different ratemaking principles when such installations are in place. To the contrary, . . . the Commission has consistently rejected arguments that different ratemaking should be applied even where there are physical limits to the amount of transmission system use.” *Id.* We understand these arguments as directed to the replacement rate, and thus we address them below. To the extent they are directed to the Commission’s FPA section 206 step one finding, we disagree for the same reasons stated below.

[149] PJM, Intra-PJM Tariffs, OATT, § III, § 28.2 (Transmission Provider Responsibilities) (1.0.0).

regardless of whether the load has contracted with the generator it abuts, or with remote generation."[150] This assertion ignores the fact that a new transmission service reflecting willingness and ability to limit energy withdrawals could further reduce system impacts—for instance through the "systems aimed at limiting [the] use of the grid" that Exelon and FirstEnergy reference.[151] We similarly disagree with Exelon and FirstEnergy's claim that a new transmission service would not "alter what must be studied in assessing the physics and engineering of any proposed new configuration."[152] Studies for a customer taking a new transmission service that limits the amount of energy that may be withdrawn would reflect that limitation.[153] Such potential transmission service could alter the level of steady-state transmission system usage studied (i.e., the "physics") and the design of the physical facilities, necessary control technologies, and/or protection systems needed to effectuate that arrangement compared to a traditional Network Customer (i.e., the "engineering"), contrary to Exelon and FirstEnergy's assertions.

68. Third, Exelon and FirstEnergy assert that the Commission contradicted itself in finding the Tariff unjust and unreasonable in lacking alternative transmission services because the Commission also stated that "'it continues to be just and reasonable for an Eligible Customer taking transmission service on behalf of Co-Located Load to elect, as one of the required transmission services from which the Eligible Customer must choose, to take NITS.'"[154] The Commission did not find that current set of transmission service options is just and reasonable. Instead, the Commission stated, it continues to be just and reasonable for such an Eligible Customer "to *elect*" NITS "as *one* of the required

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[150] Exelon and FirstEnergy Request for Rehearing at 20.

[151] *Id.* at 19-20. Exelon and FirstEnergy likewise claim that Co-Location Arrangements "will have the same potential benefit regardless of whether there is a contractual supply arrangement with a nearby generator and regardless of whether it pays for transmission service based on net or gross load." *Id.* at 21. This assertion again misses the key distinction. Under a new alternative transmission service reflecting willingness and ability to limit energy withdrawals, there could be fewer or less costly Network Upgrades if the Eligible Customer can select a lower (but otherwise satisfactory) level of demand.

[152] *Id.* at 20.

[153] Exelon and FirstEnergy state that "[t]here is simply no evidence" for an argument that a new transmission service could speed access to service. *Id.* But the Commission's findings are not based on speeding access to service or creating "fast-track interconnection." *Id.* at 20-21.

[154] *Id.* at 21-22 (quoting December Order, 193 FERC ¶ 61,217 at P 195).

transmission services."[155] But it is unjust and unreasonable for that set of options to lack the alternatives the Commission discussed.[156]

69. Fourth, Exelon and FirstEnergy argue that the Commission's finding that the Tariff is unjust and unreasonable because it lacks alternative transmission service options misunderstands the benefits and burdens "to co-located projects of being interconnected to the grid."[157] The Commission did not find, however, that Co-Located Loads could receive no benefits from or place no burdens on the transmission system. Instead, the Commission found that the Tariff was unjust and unreasonable because it did not reflect the features of Co-Location Arrangements that make the existing transmission service options unacceptable.[158] An Eligible Customer taking transmission service on behalf of Co-Located Load must be charged for the benefits received from and the burdens placed on the transmission system—but that does not mean the status quo is not unjust and unreasonable. Co-Located Load may be able to reduce the benefits received from and the burdens placed on the transmission system if it is willing and able to limit energy withdrawals. We do not dispute, and indeed continue to find, that Co-Located Loads do receive benefits even if they have zero net energy withdrawals, specifically from regulation and black start services.[159] The Commission's finding that the Tariff is unjust and unreasonable does not preclude the recognition of those benefits.

70. Finally, Exelon and FirstEnergy maintain that the Commission's "finding that the existing PJM Tariff is [unjust and unreasonable] is arbitrary and capricious because the Commission failed to consider the unique issues that attend co-location with nuclear plants."[160] This argument is misplaced. The Commission found that the Tariff is unjust and unreasonable for, in part, the two reasons discussed above.[161] In particular, the Commission found the Tariff unjust and unreasonable because it does not include an option for Eligible Customers on behalf of Co-Located Loads to take transmission services that reflect their willingness and ability to limit their energy withdrawals from

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[155] December Order, 193 FERC ¶ 61,217 at P 195 (emphasis added).

[156] *Id.* P 177.

[157] Exelon and FirstEnergy Request for Rehearing at 30-32; *see also id.* (discussing various benefits and burdens).

[158] December Order, 193 FERC ¶ 61,217 at P 177.

[159] *Id.* P 185.

[160] Exelon and FirstEnergy Request for Rehearing at 32-33.

[161] December Order, 193 FERC ¶ 61,217 at PP 176, 177.

the transmission system. The fact that a nuclear *generator* in a Co-Location Arrangement might be dependent on the transmission system because that nuclear generator cannot operate without a robust interconnection to the transmission system, or cannot load follow, does not undermine these core findings. Exelon and FirstEnergy attempt to use these facts to conclude that the Co-Located *Load* is effectively using the transmission system in a similar manner to a load served by remote resources. We disagree because, regardless of load following, the energy used by the Co-Located Load is provided (at least in part) by its Co-Located Generator, not via the transmission system. Eligible Customers on behalf of Co-Located Loads that are served by a Co-Located Generator that is a nuclear generator should be permitted to take transmission services that reflect that they are willing and able to limit their withdrawals from the transmission system under certain conditions. To the extent a nuclear generator that is part of a Co-Location Arrangement operates differently than other Co-Located Generators, that is an issue that may be assessed in subsequent study processes, or simply by the nuclear generator itself, as the Interconnection Customer (not the Eligible Customer) in determining whether and how to enter into a Co-Location Arrangement.

2. Retail BTMG Netting Rules

a. Scope and Adequate Notice

i. December Order

71. The Commission found that PJM's retail BTMG netting rules are no longer just and reasonable and clarified that this finding applies to all Network Load.[162]

ii. Request for Clarification and/or Rehearing

72. Citing the Administrative Procedure Act (APA) and Commission Rule 209, Industrials argue that changes to retail BTMG netting rules are outside the scope of the February Order.[163] Industrials assert that the February Order set the scope of the proceeding and limited it to Co-Located Load and Co-Location Arrangements, thus excluding BTMG. Industrials argue that no part of the February Order included the possibility of the Commission's BTMG netting findings in the December Order. Industrials allege there are important distinctions between Co-Location Arrangements and BTMG, particularly that a BTMG arrangement is a retail load-modification

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[162] *Id.* P 186.

[163] Industrials Request for Clarification or Rehearing at 22 (citing 5 U.S.C. § 706; 18 C.F.R. § 385.209 (2025)); *see also* 5 U.S.C. § 554.

construct, whereas a Co-Location Arrangement is a wholesale-system-impacting load integration construct.[164]

iii. Determination

73. We disagree with Industrials that changes to retail BTMG netting rules are beyond the scope of this proceeding because the Commission provided adequate notice as to those changes.

74. Under the APA, an agency setting a matter for hearing must provide parties with adequate notice of the issues that would be considered, and ultimately resolved, at that hearing.[165] Under Commission Rule 209(b), "an order to show cause will contain a statement of the matters about which the Commission is inquiring, and a statement of the authority under which the Commission is acting. The statement is tentative and sets forth issues to be considered by the Commission."[166]

75. While Industrials allege that the Commission in the February Order "set the scope of the proceeding to Co-Located Load,"[167] the Commission did no such thing. The February Order contains no finding limiting the proceeding's scope to "Co-Located Load." Instead, the February Order also expressly raises, among many other topics, relevant generation configurations[168] and overall addresses issues that attend to load with on-site or otherwise nearby generation, which logically includes BTMG.[169]

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[164] Industrials Request for Clarification or Rehearing at 22-26.

[165] *N. Va. Elec. Coop., Inc. v. FERC*, 945 F.3d 1201, 1205 (D.C. Cir. 2019); 5 U.S.C. § 554(b)(3) (establishing notice requirement for adjudications).

[166] 18 C.F.R. § 385.209(b).

[167] Industrials Request for Clarification or Rehearing at 22.

[168] February Order, 190 FERC ¶ 61,115 at P 79.

[169] *Id.* P 76 (discussing concerns related to generation and load being "likely to use or benefit from the transmission system in *different ways depending on how they are configured*" and giving examples such as "Network Load may co-locate with a generator that is not a grid resource and that either serves the load as an off-grid backup or that reduces the Network Load's consumption during peak hours" (emphasis added)).

76. In any event, Industrials themselves acknowledge that the Commission's briefing questions in fact specifically included BTMG.[170] In particular, the Commission asked parties to address "how co-located loads are similar to or disparate from other types of arrangements where load and generation share the same point of interconnection (such as Behind the Meter Generation[])."[171] This question reflects that the Commission would consider BTMG configurations in determining a just and reasonable replacement rate. Industrials contend that the Commission's reference to "other arrangements" in this question shows that retail BTMG and Co-Located Load are distinct concepts, but Industrials' claims are belied by their assertions in their reply comments to the February Order that BTMG configurations and Co-Location Arrangements identically impact the transmission system.[172] And regardless of their similarity, the Commission's briefing question raises the subject of the treatment of BTMG. Additional briefing questions in the February Order also sufficiently raise the subject of BTMG. The Commission directed parties to submit briefing on transmission services, including potential changes to the rates, terms, and conditions of NITS to accommodate Co-Location Arrangements.[173] PJM's retail BTMG netting rules are part of PJM's rates, terms, and conditions for NITS.[174] Finally, the Commission also asked "whether portions of the Guidance Document may serve as a just and reasonable and not unduly discriminatory or preferential replacement rate,"[175] and that document states, "[i]f the co-located Customer Facility elects to be designated as [BTMG], it will be allowed to net the co-located load directly against the output of the co-located Customer Facility."[176] We thus find that the February Order provided adequate notice that the Commission would consider PJM's BTMG netting rules as part of this proceeding.

77. The record developed in response to the February Order further reflects that Industrials had notice and an opportunity to address changing PJM's retail BTMG netting

[170] Industrials Request for Clarification or Rehearing at 25.

[171] February Order, 190 FERC ¶ 61,115 at P 88 (briefing question a.iv).

[172] PJM ICC and IECA April 23, 2025 Reply Comments at 9.

[173] February Order, 190 FERC ¶ 61,115 at P 88 (briefing question b.iv).

[174] PJM, Intra-PJM Tariffs, OATT, § III, § 34.2 (Netting of Behind the Meter Generation) (0.0.0).

[175] February Order, 190 FERC ¶ 61,115 at P 88 (briefing question a.iii).

[176] PJM, *PJM Guidance on Co-Located Load* (Mar. 22, 2024) (updated Apr. 17, 2024), https://www.pjm.com/-/media/DotCom/markets-ops/rpm/rpm-auction-info/pjm-guidance-on-co-located-load.pdf.

rules. While Industrials attempt to minimize the briefing questions as "scarcely mention[ing]" BTMG among a large number of topics in the February Order, PJM submitted detailed concerns that the retail BTMG netting rules were no longer just and reasonable in direct response to the February Order.[177] And parties debated the merits of PJM's concerns in reply comments.[178] All parties, including Industrials, had an opportunity to rebut PJM's claims before the Commission could weigh the evidence on this matter. As courts have explained, subsequent briefing on a topic serves as evidence of adequate notice as to that topic.[179]

b. Whether PJM's Retail BTMG Rules Are Unjust and Unreasonable

i. December Order

78. In finding that PJM's retail BTMG netting rules are no longer just and reasonable, the Commission explained that circumstances had changed since the Commission approved PJM's rules in 2004.[180] The Commission stated that PJM explains that the BTMG netting rules were "conceived for, and [have] been implemented for, substantially smaller loads (like a warehouse with solar panels) and not on the scale of large data

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[177] PJM March 24, 2025 Response at 34 ("The co-located load arrangements at issue here, large data centers, could be viewed as similar to BTM Generation that currently exists under PJM's Tariff (as reflected in Ex. A, Option 3). But as explained herein, the BTM Generation paradigm does not fit co-location arrangements particularly well because it was not designed with large load co-location in mind."); *id.* at 36-37 ("In sum, discussions in the record regarding PJM's BTM Generation rules raise questions about the status of those rules. PJM is open to exploring . . . whether the 20-year-old method of allocating costs pursuant to the BTM Generation netting rules remains consistent with cost causation principles.").

[178] *Compare* AMP April 23, 2025 Reply Comments at 10 ("The record provides no basis to revisit the current PJM Tariff provisions addressing BTMG."), *with* Northeastern Rural Electric Membership Corporation (NREMC) April 23, 2025 Reply Comments at 5 ("Additionally, simple netting of generation against load could allow these facilities [i.e., data centers] to avoid most, if not all, costs by netting out to zero as the entire load is supplied by the co-located generator, despite the co-located loads reliance and benefit from the grid. This would shift costs and burdens unfairly to other users, violating core principles of just and reasonable ratemaking.").

[179] *N. Va. Elec. Coop., Inc.*, 945 F.3d at 1206.

[180] December Order, 193 FERC ¶ 61,217 at P 186 (citing *PJM*, 107 FERC ¶ 61,113 (2004) (2004 BTMG Order)).

centers."[181] However, the Commission stated that large loads, both existing and in the planning stages with PJM, have proliferated in recent years, and PJM has persuasively explained the problems that could occur if Network Customers with large loads were allowed to use the existing BTMG netting rules in the Tariff.[182] The Commission stated that, for example, PJM explains that "[a]llowing very large loads like data centers to net is problematic because loads in this configuration do not carry reserves."[183] The Commission stated that such loads must nevertheless be served, however, allowing them to "lean on the PJM system when the [BTMG] is on a full or partial outage or if the load exceeds the rating of the [BTMG]."[184] The Commission emphasized that PJM's existing BTMG netting rules do not limit the amount of qualifying load that a Network Customer may net by using BTMG and do not provide any protections against this potential transmission and resource adequacy planning problem or against the costs of maintaining sufficient resources to serve these loads being shifted onto other customers.[185] The Commission found that PJM's BTMG netting rules are no longer consistent with cost causation principles, because large loads configured in a BTMG arrangement with significant generation will raise cost-shifting concerns compared to loads pursuing smaller amounts of netting. The Commission found that PJM's existing BTMG netting rules may lead to both reliability and resource adequacy risks because PJM, per its Tariff, is obligated to serve transmission customers using BTMG but does not consider such customers in transmission and resource adequacy planning.

ii. Request for Clarification and/or Rehearing

79. Industrials argue that the Commission erred by failing to address prior precedent on cost causation and failing to demonstrate that the existing BTMG netting rules were

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[181] *Id.* (quoting PJM March 24, 2025 Response at 13).

[182] *Id.* (citing Docket No. AD24-11-000, Large Loads Co-Located at Generating Facilities Tr. at 9:2-3 (noting that "large data centers [] need these significant new amounts of energy for their business"); *PJM Interconnection, L.L.C.*, 188 FERC ¶ 61,200, at P 5 (2024) ("PJM explains that the [tariff] proposal [to allocate load adjustments] was spurred by the recent proliferation of data centers that are contributing to large additions of forecasted load concentrated within a specific wholesale metering area.")).

[183] December Order, 193 FERC ¶ 61,217 at P 186 (quoting PJM March 24, 2025 Response at 36).

[184] *Id.* (quoting PJM March 24, 2025 Response at 13 n.5).

[185] *Id.* (citing PJM, Intra-PJM Tariffs, OATT, § III, § 34.2 (Netting of Behind the Meter Generation) (0.0.0)).

unjust and unreasonable.[186] Industrials contend that Commission precedent established the "actual use" principle, which holds that "actual use" of the transmission system is a just and reasonable approach for assessing transmission charges that comports with cost causation.[187] Industrials argue that the Commission here abandons the "actual use" principle by finding BTMG netting unjust and unreasonable.[188] According to Industrials, the December Order also "creates an unreasonable split between those who manage costs by managing load and those who manage costs by investing in generation."[189] "In other words," Industrials contend, "the effect of the 'gross load' approach is unduly discriminatory, because it allows 'actual use' to govern NITS costs for some (i.e., load-only customers), but not for others (i.e., those who have invested in retail behind-the-meter generation)."[190] Industrials acknowledge that "[i]f standby fees or other charges need to be considered in accordance with cost-causation principles, the Commission may explore those," but argue that "eliminating altogether the assessment of charges based on 'actual use' is unduly discriminatory and fails to reckon with well-established Commission precedent."[191]

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[186] Industrials Request for Clarification or Rehearing at 34; *see also id.* at 5, 19-20.

[187] *Id.* at 35-36 (citing 2004 BTMG Order, 107 FERC ¶ 61,113, at P 4 (finding "no transmission or distribution facilities are used to deliver energy from the generating unit to the load"); *Occidental Chem. Corp. v. PJM Interconnection*, 102 FERC ¶ 61,275, at P 14 (2003) (*Occidental*) ("Access charges for use of PJM's transmission system should be allocated to network customers based on a network customer's actual use of PJM's system, consistent with the principle of cost causation."); *PJM Interconnection, L.L.C.*, 167 FERC ¶ 61,268, at P 23 (2019) (*PJM*) (affirming Commission's conclusion in *Occidental* that Network Customers' charges for use of PJM's transmission system should be allocated based on a Network Customer's actual use of PJM's system); *ISO New Eng., Inc.*, 178 FERC ¶ 61,086, at P 51 (2022) (*ISO-NE*) (finding just and reasonable ISO New England Inc.'s proposal to exclude from the Monthly Regional Network Load served by unregistered BTMG and the portion of the output of a Generator Asset that serves load located behind the same retail customer meter and assign Regional Network Service charges to Network Customers based on each Network Customer's actual use of the system)).

[188] Industrials Request for Clarification or Rehearing at 35-37.

[189] *Id.* at 37.

[190] *Id.* at 37-38.

[191] *Id.* at 38.

80. Industrials argue that the Commission did not develop a sufficient record on which to base its determinations on BTMG netting rules in the Tariff.[192] Industrials give several examples of "real-life facility configurations" that will face substantial harms or be undercompensated under a "gross load" approach.[193] Industrials argue that, without a well-developed record, the Commission may not be able to fully recognize the cost causation implications of the removal of all netting rules.

iii. <u>Determination</u>

81. We disagree with Industrials that the Commission failed to address prior precedent in the December Order or show that PJM's retail BTMG netting rules were unjust and unreasonable.[194] The Commission in the December Order summarized its decision approving PJM's retail BTMG netting rules, including the finding in the 2004 BTMG Order accepting the BTMG netting rules that "charges for use of PJM's transmission system should be allocated to network customers based on a network customer's actual use of PJM's system, consistent with the principle of cost causation."[195] We recognize that the Commission's 2004 BTMG Order relied upon *Occidental* for the proposition that NITS charges should be based on actual use,[196] and that, after 2004, the Commission has relied upon *Occidental* and/or the 2004 BTMG Order to support similar findings.[197] But the Commission in the December Order did not find that it is no longer just and unreasonable to ever allocate transmission charges based on actual use. Rather, the Commission found that PJM's retail BTMG netting rules are no longer consistent with cost causation principles for a specific reason, that is, because large loads configured in a BTMG arrangement with significant generation will raise cost-shifting concerns

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[192] *Id.* at 26; *see also id.* at 6.

[193] *Id.* at 27-31; *see also id.* at 4-5.

[194] *Id.* at 34-38.

[195] December Order, 193 FERC ¶ 61,217 at P 7 (quoting 2004 BTMG Order, 107 FERC ¶ 61,113 at P 28); *Id.* P 186 (citing 2004 BTMG Order, 107 FERC ¶ 61,113).

[196] 2004 BTMG Order, 107 FERC ¶ 61,113 at P 28 (citing *Occidental*, 102 FERC ¶ 61,275).

[197] *See PJM*, 167 FERC ¶ 61,268 at P 23 (discussing *Occidental* for the proposition that the Commission has found that RTOs and transmission owners must recognize load reductions from interruptible load programs in computing billing determinants); *ISO-NE*, 178 FERC ¶ 61,086 at P 51 (finding just and reasonable ISO New England's proposal to charge Network Customers based on actual use of the system).

compared to loads pursuing smaller amounts of netting.[198] The Commission thus explained that these PJM retail BTMG netting rules, while previously consistent with cost causation principles at the time the Commission approved them, were rendered unjust and unreasonable by a change in circumstances. In further support of its finding that these rules are no longer just and reasonable, the Commission found that PJM's existing retail BTMG netting rules may lead to both reliability and resource adequacy risks because PJM, per its Tariff, is obligated to serve transmission customers using BTMG but does not consider such customers in transmission and resource adequacy planning.[199] The Commission orders relying on actual use principles that Industrials cite do not reflect the problems currently posed in PJM by large loads configured in a BTMG arrangement.[200]

82. We also disagree with Industrials that the Commission did not develop a sufficient record on which to base its determination in the December Order on PJM's retail BTMG netting rules.[201] As discussed above, the Commission adequately supported its findings that PJM's retail BTMG netting rules are no longer just and reasonable. Importantly, the Commission relied on evidence submitted by PJM detailing problems that could occur if Network Customers with large loads were allowed to use the existing retail BTMG netting rules in the Tariff.[202] Other parties raised similar concerns in the record.[203]

83. Industrials instead raise concerns that the Commission's decision results in significant economic harm to entities who have used PJM's retail BTMG netting rules

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[198] December Order, 193 FERC ¶ 61,217 at P 186.

[199] *Id.*; *see* PJM, Intra-PJM Tariffs, OATT, § III, § 34.2 (Netting of Behind the Meter Generation) (0.0.0).

[200] *See, e.g.*, *ISO-NE*, 178 FERC ¶ 61,086 at P 8 (explaining that, decades ago, behind-the-meter generation was typically larger on-site generation connected to industrial load, but since then, behind-the-meter generation has evolved with increasing amounts of widely distributed behind-the-meter generation that is below 5 MW, such as solar photovoltaic generation).

[201] Industrials Request for Clarification or Rehearing at 26-27.

[202] December Order, 193 FERC ¶ 61,217 at P 186 ("For example, PJM explains that "[a]llowing very large loads like data centers to net is problematic because loads in this configuration do not carry reserves.") (quoting PJM March 24, 2025 Response at 36).

[203] *Id.* P 73 ("NREMC argues that large Co-Located Loads paired with BTMG present significantly greater operational risks than traditional BTMG arrangements because they lack adequate reserves.") (citing NREMC April 23 Reply Comments at 5).

and the Commission may not have fully recognized the cost causation implications of the removal of all netting rules.[204] We find these concerns unpersuasive for several reasons. First, we believe Industrials' argument concerns how the Commission fashions a replacement rate that determines the extent to which entities may be able to continue to rely on netting,[205] not to the Commission's finding that the existing rate in PJM is no longer just and reasonable.

84. Second, as the Commission explained in the December Order in its determination on transmission services, NITS charges based on gross load for Network Load are roughly commensurate with the benefits received because Network Load has the right to be served from the transmission system at any time.[206] The Commission's decision to revise PJM's retail BTMG netting rules may increase transmission charges for Network Customers who have used PJM's retail BTMG netting rules, but this change better aligns the benefits and costs for these customers and addresses cost-shifting concerns because it reflects the fact that they must be served even when their retail BTMG is on outage.[207]

85. Third, as discussed elsewhere in this order, we set aside the December Order in part and permit Eligible Customers taking transmission service on behalf of load served by BTMG to have the option to take the new transmission services set forth in the December Order. Therefore, Eligible Customers taking transmission service on behalf of load served by BTMG will, at minimum, not be required to take NITS on a gross load basis but will have the option to take and be charged for different transmission services.

86. Fourth, we note that Industrials offer six examples involving specific BTMG arrangements that could be financially harmed by the removal of PJM's retail BTMG netting rules. As discussed above, to the extent these BTMG arrangements are financially harmed, that implicates the Commission's decision to set a replacement rate as to the extent to which such entities may continue to net going forward. Also, as discussed below, we set aside the December Order in part and direct PJM to exempt certain cogeneration facilities from revised retail BTMG netting rules where the facilities may be integrated with load such that, when their generator trips offline, the load follows (rather than withdrawing energy from the transmission system), as such facilities would not present the cost shift, reliability, or resource adequacy concerns discussed in the

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[204] Industrials Request for Clarification or Rehearing at 27.

[205] *See supra* Part IV.C.1.c.

[206] December Order, 193 FERC ¶ 61,217 at P 198.

[207] *See id.* P 186 (finding that PJM's retail BTMG netting rules raise cost-shifting concerns due to large loads configured in BTMG arrangements).

December Order.[208] To the extent that any of the facilities discussed in Industrials' six examples could demonstrate that they do not present such concerns, they may fall within the exemption that we direct PJM to submit as part of the compliance filing discussed below.[209]

87. We also disagree with Industrials that the December Order unduly discriminates against Network Customers who manage costs by investing in generation as compared to Network Customers who manage costs by managing load. Undue discrimination prohibited by the FPA can occur when similarly situated customers are treated differently.[210] Here, Industrials fail to show that the December Order results in differential treatment because Network Customers are subject to charges for NITS based on gross load whether or not they have associated generation, with the exception of the materiality threshold for retail BTMG discussed below. In addition, the December Order neither addresses nor limits Network Customers' ability to manage load, whether or not they have associated generation.

3. <u>Transmission Service Options for BTMG</u>

a. <u>December Order</u>

88. As explained above, the Commission found that the Tariff is unjust and unreasonable because it does not include transmission services that reflect Eligible Customers taking service on behalf of Co-Located Loads that are willing and able to limit their energy withdrawals from the transmission system under certain conditions.[211]

89. The Commission found that PJM's retail BTMG netting rules were no longer just and reasonable, explaining that these rules may lead to both reliability and resource adequacy risks because PJM, per its Tariff, is obligated to serve transmission customers

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[208] *Id.*

[209] *See, e.g.*, Industrials Request for Clarification or Rehearing at 27 ("Because the manufacturing process requires steam produced for generation, the bulk of the load can remain online only if generation is operational. If the generation goes down, the load will largely cease as well.").

[210] *Cal. Indep. Sys. Operator Corp.*, 193 FERC ¶ 61,117, at P 33 (2025).

[211] December Order, 193 FERC ¶ 61,217 at P 193.

using BTMG but does not consider such customers in transmission and resource adequacy planning.[212]

b. Request for Clarification and/or Rehearing

90. Industrials request clarification that the new transmission services must be made available to Eligible Customers taking transmission service on behalf of load-only customers with BTMG.[213] Industrials argue that Eligible Customers taking transmission service on behalf of load-only customers with BTMG should also be allowed to benefit from the new transmission services.[214]

c. Determination

91. We set aside, in part, the December Order. In addition to the finding in the December Order that the Tariff is unjust and unreasonable as to Eligible Customers taking transmission service on behalf of Co-Located Load, we also find that the Tariff is unjust and unreasonable because it does not include transmission services that reflect that Eligible Customers taking transmission service on behalf of load with BTMG are willing and able to limit their energy withdrawals from the transmission system under certain conditions. Requiring Eligible Customers taking transmission service on behalf of load with BTMG to take NITS, without the option to instead take such alternative transmission services that reflect their willingness and ability to limit their energy withdrawals, would be unjust and unreasonable for the same reasons we made the same finding with respect to Eligible Customers taking transmission service on behalf of Co-Located Load.[215] For purposes of this order, then, we use the term Eligible Load to refer to Co-Located Load[216] and/or load with BTMG.[217] We also direct PJM to file, within 60 days of the date of issuance of this order, a definition for Eligible Load, or other comparable Tariff revisions to implement these directives, and to revise its definition of BTMG to allow Eligible Customers taking transmission service on behalf of

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[212] *Id.* P 186.

[213] Industrials Request for Clarification or Rehearing at 13-14.

[214] *Id.*

[215] *See supra* Part IV.B.1.c (discussing further the Commission's finding in the December Order that the Tariff is unjust and unreasonable as to Eligible Customers taking transmission service on behalf of Co-Located Load).

[216] *See supra* P 10.

[217] *See supra* note 4.

load with BTMG that are willing and able to limit their energy withdrawals from the transmission system under certain conditions to take the new transmission services, consistent with this order. All Eligible Customers taking one of the new transmission services on behalf of Eligible Load will be subject to the requirements discussed below, including, but not limited to, operational requirements such as necessary control technologies and/or protection systems as discussed in part VI.C and penalty charges and other remedial actions as discussed in part VI.D.

C. Replacement Rate

1. Transmission Services

a. NITS

i. December Order

92. As relevant here, the Commission found that NITS must be taken on a gross basis.[218]

ii. Request for Clarification

93. PIOs request clarification of the December Order regarding cost allocation issues. PIOs argue that, given the unprecedented volume and scale of large load requests, the Commission should evaluate whether existing transmission rate designs remain just and reasonable. PIOs state that the Commission held in the December Order that Co-Located Load taking NITS would be responsible for costs that are "roughly commensurate" with benefits because zonal NITS rates include upgrades and operations and maintenance costs. PIOs argue that this rate design relies on a standard assuming that load growth is incremental and widely distributed, however, whereas discrete large-load pockets trigger multi-million dollar reliability solutions.[219]

94. PIOs contend that a significant "payer gap" can emerge because customers pay only in proportion to billing determinants rather than by the incremental costs that they trigger. PIOs provide the example of a transmission project portfolio approved in the 2024 Regional Transmission Expansion Plan (RTEP) Window 1 that will cost $5.08 billion and state that if a 1,000 MW data center represents 7% of the zone's peak determinants, it would contribute only $203 million and leave a $4.877 billion gap for unrelated regional and zonal customers to pay. PIOs therefore request that the Commission clarify how "roughly commensurate" cost allocation is evaluated when a

[218] December Order, 193 FERC ¶ 61,217 at P 195.

[219] PIOs Request for Clarification at 7.

discrete driver's pro-rata contribution is minimal compared to the infrastructure it necessitates. PIOs also argue that the Commission should require PJM and the PJM transmission owners to provide transparent reporting for major projects that compares incremental cost causation against pro-rata billing determinant recovery.[220]

iii. Determination

95. We deny the request for clarification.[221] In the December Order, the Commission found that NITS must be taken on a gross basis.[222] The Commission did not address cost allocation for Network Upgrades needed to accommodate NITS (or related reporting requirements) and we decline to do so here, finding those issues to be sufficiently distinct from the immediate issues in this proceeding and outside the scope of this proceeding. In any event, we note that these issues would be better addressed in a separate proceeding in which a record could be developed on these technical topics.[223]

b. New Transmission Services

96. In the December Order, the Commission—having found the Tariff unjust and unreasonable because it lacked relevant provisions with sufficient clarity and transmission services that reflect Eligible Customers taking service on behalf of Co-Located Loads that are willing and able to limit their energy withdrawals—addressed a just and reasonable replacement rate.[224]

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[220] *Id.* at 7-8.

[221] PIOs' request for clarification is titled and presented as a request for clarification, *id.* at 1, and we treat it as such, noting that it does not meet the Commission's requirements for requests for rehearing. 18 C.F.R. § 385.713(c)(2); *Pub. Serv. Co. of Colo.*, 190 FERC ¶ 61,128, at P 24 (2025).

[222] December Order, 193 FERC ¶ 61,217 at P 195.

[223] *See Mobil Oil Expl. & Prod. Serv. v. United Distrib. Cos.*, 498 U.S. 211, 230-31 (1991) ("An agency enjoys broad discretion in determining how best to handle related, yet discrete, issues in terms of procedures."); *Tenn. Valley Mun. Gas Ass'n v. FERC*, 140 F.3d 1085, 1088 (D.C. Cir. 1998) (the Commission has "broad discretion to determine when and how to hear and decide the matters that come before it"); *Stowers Oil & Gas Co.*, 27 FERC ¶ 61,001, at 61,001 (1984) ("The Commission, like other agencies, is generally master of its own calendar and procedures.").

[224] December Order, 193 FERC ¶ 61,217 at P 193.

97. The Commission directed PJM to submit a compliance filing to modify its Tariff to require that the Eligible Customer taking transmission service on behalf of a Co-Located Load takes one of three transmission services: (1) NITS or Interim NITS, (2) a new FCD transmission service, or (3) a new NFCD transmission service.[225] The Commission also established paper hearing procedures to determine the appropriate rates, terms, and conditions of the new transmission services.[226] The Commission stated that Interim NITS is a new interim, non-firm transmission service, which allows an Eligible Customer that has requested NITS on behalf of a Co-Located Load to take non-firm transmission service that can be interrupted until the Network Upgrades necessary to provide NITS are complete and the Co-Located Load can be designated as Network Load.[227]

98. The Commission stated that, under the FCD transmission service, Eligible Customers will have the right to request transmission service on behalf of a Co-Located Load up to a specified MW quantity, i.e., the contract demand. The Commission stated that the FCD transmission service will have the same reservation and curtailment priority as existing firm transmission services, at the level of the contract demand. However, the Commission stated that, unlike Network Customers, the Eligible Customer taking the FCD transmission service on behalf of the Co-Located Load is not permitted to withdraw energy from the PJM transmission system beyond the contract demand level.[228]

99. The Commission stated that the new NFCD transmission service will be provided during normal operations, on an as-available basis, and curtailed during emergency operations (i.e., it will be curtailed before existing firm transmission services and the new FCD transmission service). The Commission stated that, under this service, Eligible Customers may reserve transmission service on behalf of a Co-Located Load as needed during normal, non-emergency system operating conditions. The Commission stated that reservations under this service would be available only when there is available transmission capacity, similar to existing non-firm transmission service options in the Tariff.[229]

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[225] *Id.*

[226] *Id.* P 194.

[227] *Id.* P 200.

[228] *Id.* P 208.

[229] *Id.* P 215.

i. BTMG

(a) Requests for Clarification and/or Rehearing

100. As to a replacement rate covering Eligible Customers taking transmission service on behalf of load-only customers with BTMG, Industrials request clarification that the new transmission services must be made available to those customers.[230] Industrials argue that Eligible Customers taking transmission service on behalf of load-only customers with BTMG should also be allowed to benefit from the new transmission services.[231]

(b) Determination

101. As explained above, we set aside, in part, the December Order and find that the Tariff is unjust and unreasonable because it does not include transmission services that reflect Eligible Customers taking transmission service on behalf of loads with BTMG that are willing and able to limit their energy withdrawals from the transmission system under certain conditions. Consistent with this new determination, we now direct PJM to revise its Tariff to extend the three new transmission services set forth in the December Order to Eligible Customers taking service on behalf of load with BTMG that are willing and able to limit their energy withdrawals from the transmission system under certain conditions.

102. Specifically, we direct PJM to submit a compliance filing, within 60 days of the date of this order, to modify its Tariff to require that the Eligible Customer taking transmission service on behalf of Eligible Load takes one of three transmission services: (1) NITS or Interim NITS, (2) FCD transmission service, or (3) NFCD transmission service.[232] We find that it is just and reasonable for an Eligible Customer taking transmission service on behalf of Eligible Load to elect, as one of the required transmission services from which the Eligible Customer must choose, to take NITS for the same reasons we made that finding with respect to Eligible Customers taking transmission service on behalf of Co-Located Loads.[233]

103. Eligible Customers, on behalf of the Eligible Loads that they represent, may choose the transmission services that match their preferred use of the transmission

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[230] Industrials Request for Clarification or Rehearing at 13-14.

[231] *Id.*

[232] They must choose at least one of the required transmission services and may take a combination of the FCD and NFCD transmission services.

[233] December Order, 193 FERC ¶ 61,217 at PP 195, 198.

system; however, they must choose at least one of the required transmission services, and may take a combination of the FCD and NFCD transmission services. In addition, in instances where load with BTMG includes necessary control technologies and/or protection systems that limit its energy withdrawals, we find that it is a just and reasonable replacement rate to allow an Eligible Customer taking transmission service on behalf of Eligible Load to take and be charged for new types of transmission service that are alternatives, and not equivalent, to NITS: FCD and NFCD transmission services.[234]

ii. Undue Discrimination

(a) Requests for Clarification and/or Rehearing

104. Exelon and FirstEnergy argue that the Commission granted an undue preference to Co-Located Loads in requiring new forms for transmission services.[235] Exelon and FirstEnergy charge that the Commission failed "to explain why system protection schemes installed in [non-Co-Located Load] configurations would not provide similar benefits and be deserving of preferential rates."[236] Exelon and FirstEnergy contend that the totality of the burdens and benefits of grid interconnection justify charging Co-Located Load the same rate as all other transmission customers. Exelon and FirstEnergy assert that the Commission's new transmission service reduces the share of embedded costs for Co-Located Loads compared to all other users who receive the same benefits.

105. Industrials request clarification that the new transmission services must be made available to load-only customers with load flexibility, minimal retail BTMG, or no retail BTMG.[237] Industrials contend that this clarification would reduce the risk of undue discrimination because "[m]any large load customers can curtail their load at key times and control the amount of transmission service they use and when they use it."[238] Industrials also argue that this clarification would avoid potential cost shifts that would occur if similarly situated customers were given different options depending only on whether they have small generators on site. Industrials assert that this clarification would

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[234] *See id.* P 205.

[235] Exelon and FirstEnergy Request for Rehearing at 36-39.

[236] *Id.* at 38.

[237] Industrials Request for Clarification or Rehearing at 13 ("Such an approach would align with the natural gas industry's long history of large gas consumers electing how much service they purchase."); *see also id.* at 6-7.

[238] *Id.* at 14.

extend the optionality of the new transmission services to retail BTMG and load-only customers.[239] Lastly, Industrials argue that this clarification could make the PJM transmission planning process more efficient.[240]

(b) Determination

106. As an initial matter, we dismiss the argument that the new transmission services would be unduly discriminatory or preferential.[241] First, we dismiss this argument for lack of finality. Rule 713(b) of the Commission's Rules of Practice and Procedure permits requests for rehearing "of any final decision or other final order in a proceeding."[242] A final decision is one that imposes an obligation, denies a right, or fixes some legal relationship as a consummation of the administrative process.[243] The December Order did not make a final decision on the rates, terms, and conditions for the new transmission services.[244] Instead, the Commission found that "additional record evidence is needed" and set these issues for paper hearing procedures.[245] Setting a matter

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[239] *Id.* at 14-15.

[240] *Id.* at 15.

[241] Exelon and FirstEnergy Rehearing Request at 19-20, 30-31, 36-39, 52-53; Industrials Request for Clarification or Rehearing at 13-14. Further, as discussed above, we set aside the December Order, in part, and find in this order that it is just and reasonable for Eligible Customers taking transmission service on behalf of load with BTMG to take one of three transmission services: (1) NITS or Interim NITS, (2) FCD transmission service, or (3) NFCD transmission service. We therefore do not address whether it would be unduly discriminatory or preferential if the replacement rate were to not allow Eligible Customers taking transmission service on behalf of load with BTMG to take those services.

[242] 18 C.F.R. § 385.713(b); *see also* 16 U.S.C. § 825*l*(a) (stating that parties "aggrieved by an order issued by the Commission in a proceeding . . . may apply for a rehearing within thirty days after the issuance of such order").

[243] *Reliable Automatic Sprinkler Co., Inc. v. Consumer Prod. Safety Comm'n*, 324 F.3d 726, 731 (D.C. Cir. 2003) ("Final agency action 'mark[s] the consummation of the agency's decision making process' and is 'one by which rights or obligations have been determined, or from which legal consequences will flow'") (quoting *Bennett v. Spear*, 520 U.S. 154, 178 (1997)).

[244] December Order, 193 FERC ¶ 61,217 at P 219.

[245] *Id.*

for paper briefing "is interlocutory: it constitutes a procedural step that does not impose an obligation, deny a right, or fix some legal relationship as a consummation of the administrative process."[246] Without a final decision on the rates, terms, and conditions for the new transmission services, it is "premature" to argue or evaluate on rehearing whether those as-yet-undeveloped services would be unduly discriminatory.[247] At bottom, "the claimed harms are based on speculation regarding potential action that the Commission could take, rather than any action the Commission has actually taken."[248] Accordingly, because Commission action is not final and is to be succeeded by further Commission action, we dismiss the undue discrimination argument.[249]

107. In any event, we also dismiss the undue discrimination argument for the independent reason that it is outside the scope of this proceeding. This proceeding addresses Eligible Customers taking transmission service on behalf of Eligible Load with associated generation, such as through Co-Location Arrangements and BTMG

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[246] *Algonquin Gas Transmission, LLC*, 175 FERC ¶ 61,150, at PP 1, 5-8 (2021); *see also Kan. Elec. Power Coop., Inc.*, 181 FERC ¶ 61,017, at P 10 (2022) (finding that, because "the Commission found that its preliminary analysis indicated that the Formal Challenge and Complaint raised issues of material fact that could not be resolved on the record before the Commission and are more appropriately addressed in hearing and settlement judge procedures," "here, Commission action is not final and is to be succeeded by further Commission action," thus "a request for rehearing may be dismissed"); *City of Hamilton, Ohio*, 82 FERC ¶ 61,349, at 62,359 (1998) ("Setting this matter for a trial-type hearing does not impose an obligation, deny a right, or fix some legal relationship as a consummation of the administrative process.").

[247] *Algonquin Gas Transmission*, 175 FERC ¶ 61,150 at P 8; *see also, e.g.*, *F.T.C. v. Standard Oil Co. of Cal.*, 449 U.S. 232, 244 n.11 (1980) (*Standard Oil*) (explaining the fact that a "challenge may be mooted in adjudication warrants the requirement that [party] pursue adjudication, not shortcut it"); *MediNatura, Inc. v. Food & Drug Admin.*, 998 F.3d 931, 939 (D.C. Cir. 2021); *CSX Transp., Inc. v. Surface Transp. Bd.*, 774 F.3d 25, 30 (D.C. Cir. 2014) (explaining that it is a "good sign" that action is non-final when further agency processes may eliminate need for review).

[248] *Algonquin Gas Transmission*, 175 FERC ¶ 61,150 at P 8.

[249] *See, e.g.*, *Cove Mountain Solar, LLC*, 179 FERC ¶ 61,179, at P 7 (2022) (dismissing, in part, rehearing request on finality grounds because the Commission had established hearing and settlement judge procedures); *Westlands Transmission, LLC*, 177 FERC ¶ 61,175, at P 4 (2021); *BridgeTex Pipeline Co., LLC*, 164 FERC ¶ 61,111, at PP 10-12 (2018); *Pac. Gas & Elec. Co.*, 162 FERC ¶ 61,246, at PP 6-7 (2018); *Talen Energy Mktg., LLC*, 158 FERC ¶ 61,077, at PP 3-4 (2017).

arrangements.[250] In an order issued concurrently, the Commission is initiating a separate show cause proceeding in Docket No. EL26-67-000 to address, among other things, whether the Tariff remains just and reasonable and not unduly discriminatory or preferential without provisions addressing transmission services that reflect flexible large loads[251] that are willing and able to limit their energy withdrawals from the transmission system under certain conditions. Accordingly, it is beyond the scope of this proceeding—and within the scope of the separate proceeding—to argue that the new transmission services should be extended to Eligible Customers taking transmission service on behalf of flexible large loads. We thus dismiss this argument as outside the scope of this proceeding.[252] The Supreme Court has made clear that the Commission "enjoys broad discretion in determining how best to handle related, yet discrete, issues in terms of procedures."[253] The Supreme Court has "expressly approved a[] . . . Commission decision to treat [an] issue separately where a different proceeding would generate more appropriate information and where the agency was addressing the question"[254]—as is true as to the other proceeding. As courts have further recognized, "[w]hile the statute requires the Commission to act upon a finding that rates . . . are unjust or unreasonable, it nowhere mandates that having made such a finding with respect to a discrete issue, the Commission must reopen and reevaluate all other aspects of the filed rate."[255] Here, while the Commission addresses Co-Location Arrangements and BTMG, those findings do not necessitate that the Commission reevaluate transmission services that Eligible Customers take on behalf of other types of load.[256]

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[250] *See, e.g.*, December Order, 193 FERC ¶ 61,217 at P 2.

[251] Flexible large loads are a subset of large loads that are not co-located with generation but that are willing and able to limit their use of the transmission system under certain conditions.

[252] *See PJM Interconnection, L.L.C.*, 126 FERC ¶ 61,030, at P 16 (2009); *see also La. Pub. Serv. Comm'n v. Entergy Corp.*, 169 FERC ¶ 61,179, at P 9 (2019); *N.Y. Indep. Sys. Operator, Inc.*, 127 FERC ¶ 61,042, at P 26 (2009); *Union Elec. Co.*, 113 FERC ¶ 61,320, at P 8 (2005); *Cal. Indep. Sys. Operator Corp.*, 113 FERC ¶ 61,133, at P 24 (2005).

[253] *Mobil Oil*, 498 U.S. at 230-31; *see supra* note 226.

[254] *Mobil Oil*, 498 U.S. at 230-31.

[255] *Colo. Off. of Consumer Couns. v. FERC*, 490 F.3d 954, 956 (D.C. Cir. 2007).

[256] Industrials Request for Clarification or Rehearing at 6-7, 13-14.

108. In any event, while we dismiss the undue discrimination argument for the reasons explained above, we address the argument below to provide clarification to the parties. As relevant here, Industrials argue that it is unduly discriminatory for "load-only customers with load flexibility" to not be eligible for the new transmission services.[257] Industrials contend this creates undue discrimination "between customers with generation and customers without generation," who Industrials state "can curtail their load at key times and control the amount of transmission service they use and when they use it."[258] We refer in this subsection to these "load-only customers with load flexibility," as described by Industrials, as "flexible loads."

109. The Commission "has wide discretion to determine what constitutes undue discrimination."[259] Discrimination is undue when there is a difference in rates or terms between similarly situated entities that is not justified by some legitimate factor.[260] "[D]istinct operating characteristics" can render entities not similarly situated.[261] Here, a relevant distinct operating characteristic is that Eligible Load has an associated generator (Co-Located Generator or BTMG) as part of the Co-Location Arrangement or load configured with BTMG, and flexible load does not. The presence of these associated generators is a material factor in analyzing eligibility for the new transmission services. We anticipate, based on the record here, that Eligible Customers taking transmission

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[257] *Id.* at 13-14.

[258] *Id.* More generally, Industrials argue that the new transmission services should be extended to all transmission customers. *Id.* Because we dismiss the undue discrimination argument as nonfinal and outside of scope, we need not address the argument that the new transmission services should be extended to all transmission customers (an even broader, and thus less similar, category). Moreover, we have, in the December Order and in this order, sufficiently discussed eligibility for the new transmission services, including by explaining that it is not unduly discriminatory to limit the new transmission services to Eligible Customers taking transmission service on behalf of Eligible Load, such that we need not further address extending the services to all transmission customers.

[259] *Mo. River Energy Servs. v. FERC*, 918 F.3d 954, 958 (D.C. Cir. 2019) (citation modified). For purposes of the undue discrimination analysis in this order, when we refer to Eligible Customers taking transmission service on behalf of Eligible Load as not similarly situated to Eligible Customers taking transmission service on behalf of flexible load, we are referring to Eligible Customers only *insofar as* they take transmission service on behalf of *specific* Eligible Loads or flexible loads.

[260] *Sw. Power Pool, Inc.*, 192 FERC ¶ 61,058, at P 175 (2025).

[261] *Sw. Power Pool, Inc.*, 193 FERC ¶ 61,198, at P 82 (2025).

services on behalf of Eligible Loads would rely regularly in whole or in part on their associated generators, not on the transmission system, while Eligible Customers taking transmission services on behalf of flexible loads generally would rely entirely on the transmission system, even as they sometimes shift the amount of energy they take. This dynamic creates different transmission system usage, which is relevant to transmission services, charges, and planning.[262]

iii. Contract Demand

(a) Request for Rehearing

110. Exelon and FirstEnergy argue that the Commission has departed from decades of precedent that NITS is based on the entire gross load of the Network Customer, and the Commission failed to adequately explain its departure.[263] Exelon and FirstEnergy highlight, for example, the Commission's statement that it would be inconsistent with cost causation principles to require Eligible Customers taking transmission service on behalf of Co-Located Loads that limit their energy withdrawals to take NITS on a gross demand basis.[264] Exelon and FirstEnergy allege that the Commission recognized that

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[262] For the reasons in this Part, we also reject Industrials' request for clarification on this issue. Industrials Request for Clarification or Rehearing at 13-14.

[263] Exelon and FirstEnergy Request for Rehearing at 22-26 (citing *Nat'l R.R. Passenger Corp. v. PPL Elec. Utils. Corp.*, 173 FERC ¶ 61,043 (2020) (*Amtrak*); *Fla. Power & Light*, 113 FERC ¶ 61,290 (2005), *order on reh'g*, 116 FERC ¶ 61,012 (2006), *aff'd*, 264 F. App'x 4 (D.C. Cir. 2008) (*Florida Power & Light*); *Idaho Power Co.*, 106 FERC ¶ 61,329 (2004) (*Idaho Power*); *Ameren Servs. Co. v. Prairieland Energy Inc.*, 131 FERC ¶ 61,125 (2010) (*Ameren*); *Ariz. Pub. Serv. Co.*, 151 FERC ¶ 61,191 (2015) (*APS*); *Preventing Undue Discrimination & Preference in Transmission Serv.*, Order No. 890, 118 FERC ¶ 61,119, *order on reh'g*, Order No. 890-A, 121 FERC ¶ 61,297 (2007), *order on reh'g*, Order No. 890-B, 123 FERC ¶ 61,299 (2008), *order on reh'g*, Order No. 890-C, 126 FERC ¶ 61,228, *order on clarification*, Order No. 890-D, 129 FERC ¶ 61,126 (2009); *Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Servs. by Pub. Utils.; Recovery of Stranded Costs by Pub. Utils. & Transmitting Utils.*, Order No. 888, FERC Stats. & Regs. ¶ 31,036 (1996) (cross-referenced at 75 FERC ¶ 61,080), *order on reh'g*, Order No. 888-A, FERC Stats. & Regs. ¶ 31,048 (cross-referenced at 78 FERC ¶ 61,220), *order on reh'g*, Order No. 888-B, 81 FERC ¶ 61,248 (1997), *order on reh'g*, Order No. 888-C, 82 FERC ¶ 61,046 (1998), *aff'd in relevant part sub nom. Transmission Access Pol'y Study Grp. v. FERC*, 225 F.3d 667 (D.C. Cir. 2000), *aff'd sub nom. N.Y. v. FERC*, 535 U.S. 1 (2002).

[264] Exelon and FirstEnergy Request for Rehearing at 28 (citing December Order, 193 FERC ¶ 61,217 at P 199).

these customers use the transmission system for some services, such as regulation and black start, but for the customer not to use the system for other services makes the customer partially integrated, contrary to Order No. 888-A.[265] Exelon and FirstEnergy contend that the Commission has consistently rejected attempts to create a new third type of transmission service by parties whose reasons are exactly the same as the reasons the Commission used to justify its decision to establish Contract Demand transmission service based on net load, such as the notion that Co-Located Loads impose less burden on the grid. Exelon and FirstEnergy argue that the assessment of NITS is not based on actual use, that Network Customers pay the full rate but NITS charges are allocated based on contribution to system peak.[266] Exelon and FirstEnergy contend that Network Load needs to be able to call on service regardless of actual usage and utilities have an obligation to serve that load.

(b) <u>Determination</u>

111. We continue to find that it is just and reasonable to charge for FCD and NFCD transmission services based on the contract demand.[267] We disagree with Exelon and FirstEnergy's arguments that the Commission erred in not requiring the new FCD and NFCD transmission services be charged on a gross load basis and that this decision violates precedent.[268] As an initial matter, Exelon and FirstEnergy appear to suggest that the charges for these services would be based "on actual use" or "on net . . . load."[269] As explained in the December Order, however, transmission customers taking the new FCD or NFCD transmission service would "be charged based on their contract demand irrespective of usage."[270] We continue to find that this is a just and reasonable alignment of costs and benefits.[271] In particular, for the new FCD transmission service, because transmission customers taking this service would agree to limit withdrawals to the

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[265] *Id.* at 24.

[266] *Id.* at 26-29 (citing Indicated TOs June 3, 2025 Answer, Powers Decl.).

[267] December Order, 193 FERC ¶ 61,217 at P 2.

[268] Exelon and FirstEnergy Request for Rehearing at 22-30.

[269] *Id.*

[270] December Order, 193 FERC ¶ 61,217 at PP 211, 216 ("Eligible Customers taking the [NFCD] transmission service on behalf of Co-Located Loads will be charged for transmission and ancillary services on an as-reserved contract demand basis, based on the reserved contract demand amount of transmission service (except as noted[)].").

[271] *Id.*

contract demand through the mandatory implementation of necessary control technologies and/or protection systems, PJM would only plan the transmission system, procure generation capacity, and be obligated to provide transmission service up to that contract demand.[272] Similarly, for the new NFCD transmission service, PJM would only be obligated to provide transmission service up to the reserved contract demand when there is sufficient available transmission capacity to provide the requested service.[273] If the transmission customers taking the new FCD and NFCD transmission services were charged for that service on a gross load basis, they could be charged for more load than PJM is obligated to plan for, procure generation capacity for, or otherwise serve when transmission capacity is available. And—because these customers would be charged based on their contract demand irrespective of usage—they would be unable to avoid load-ratio cost responsibility by modifying their load at a particular time.[274]

112. Exelon and FirstEnergy argue that the new contract demand transmission services are inconsistent with Commission precedent.[275] Exelon and FirstEnergy contend that the Commission in the December Order contravened Order No. 888-A, in which the Commission rejected the notion of Network Customers "partially integrat[ing]" or "splitting a discrete load" because "such a split system creates the potential for a customer to game the system thereby evading some or all of its load-ratio cost responsibility for network services."[276] We continue to find that the new contract demand transmission services do not violate Order No. 888-A.[277] Most simply, Order No. 888-A rejected splitting load between NITS and PTPS at the same point of delivery.[278] That kind of splitting between transmission services at the same point of delivery remains barred under the December Order: Eligible Customers also cannot split

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[272] *Id.*; *see also id.* PP 215-216 (explaining that an Eligible Customer taking NFCD transmission service may reserve service as needed when the service is available, and the Eligible Customer will be charged on an as-reserved contract demand basis).

[273] *Id.*; *see also id.* PP 215-216 (explaining that an Eligible Customer taking NFCD transmission service may reserve service as needed when the service is available, and the Eligible Customer will be charged on an as-reserved contract demand basis).

[274] *Id.* P 211.

[275] Exelon and FirstEnergy Request for Rehearing at 22-30.

[276] *Id.* at 23-24 (quoting Order No. 888-A, FERC Stats. & Regs. ¶ 31,048 at 30,259) (internal quotation marks omitted).

[277] December Order, 193 FERC ¶ 61,217 at P 211.

[278] Order No. 888-A, FERC Stats. & Regs. ¶ 31,048 at 30,260.

load between NITS and FCD or NFCD transmission service at the same point of delivery. Further, under the new contract demand services, load is neither split nor partially integrated. Instead, load is capped at contract demand and Eligible Customers taking transmission service on behalf of Co-Located Loads are charged for that contract demand, irrespective of usage. Moreover, the rationale underlying Order No. 888-A—gaming—is also not present here.[279] The new contract demand transmission services will help avoid a cost shift to other transmission customers because Eligible Customers will not be able to reduce their load-ratio share to avoid paying transmission costs or capacity costs because their amount of FCD transmission service is fixed.[280]

113. Exelon and FirstEnergy further argue that the Commission contravened Order No. 888-A "[b]ecause the Commission has recognized that the [contract demand transmission service] customers use the transmission system for some services (such as load following and black start)," which would render those customers "partially integrated."[281] We disagree. Receiving ancillary services, such as regulation and black start, does not "integrate" a transmission customer into the transmission network—and particularly not in the manner that NITS does. Specifically, Order No. 888-A clarified that a "request for network service is a request for the integration of a customer's resources and loads,"[282] and a PTPS customer is not integrated, as recognized by Order

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[279] *Id.*

[280] December Order, 193 FERC ¶ 61,217 at P 211. We also note that the Commission justified its findings in Order No. 888-A by discussing "several fundamental operational problems associated with allowing partial network service." Order No. 888-A, FERC Stats. & Regs. ¶ 31,048 at 30,260. Those operational problems are not raised or present here because neither FCD nor NFCD transmission service are based on the Eligible Customer's load ratio. Further, Exelon and FirstEnergy suggest that the December Order is inconsistent with Order No. 890. Exelon and FirstEnergy Request for Rehearing at 25-26 (citing Order No. 890, 118 FERC ¶ 61,119, *order on reh'g*, Order No. 890-A, 121 FERC ¶ 61,297, *order on reh'g*, Order No. 890-B, 123 FERC ¶ 61,299 (2008), *order on reh'g*, Order No. 890-C, 126 FERC ¶ 61,228, *order on clarification*, Order No. 890-D, 129 FERC ¶ 61,126). While they do not cite a particular portion, they appear to be referring to a section that reiterates the already discussed portion of Order No. 888-A. Order No. 890, 118 FERC ¶ 61,119 at P 1619 (citing Order No. 888-A, FERC Stats. & Regs. ¶ 31,048 at 30,260-61). Our findings as to Order No. 888-A thus apply to Exelon and FirstEnergy's citation to Order No. 890.

[281] Exelon and FirstEnergy Request for Rehearing at 24.

[282] Order No. 888-A, FERC Stats. & Regs. ¶ 31,048 at 30,260.

No. 888-A.[283] Nonetheless, PTPS customers pay for and use ancillary services, including regulation service. Therefore, whether an Eligible Customer taking transmission service on behalf of Co-Located Load could receive ancillary services and/or black start service has no bearing on whether it is "integrated" as a Network Customer.

114. Exelon and FirstEnergy also argue that the December Order is inconsistent with other Commission precedent.[284] These cases do not undermine the December Order. In several cited cases, Network Customers chose to take NITS and sought to receive the benefits of NITS, specifically the right to withdraw energy from the transmission system when their own resources were not available, while arguing that they should be charged a lower rate based on their usage.[285] For example, Amtrak relied on the transmission system when the nearby generator was not available, and sought to maintain that arrangement and ability to withdraw energy to meet its gross load *at any time*, while paying NITS.[286] Here, the new FCD and NFCD transmission services set up new obligations and benefits—as well as charges on that new basis.[287] For example, under

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[283] *Id.* at 30,259-60 (presenting binary of "fully integrated or not integrated"—with full NITS or no NITS, respectively—in opposition to "partially integrated," which would include NITS and PTPS).

[284] Exelon and FirstEnergy Request for Rehearing at 23-30 (citing *Amtrak*, 171 FERC ¶ 61,237, *order on reh'g*, 173 FERC ¶ 61,043 (2020); *Florida Power & Light*, 113 FERC ¶ 61,290, *order on reh'g*, 116 FERC ¶ 61,012, *aff'd*, 264 F. App'x 4; *Idaho Power*, 106 FERC ¶ 61,329; *Ameren*, 131 FERC ¶ 61,125; *APS*, 151 FERC ¶ 61,191).

[285] *E.g.*, *Amtrak*, 173 FERC ¶ 61,043 at P 12 ("What Amtrak seeks to do is carve out from network service charges the power supplied by Safe Harbor. Such an outcome is impermissible under the PJM Tariff and inconsistent with the nature of NITS.").

[286] *See id.* P 13 (rejecting Amtrak's rehearing request and explaining that "Amtrak seeks the ability to select when it will use and pay for NITS (i.e., only when inflows occur through PPL's Manor Substation")).

[287] December Order, 193 FERC ¶ 61,217 at PP 208, 210, 211, 212. Indeed, the December Order also responds to new circumstances not present in the cited cases—namely, the proliferation of potential Co-Location Arrangements. Even if the cited cases were controlling here, we find these new circumstances would warrant the Commission's decision to charge for FCD and NFCD transmission services based on the contract demand.

FCD transmission service, the Eligible Customer can rely on the service only up to the level of its contract demand.[288]

115. In particular, Exelon and FirstEnergy maintain that the December Order is inconsistent with *Florida Power & Light*, which they characterize as standing for the proposition that "the gross load construct [i]s most appropriate," "even in the case of physical impossibility of serving the entire load."[289] As an initial matter, there is no "physical impossibility exception"[290] in the December Order because the new FCD and NFCD transmission services are based on legally capped demand, not "physical impossibility."[291] Specifically, while in *Florida Power & Light* the "physical impossibility" was a constraint on the transmission system, which prevented the entire load from being served by the transmission system,[292] no such physical constraint on the transmission system exists for an Eligible Customer taking FCD and/or NFCD transmission service on behalf of a Co-Located Load. Rather, such Eligible Customers may elect to take transmission service at a contract demand level less than the amount of the entire load and commit to limiting their withdrawals from the transmission system to the contract demand level. Regardless, in *Florida Power & Light*, the Commission only discussed "physical impossibility" in dicta.[293] In that discussion, the Commission

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[288] *Id.* We further reiterate that the absence of this type of option is unjust and unreasonable. *Id.* P 177.

[289] *E.g.*, Exelon and FirstEnergy Request for Rehearing at 24-25.

[290] *Florida Power & Light*, 113 FERC ¶ 61,290 at P 7.

[291] December Order, 193 FERC ¶ 61,217 at PP 208, 210, 211, 212. To the extent Exelon and FirstEnergy characterize their argument addressed in this Part as directed toward our "unjust and unreasonable" findings and not the replacement rate, Exelon and FirstEnergy Request for Rehearing at 22-23, we reject this argument based on the same substantive reasons included in this Part.

[292] *Florida Power & Light*, 113 FERC ¶ 61,290 at PP 7-8.

[293] *Id.* The Commission began by generally rejecting the prospect of alternative proposals from individual customers because of the potential administrative and undue discrimination concerns with setting individual-customer-specific rates (but the Commission did approve the prospect of alternative proposals from utilities). *Id.* P 6. In other words, the cited adjudications, *see, e.g.*, Exelon and FirstEnergy Request for Rehearing at 23-25; *see also id.* at 27, are additionally inapposite here to the extent they involved proceedings where only individual customers that claimed to limit their use of the transmission system sought to alter the rates, terms, and conditions of its transmission service and obtain rates and terms for themselves.

nonetheless did not even rule out the prospect of considering "physical impossibility" in a more generally applicable setting where the impossibility could be administered, verified, and backed by technological and legal constructs—rather than on an ad hoc basis due to a transmission customer's mere assertions that it was particularly deserving of a specially-designed and administered service.[294]

iv. <u>Alleged Alternatives to FCD and NFCD Transmission Services</u>

(a) <u>Request for Rehearing</u>

116. Exelon and FirstEnergy contend that the Commission "fail[ed] to demonstrate that [the new transmission services] are just and reasonable" because there are already existing mechanisms for customers to reduce load or use other generation in order to reduce withdrawals.[295] Exelon and FirstEnergy maintain that PJM's demand response rules are available to Co-Located Loads and the Commission fails to explain why such rules are inadequate here. Indeed, Exelon and FirstEnergy assert, the Commission stated that those rules are just and reasonable for Co-Located Loads taking NITS.

(b) <u>Determination</u>

117. We do not find Exelon and FirstEnergy's argument availing. The mere fact that there may be preexisting mechanisms in the Tariff to accomplish something (even assuming that they are equivalent, which we do not) does not mean that adding an additional mechanism is not just and reasonable. Exelon and FirstEnergy offer no justification or citation to support the proposition that having multiple provisions targeted at similar objectives is not just and reasonable.

118. Further, demand response operates differently from the contract demand transmission services. In the first place, demand response is not a transmission service. And demand response presents a different set of benefits and burdens—NFCD transmission service would be curtailed earlier than demand response resources would be called on and can be instructed to curtail without any notification (unlike most demand response resources).[296] FCD transmission service, on the other hand, is a firm transmission service with the same curtailment priority as existing firm transmission

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[294] *Florida Power & Light*, 113 FERC ¶ 61,290 at PP 7-8.

[295] Exelon and FirstEnergy Request for Rehearing at 36-37.

[296] December Order, 193 FERC ¶ 61,217 at P 215; *see also infra* Part VI.G.4.

services, at the level of contract demand.[297] In addition, PJM would not plan for any future load growth for either FCD or NFCD transmission service once the contract demand level of each transmission service is established. As to Interim NITS, that transmission service serves a different function than demand response because it allows Eligible Customers to begin taking a limited, non-firm transmission service on behalf of Co-Located Load before the transmission system is capable of reliably providing NITS at their requested level.

v. <u>Protection Systems</u>

(a) <u>Request for Rehearing</u>

119. Exelon and FirstEnergy argue that the Commission's emphasis on protection systems is arbitrary and capricious because it is in tension with the Commission's open access policies. Exelon and FirstEnergy assert that generators have an interest in designing captive arrangements where customers cannot access alternative supply, which is contrary to the Commission's open access policies in Order No. 888.[298] Exelon and FirstEnergy argue that generators will convert their interconnection facilities into transmission assets and then install relay systems that make load captive to its generation.[299] Exelon and FirstEnergy view this arrangement as akin to the problem of transmission owners using their control of transmission facilities to refuse to deliver energy produced by competitors or to deliver competitors' power on less favorable terms.[300]

120. Exelon and FirstEnergy argue that the Commission erred in minimizing the fact that protection systems can and have failed.[301] Exelon and FirstEnergy point out that the Commission recognizes that protection systems fail, and to address this risk, directed PJM to apply a penalty rate for the new transmission services. But Exelon and FirstEnergy allege that assessing penalties after the fact does not remediate the reliability implications of faulty protection systems. Exelon and FirstEnergy also argue that protection systems "do not protect the grid from real impacts that occur even when there

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[297] December Order, 193 FERC ¶ 61,217 at P 208.

[298] Exelon and FirstEnergy Request for Rehearing at 39-40.

[299] *Id.* at 40.

[300] *Id.* (citing *N.Y. v. FERC*, 535 U.S. at 8-9).

[301] *Id.* at 39-41.

is consumption by a co-located customer but no net withdrawal, such as the impacts of load and voltage spikes and oscillations."[302]

(b) Determination

121. We address both arguments in turn. First, the contemplated use of necessary control technologies and/or protection systems is not inconsistent with the Commission's open access policies. Co-Location Arrangements are voluntary. The December Order does not mandate that any Co-Located Load or Co-Located Generator enter into a Co-Location Arrangement. In other words, contrary to Exelon and FirstEnergy's assertions, the Commission is not forcing any entity into being a captive customer, as they would have the option to connect to the transmission system and take NITS like any other Network Customer.

122. Second, we dismiss the argument regarding protection system failure and the risks they address for lack of finality.[303] The December Order did not make a final decision on required technology and what appropriate remedies would be for failure of that technology.[304] Instead, the December Order set those issues for paper hearing procedures.[305] In any event, the Commission recognized that protection systems, like many technologies, in rare instances can fail; accordingly, the Commission ordered paper briefing on technical requirements to address reliability risks and remedial actions.[306] We also note that it is possible that the remedial actions could remediate the reliability implications of such a failure. Further, whatever risks are not avoided by a facility's necessary control technologies and/or protection systems will be studied in the relevant study processes.

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[302] *Id.* at 39.

[303] *See supra* P 106.

[304] December Order, 193 FERC ¶ 61,217 at P 177.

[305] *Id.* P 178.

[306] *Id.* P 212.

vi. Benefits of FCD and NFCD Transmission Services

(a) Request for Rehearing

123. Exelon and FirstEnergy allege that the Commission is wrong to suggest that FCD and NFCD transmission services will promote efficiency or change siting.[307] Exelon and FirstEnergy argue that planning and siting depend on physics and engineering of the grid, not whether transmission service is charged on a gross or net load basis. Exelon and FirstEnergy argue that the Commission's decision to require FCD and NFCD transmission services does not change how the study process should work. Exelon and FirstEnergy warn that, "[i]f transmission providers are forced to pretend a 500 MW load is only 50 MW, or even that it is zero . . . it will threaten reliability and resource adequacy."[308] Exelon and FirstEnergy maintain that no loads should be taken out of the broader planning process, and there is no support for the suggestion that regional planning needs are reduced because of FCD and NFCD transmission services. Exelon and FirstEnergy argue that the Commission's decision on PJM's retail BTMG netting rules and the Commission's concerns about resource adequacy and cost shifting cannot be reconciled with the Commission's proposed structure for the new transmission services.[309]

124. Exelon and FirstEnergy state that the Commission failed to point to any other tariff where these new transmission services have been required by the Commission.[310]

(b) Determination

125. As an initial matter, we dismiss this argument for lack of finality.[311] The December Order did not make a final decision on the rates, terms, and conditions for the new FCD and NFCD transmission services.[312] Instead, the Commission found that "additional record evidence is needed" and set these issues for paper hearing

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[307] Exelon and FirstEnergy Request for Rehearing at 47-48.

[308] *Id.* at 48.

[309] *Id.* at 48-49.

[310] *Id.* at 36.

[311] *See supra* P 106.

[312] December Order, 193 FERC ¶ 61,217 at P 219.

procedures.[313] Without a final decision on the rates, terms, and conditions for the new FCD and NFCD transmission services, it is "premature" to argue or evaluate on rehearing whether those as-yet-undeveloped services would affect efficiency or siting.[314]

126. In any event, while Exelon and FirstEnergy appear to direct this argument toward the replacement rate, we addressed these topics in our discussion of the Commission's FPA section 206 step one finding above. In short, we continue to find that the Tariff is unjust and unreasonable because it does not include transmission services that reflect Eligible Customers taking service on behalf of Co-Located Loads that are willing and able to limit their energy withdrawals from the transmission system under certain conditions—and that this lack of such transmission services is economically inefficient.[315] We direct the new FCD and NFCD transmission services as a just and reasonable way to address this issue (among others). And, while siting choices can reduce the need for Network Upgrades, that fact does not undermine our finding that requiring Eligible Customers taking service on behalf of Co-Located Loads to take NITS for these loads leads to an unacceptable probability of inefficient outcomes by requiring more or more costly Network Upgrades than would potential new FCD and NFCD transmission services.[316] We similarly reiterate that the need for many Network Upgrades are caused by the amount of MW flow on the transmission system even though the need for certain Network Upgrades are not (e.g., they may be caused by stability or voltage-related issues).[317] Therefore, as Exelon and FirstEnergy concede, under a transmission service that reflects willingness and ability to limit energy withdrawals, "if the load installs systems aimed at limiting its use of the grid, those might change the system impacts and need for upgrades."[318] Likewise, while PJM will only plan the transmission system for FCD transmission service based on the level of contract demand as a matter of transmission *capacity*, PJM will still be able to consider the gross load for analyzing certain issues such as stability and short circuit.[319]

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[313] *Id.*

[314] *Algonquin Gas Transmission*, 175 FERC ¶ 61,150 at P 8.

[315] December Order, 193 FERC ¶ 61,217 at P 177.

[316] *Id.* PP 177, 199, 205.

[317] *See* Exelon and FirstEnergy Request for Rehearing at 47-48.

[318] *Id.* at 19-20; *see also id.* at 48.

[319] December Order, 193 FERC ¶ 61,217 at P 210.

127. The Commission's findings related to retail BTMG netting are not inconsistent with the findings related to the new FCD and NFCD transmission services.[320] The Commission stated that "the existing BTMG netting rules in the PJM Tariff [are] unjust and unreasonable" because, "under the existing Tariff, loads with BTMG are not fully accounted for in resource adequacy planning."[321] The Commission explained that "[s]uch loads must nevertheless be served, however, allowing them to lean on the PJM system when the [BTMG] is on a full or partial outage or if the load exceeds the rating of the [BTMG]."[322] Eligible Customers taking service on behalf of Co-Located Load will be treated differently under FCD and NFCD transmission services—"PJM will have no obligation to serve the Eligible Customer beyond the contract demand."[323]

128. Exelon and FirstEnergy argue that the Commission failed to point to any other tariff where these new transmission services have been required by the Commission.[324] This argument is irrelevant because the Commission need not point to another FPA section 206 proceeding where the Commission set an identical replacement rate in order to set a replacement rate.

vii. <u>Reliability and New Transmission Services</u>

(a) <u>Request for Rehearing</u>

129. Exelon and FirstEnergy argue that the Commission overlooked important reliability concerns in establishing new transmission services, including that loads impact the system even when there is no net power draw on the system.[325] Exelon and FirstEnergy assert that gross load is being followed by resources on the grid at all times, thus impacting the system. Exelon and FirstEnergy assert that the Commission has not explained how reliability planning should proceed when large loads may be incentivized to exceed their contract demand limit for transmission service. Exelon and FirstEnergy contend that the Commission overlooked resource adequacy risks in establishing Interim NITS. Exelon and FirstEnergy allege that it is unclear how it will be determined that load may be served reliably and the Commission failed to give PJM guideposts to make

[320] *See* Exelon and FirstEnergy Request for Rehearing at 48-49.

[321] December Order, 193 FERC ¶ 61,217 at P 179.

[322] *Id.* P 186.

[323] *Id.* P 211.

[324] Exelon and FirstEnergy Request for Rehearing at 36; *see also id* at 27, 29, 35.

[325] *Id.* at 49-51.

such a determination. Exelon and FirstEnergy state that it is unknown how and by what standards load would be curtailed and whether curtailment is an adequate response to the need to follow gross load moment-by-moment, and thus the transmission service options cannot be just and reasonable.

130. Exelon and FirstEnergy argue that, as to Interim NITS, the Commission has not accounted for reliability risks, not knowing when or how curtailments would be implemented, as the Commission has asked for briefing on when Eligible Customers taking this service would be curtailed.[326] Exelon and FirstEnergy express concern that future state legislation may create inconsistencies among Co-Located Load in different states.

(b) <u>Determination</u>

131. We dismiss these arguments for lack of finality.[327] The December Order did not make a final decision on several issues relevant to this argument.[328] Instead, the Commission found that "additional record evidence is needed" and established paper hearing procedures on: the rates, terms, and conditions for the new transmission services; interconnection requirements and operational practices for special protection schemes; the communications, alarm, SCADA,[329] or other requirements necessary for PJM to monitor Co-Located Load transmission system demand status, ensure that relay settings are consistent with special protection scheme design, and inform system operator action in order to limit withdrawals that exceed the amount of contract demand; and the procedures to govern circumstances under which PJM curtails an Eligible Customer taking the three new transmission services.[330] Without a final decision on these issues, it is premature to argue or evaluate on rehearing whether the Commission overlooked important reliability concerns in establishing the new transmission services.[331] In any event, as to the new FCD and NFCD transmission services, the December Order did not

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[326] *Id.* at 37.

[327] *See supra* P 106.

[328] December Order, 193 FERC ¶ 61,217 at P 219.

[329] Supervisory Control and Data Acquisition (SCADA) is a system of remote control and telemetry used to monitor and control the transmission system. *See* NERC *Glossary of Terms* 42, https://www.nerc.com/globalassets/standards/reliability-standards/glossary_of_terms.pdf.

[330] December Order, 193 FERC ¶ 61,217 at P 219.

[331] *See Algonquin Gas Transmission*, 175 FERC ¶ 61,150 at P 8.

prohibit PJM or the transmission owners from performing any particular studies that may be necessary or mandate that the level of contract demand would be the only impact studied. For example, when PJM or the transmission owners consider factors unrelated to the contract demand of the Co-Located Load, the December Order did not preclude use of the complete dynamic or EMT model of the Co-Located Load, regardless of what level or type of transmission service the Eligible Customer has requested.

132. On Interim NITS, specifically, the Commission established paper hearing procedures on "What are the appropriate procedures to govern the circumstances under which PJM curtails an Eligible Customer taking the interim, non-firm transmission service . . . on behalf of a Co-Located Load during emergency procedures?"[332] The Commission thus did not make a final decision on this issue either. In any event, the Commission stated that said Interim NITS "would only be available to the extent PJM determines that it can provide some level of interim service reliably."[333]

viii. Major Questions Doctrine

(a) Request for Rehearing

133. Exelon and FirstEnergy assert that the Commission's replacement rate violates the major questions doctrine.[334] Exelon and FirstEnergy argue that the Commission has no authority under FPA section 206 to provide unduly preferential treatment to a certain category of customers, but that the Commission established a replacement rate favoring Co-Located Load without reasoned explanation.

(b) Determination

134. We disagree with Exelon and FirstEnergy that the December Order violates the major questions doctrine. The major questions doctrine applies in certain "extraordinary cases" involving an agency action that results in a "transformative expansion" of its authority—especially over issues of great "economic and political significance."[335] In

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[332] December Order, 193 FERC ¶ 61,217 at P 219.

[333] *Id.* P 200.

[334] Exelon and FirstEnergy Request for Rehearing at 52.

[335] *W. Va. v. EPA*, 597 U.S. 697, 721, 724 (2022) (citations and quotations omitted).

such "extraordinary cases," courts might "hesitate before concluding that Congress meant to confer such authority."[336]

135. We conclude that this proceeding is not an "extraordinary case" such that the December Order does not implicate the major questions doctrine. In *West Virginia v. Environmental Protection Agency*, the U.S. Supreme Court identified a number of indicators that tend to identify a case as extraordinary, none of which are present here. First, the December Order does not involve a "transformative expansion" of the FPA or a reimagining of the Commission's long-held interpretation of that statute.[337] Instead, the Commission acted, as it has previously, by finding that an existing practice was unjust and unreasonable and proceeding to establish a just and reasonable replacement rate.[338] Second, the December Order does not entail the use of an "ancillary" or "little-used backwater" statutory provision.[339] To the contrary, FPA section 206 is central to the Commission's authority over the rates for transmission service in interstate commerce.[340] Third, the Commission did not in the December Order act outside of the Commission's typical area of "comparative expertise."[341] Indeed, the Commission's regulation of the

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[336] *Id.* at 721 (citations and quotations omitted).

[337] *See id.* at 724-25 (finding that an agency's failure to invoke the asserted power in the past indicates that the major questions doctrine might apply).

[338] *See, e.g.*, *N.Y. v. FERC*, 535 U.S. 1 (upholding Commission's exercise of its FPA section 206 authority in its landmark Order No. 888, which established the *pro forma* OATT and established new transmission services); *S.C. Pub. Serv. Auth. v. FERC*, 762 F.3d 41 (upholding Commission's exercise of its authority under FPA section 206 to remedy deficiencies in existing transmission planning practices).

[339] *W. Va. v. EPA*, 597 U.S. at 724, 730.

[340] *See EPSA*, 577 U.S. at 290 ("ensur[ing] effective transmission of electric power" is one of the "core objects" of the FPA"); *N.Y. v. FERC*, 535 U.S. at 7 ("[Section] 205 of the FPA prohibited . . . unreasonable rates and undue discrimination with respect to any transmission . . . subject to the jurisdiction of the Commission, and [section] 206 gave the [Commission] the power to correct such unlawful practices.") (quotations and citations omitted); *Bldg. for the Future Through Elec. Reg'l Transmission Plan. & Cost Allocation*, Order No. 1920, 187 FERC ¶ 61,068 (2024), *order on reh'g and clarification*, Order No. 1920-A, 189 FERC ¶ 61,126, at P 175 (2024) ("FPA section 206 sets forth core Commission regulatory authority to remedy unjust and unreasonable rates, and practices affecting rates, for the transmission of electric energy in interstate commerce."), *order on reh'g and clarification*, Order No. 1920-B, 191 FERC ¶ 61,026 (2025).

[341] *W. Va. v. EPA*, 597 U.S. at 729.

rates, terms, and conditions of transmission service in interstate commerce sits at the core of the Commission's expertise.[342] Fourth, the December Order does not assert authority in a manner of great "economic and political significance."[343] Instead, the December Order makes important but discrete changes to the manner in which a subset of transmission customers take and pay for certain transmission services.

136. In any event, Exelon and FirstEnergy argue that the replacement rate violates the major questions doctrine only insofar as it exceeds the Commission's jurisdiction or is unduly discriminatory or preferential.[344] As explained above, the replacement rate does neither.

c. BTMG

i. Qualifying Facilities

(a) December Order

137. The Commission directed PJM to revise the Tariff to revise the retail BTMG netting rules.[345] The Commission directed PJM to propose a new MW threshold for the amount of load at a particular electrical location that Network Customers may net by using BTMG but to otherwise phase-in the elimination of netting. Specifically, the Commission directed PJM to allow Network Customers already using the retail BTMG netting rules to continue to do so for a transition period of three years.[346] Further, the Commission directed PJM to grandfather entities with existing contracts for the specific purpose of effectuating a BTMG arrangement for the current term remaining under the existing contract.[347]

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[342] *See S.C. Pub. Serv. Auth. v. FERC*, 762 F.3d at 49-54 (summarizing the Commission's history of reforms to the rates, terms and conditions of interstate transmission service).

[343] *W. Va. v. EPA*, 597 U.S. at 721.

[344] Exelon and FirstEnergy Request for Rehearing at 52.

[345] December Order, 193 FERC ¶ 61,217 at P 221.

[346] *Id.* P 223.

[347] *Id.* P 224.

(b) Request for Clarification and/or Rehearing

138. Industrials request clarification on whether cogeneration QFs under the Public Utility Regulatory Policies Act of 1978 (PURPA) will be provided access to back-up and maintenance power at just and reasonable rates and be credited for capacity based on the reliability of their generating units.[348] Industrials contend that many QFs are cogeneration facilities, and that strong operational and financial incentives exist for cogeneration facilities to operate efficiently. Industrials state that Commission regulations require certain QFs to meet specified efficiency standards and thus should be encouraged.[349] Thus, Industrials argue that many QFs operate with a high capacity factor and reliably during transmission peaks. Industrials accordingly seek clarification on whether and how the December Order will apply to cogeneration QFs. Industrials contend that the removal of netting rules will "directly harm large American manufacturing facilities that have invested substantial resources into developing and maintaining on-site generation."[350] Industrials add that removing netting rules may contradict Commission regulations that require back-up and maintenance services for cogeneration QFs. Further, Industrials argue that FCD and NFCD transmission services do not appear to account for forced generation outages. For these reasons, Industrials request that the Commission clarify that cogeneration QFs are exempt from the "gross load" approach or that PJM must include a reasonable "Back-up Power" transmission option that retail BTMG customers, including QFs, can purchase.[351]

(c) Determination

139. As discussed below, in response to the Industrials' request for clarification, we clarify and set aside, in part, the December Order.

140. First, we clarify that the December Order's replacement rate does not change any obligation under the Commission's PURPA regulations regarding QFs' access to supplementary, back-up, maintenance, and interruptible power. The replacement rate applies only to Network Customers' usage of NITS under the Tariff, and nothing in the replacement rate undoes the requirement in 18 C.F.R. § 292.305(b)(1) that, as to QFs, "each electric utility shall provide . . . Supplementary power, Back-up power,

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[348] Industrials Request for Clarification or Rehearing at 10; *see also id.* at 5.

[349] *Id.* at 11 (citing 18 C.F.R. § 292.205 (2025)).

[350] *Id.*

[351] *Id.* at 11-13.

Maintenance power, and Interruptible power."[352] While Industrials suggest that removing netting rules may contradict Commission regulations that require back-up and maintenance services for cogeneration QFs, Industrials do not explain how the replacement rate results in Industrials no longer being entitled to back-up and maintenance power under the Commission's regulations. In addition, Industrials do not explain why it is necessary for the Commission to adopt a change to "credit [QFs] for capacity based on the reliability of their generating units."[353]

141. Second, we set aside, in part, the December Order's directive that PJM establish a new MW threshold for the amount of load at a particular electrical location that *Network Customers* may net by using BTMG.[354] We find that it is just and reasonable to allow certain cogeneration QFs that are Network Customers to be able to net by using BTMG, and to be exempt from the new MW threshold, as discussed below. In the December Order, the Commission found that PJM's retail BTMG rules are no longer consistent with cost causation principles because large loads configured in a BTMG arrangement with significant generation will raise cost-shifting concerns compared to loads pursuing smaller amounts of netting.[355] Moreover, the Commission found that PJM's existing retail BTMG rules may lead to both reliability and resource adequacy risks because PJM, per its Tariff, is obligated to serve transmission customers using BTMG but does not consider such customers in transmission and resource adequacy planning.[356] We find that there is not sufficient reason, and nor do Industrials articulate such a reason on rehearing, to believe that these concerns are inapplicable to cogeneration QFs categorically.

142. However, we recognize, based on the record, that there may be *certain* industrial cogeneration QFs that may be integrated with load such that, when their generator trips offline, the load follows (rather than withdrawing energy from the transmission system). For example, as Industrials explain as to certain industrial cogeneration QFs, "if the generator goes offline, the load promptly follows because the manufacturing facility

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[352] 18 C.F.R. § 292.305(b)(1) (2025).

[353] Industrials Request for Clarification or Rehearing at 10.

[354] December Order, 193 FERC ¶ 61,217 at P 221.

[355] *Id.* P 186.

[356] *Id.* To the extent the Commission's clarification on this issue conflicts with the requested clarification, we otherwise disagree with Industrials' request to the extent Industrials request rehearing in the alternative. *See* Industrials Request for Clarification or Rehearing at 2.

cannot function without the steam output from the generation process."[357] We therefore direct PJM, within 60 days of the date of issuance of this order, to submit on further compliance a process to exempt certain cogeneration QFs from the new retail BTMG netting rules if they demonstrate that they are integrated with load such that, when their generating facility trips offline, the load follows, and they thus do not present the reliability or resource adequacy concerns discussed in the December Order. In developing its compliance proposal, PJM must ensure that the requirements for a cogeneration QF to make this demonstration are not unduly burdensome.

ii. Capacity Obligations

(a) December Order

143. The Commission found that PJM's existing retail BTMG netting rules may lead to both reliability and resource adequacy risks because PJM is obligated to serve transmission customers using BTMG but does not consider such customers in transmission and resource adequacy planning.[358] The Commission directed PJM to propose a new MW threshold for the amount of load at a particular electrical location that Network Customers may net by using BTMG.[359] The Commission explained that such a threshold should reduce the reliability and resource adequacy risks that large loads may pose to PJM, while also allowing for Network Customers to reduce their transmission charges in a transparent, not unduly discriminatory fashion.

(b) Request for Clarification and/or Rehearing

144. Industrials seek clarification that the removal of BTMG netting rules will only be applicable to transmission and specified ancillary services, not to capacity obligations. Industrials represent that the determination of retail customers' capacity tags is made by individual electric distribution companies and that large industrial and institutional users have a variety of configurations and approaches to meeting their capacity requirements.[360] Industrials contend that the Commission did not analyze the impact of

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[357] Industrials Request for Clarification or Rehearing at 11.

[358] December Order, 193 FERC ¶ 61,217 at P 186.

[359] *Id.* P 221.

[360] Industrials Request for Clarification or Rehearing at 15-16.

the BTMG rule changes on retail customers' capacity obligations or address alternate capacity products that a retail customer with BTMG could elect.[361]

(c) Determination

145. We deny Industrials' clarification request and sustain the December Order. The Commission's determination that PJM's retail BTMG netting rules are no longer just and reasonable rested on a finding that PJM's existing retail BTMG netting rules may lead to reliability and resource adequacy risks.[362] The Commission set a replacement rate to reduce the resource adequacy risks identified in the record.[363] We recognize that requiring PJM to revise its retail BTMG netting rules may affect capacity obligations,[364] but in the absence of this reform, the resource adequacy problems arising from PJM's existing retail BTMG netting rules would persist because PJM remains obligated to serve transmission customers using BTMG but under the existing rules does not consider such customers in resource adequacy planning.[365] As to Industrials' concerns about the impact of the retail BTMG netting rule changes on retail customers, we agree with Industrials that the RAA provisions Industrials cite directly apply to LSEs, not retail customers' capacity obligations,[366] and we note that, as part of our replacement rate, we established a grandfathering provision such that existing entities may be able to continue netting for the remainder of a contract entered into for the purpose of effectuating a BTMG arrangement.[367] This grandfathering provision may also limit the impacts of the changes to PJM's retail BTMG netting rules upon some entities' capacity obligations. In addition, as discussed above, we set aside, in part, the December Order and direct PJM to revise its Tariff to extend the three new transmission services set forth in the December Order to Eligible Customers taking service on behalf of load with BTMG that are willing and able to limit their energy withdrawals from the transmission system under certain conditions. Thus, Eligible Customers taking transmission service on behalf of load with BTMG that

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[361] *Id.* at 16.

[362] December Order, 193 FERC ¶ 61,217 at P 186.

[363] *Id.* P 221.

[364] *See, e.g.*, PJM, Intra-PJM Tariffs, RAA, Schedule 8 (Determination of Unforced Capacity Obligations) (5.3.0).

[365] December Order, 193 FERC ¶ 61,217 at P 186.

[366] *See, e.g.*, PJM, Intra-PJM Tariffs, RAA, Schedule 8 (Determination of Unforced Capacity Obligations) (5.3.0).

[367] December Order, 193 FERC ¶ 61,217 at P 224.

are willing and able to limit their energy withdrawals from the transmission system under certain conditions may elect to take FCD and/or NFCD transmission service, which could reduce capacity obligations in comparison to a BTMG arrangement where the Eligible Customer elects to take NITS.[368]

iii. Unlawful Taking of Private Property

(a) December Order

146. In the December Order, the Commission directed PJM to revise the retail BTMG netting rules in the Tariff.[369]

(b) Request for Clarification and/or Rehearing

147. Industrials argue that the Commission's BTMG findings effectuate an unlawful taking of private property without providing just compensation, in violation of the Fifth Amendment of the United States Constitution. Industrials contend that there is a "*per se* taking[]" because "the owner is deprived of 'all economically beneficial us[e]' of the property due to the government action."[370] Industrials assert that certain manufacturing facilities with on-site generation would be "completely uneconomic."[371] Separately, Industrials contend that there is a regulatory taking under the factors outlined in *Penn Central Transportation Co. v. New York City*.[372] In particular, Industrials state that the BTMG netting findings will cause, in some instances, devastating economic impacts "but perhaps not total deprivation."[373] Industrials also argue that the BTMG netting findings

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[368] *Id.* P 211 ("PJM will only plan the transmission system and procure generation capacity for the contract demand—not for load growth, like it does for NITS customers—and PJM will have no obligation to serve the Eligible Customer beyond the contract demand."); *id.* P 218 ("The new Non-Firm Contract Demand transmission service will not include a charge for generation capacity.").

[369] *Id.* P 221.

[370] Industrials Request for Clarification or Rehearing at 31-32 (quoting *Lingle v. Chevron U.S.A.*, 544 U.S. 528, 538 (2005)).

[371] *Id.* at 32 (listing examples).

[372] *Id.* at 33 (citing *Penn. Cent. Transp. v. City of N.Y.*, 438 U.S. 104, 124 (1978)).

[373] *Id.* at 33-34.

upset investment-backed expectations and do not "promote or facilitate a public program or public good to justify the economic interference."[374]

(c) Determination

148. As an initial matter, we dismiss Industrials' argument that the Commission's BTMG findings effectuate an unlawful taking of private property for lack of finality.[375] The December Order did not make a final decision on the applicability and design of the revised retail BTMG netting rules.[376] In particular, the Commission stated that it "ma[d]e no finding in this order on a threshold" "for the amount of load at a particular electrical location that Network Customers may net by using BTMG."[377] It would thus be premature to argue or evaluate on rehearing whether those as-yet-undeveloped retail BTMG netting rules effectuate an unlawful taking.[378]

149. In any event, the Commission has an obligation under the FPA to ensure that the rates, terms, and conditions of jurisdictional service are just and reasonable. As the Commission found in the December Order, circumstances have changed since the Commission approved PJM's retail BTMG netting rules such that these rules are no longer just and reasonable.[379] The Commission therefore is establishing a just and reasonable replacement rate. And, as the Courts have held, in the context of setting rates, terms, and conditions for jurisdictional service, what is just and reasonable is not a taking.[380] Instead, in establishing a just and reasonable replacement rate, the Commission is balancing the respective rights and obligations of the parties and will determine that

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[374] *Id.*

[375] *See supra* P 106.

[376] December Order, 193 FERC ¶ 61,217 at P 221.

[377] *Id.*

[378] *Algonquin Gas Transmission*, 175 FERC ¶ 61,150 at P 8.

[379] December Order, 193 FERC ¶ 61,217 at P 186.

[380] *See In re Permian Basin Area Rate Cases*, 390 U.S. 747, 770 (1968) ("[T]he just and reasonable standard of the Natural Gas Act coincides with the applicable constitutional standards and any rate selected by the Commission from the broad zone of reasonableness permitted by the Act cannot properly be attacked as confiscatory.") (punctuation and citations omitted); *see also N.Y. Indep. Sys. Operator, Inc.*, 151 FERC ¶ 61,075, at P 63 (2015).

appropriate replacement rate through the course of the paper hearing and compliance proceedings.[381]

iv. Materiality Threshold

(a) December Order

150. The Commission directed PJM to propose a new MW threshold for the amount of load at a particular electrical location that Network Customers may net by using BTMG.[382] The Commission stated that parties would have an opportunity to comment on PJM's proposed threshold before we establish this replacement rate.[383]

(b) Request for Clarification and/or Rehearing

151. Industrials seek clarification that any retail BTMG materiality threshold implemented will be sufficiently high to permit traditional manufacturers and institutional customers to continue to net generation, consistent with actual use of the transmission system.[384] Industrials argue that a threshold of at least 200 MW would appropriately recognize the major energy investments most existing industrial and institutional loads have made over decades, consistent with the "actual use" principle, without making

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[381] *N.Y. Indep. Sys. Operator, Inc.*, 151 FERC ¶ 61,075 at P 63 (citing *Jersey Cent. Power & Light Co. v. FERC*, 810 F.2d 1168, 1191 (D.C. Cir. 1987) (*en banc*) (Starr, J. concurring) (("Unlike garden-variety takings, the requirements of the Takings Clause are satisfied in the rate regulatory setting when justice is done, that is to say the striking of a reasonable balance between competing interests.")); *see also supra* P 137 (describing the materiality threshold, phase-in, and grandfathering), PP 141-142 (setting aside the December Order in part to allow certain cogeneration QFs to continue to net).

[382] December Order, 193 FERC ¶ 61,217 at P 221.

[383] *Id.*

[384] Industrials Request for Clarification or Rehearing at 16.

uneconomic their resource adequacy contributions.[385] Industrials contend that this threshold would still address the primary concern driven by new large loads.[386]

152. To the extent the Commission does not grant clarification, Industrials argue that the MW materiality threshold, transition period, and grandfathering provision fail to correct the asserted defects created in the December Order.[387] While Industrials "welcome exemptions as helpful," they describe those policies as "the exception that proves the rule."[388] Industrials contend that the threshold could create unintended consequences such as perverse incentives to make on-site generation projects smaller, undue discrimination via a bright-line threshold, or a limit that is too low.[389] Industrials suggest that, rather than an arbitrary threshold, the Commission should maintain its traditional netting approach but find alternative means to ensure that standby or backup costs are addressed for very large loads. Industrials recommend that if the Commission pursues a mandatory threshold, it should choose a multi-pronged threshold aligned with the drivers of current transmission demand and the reliability risks posed.[390] Specifically, Industrials argue, the Commission should set the threshold high enough to permit traditional manufacturers and industrial loads to continue netting—such as 200 MW.[391]

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[385] *Id.* at 16 & n. 23 ("We understand that industrial combined heat and power . . . units may, in certain cases, exceed 200 MW. Given the Administration's interest in reshoring American manufacturing and the pressing need to keep long-established generation units economic, 200 MW may be insufficient.").

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

[387] *Id.* at 42.

[388] *Id.*

[389] *Id.* at 42-43 (stating also that "[n]either a MW-based threshold nor a grandfathering provision correct jurisdictional deficiencies" and the Commission should "find alternative means to ensure that standby or backup costs are addressed for very large loads").

[390] *Id.* at 43.

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

(c) Determination

153. As an initial matter, we dismiss Industrials' argument that any retail BTMG materiality threshold implemented will be insufficiently high for lack of finality.[392] The December Order did not make a final decision on the materiality threshold to be used in the revised the retail BTMG netting rules.[393] In particular, the Commission stated that it "ma[d]e no finding in this order on a threshold" "for the amount of load at a particular electrical location that Network Customers may net by using BTMG."[394] It would thus be premature to argue or evaluate on rehearing whether that as-yet-undeveloped retail BTMG materiality threshold be insufficiently high.[395]

154. In response to the Industrials' arguments on rehearing regarding the MW threshold, transition period, and grandfathering provision, we continue to find that this three-pronged approach as to a replacement rate is just and reasonable.[396] As an initial matter, we note that Industrials primarily take issue with the Commission's decision to set a MW threshold, alleging it is arbitrary and may be unduly discriminatory.[397] We disagree. We recognize that no threshold may be perfect, but the Commission has discretion in drawing administrative lines it deems necessary,[398] and we continue to believe that a threshold is not only necessary for the reasons set out in the December Order, but also that we can exercise reasonable discretion to set a threshold consistent with the Commission's intent to reduce the concerns raised by PJM's existing retail BTMG netting rules. As the Commission explained in the December Order, "such a threshold should reduce the reliability and resource adequacy risks [] that large loads may

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[392] *See supra* P 106.

[393] December Order, 193 FERC ¶ 61,217 at P 221.

[394] *Id.*

[395] *Algonquin Gas Transmission*, 175 FERC ¶ 61,150 at P 8.

[396] December Order, 193 FERC ¶ 61,217 at PP 221-224.

[397] Industrials Request for Clarification or Rehearing at 16-17, 42-43.

[398] *See Vonage Holdings Corp. v. FCC*, 489 F.3d 1232, 1242 (D.C. Cir. 2007) ("It is true that an agency may not pluck a number out of thin air when it promulgates rules in which percentage terms play a critical role. When a line has to be drawn, however, the Commission is authorized to make a 'rational legislative-type judgment.' If the figure selected by the agency reflects its informed discretion, and is neither patently unreasonable nor 'a dictate of unbridled whim,' then the agency's decision adequately satisfies the standard of review.") (citation and internal quotation marks omitted).

pose to PJM, while also allowing Network Customers to reduce their transmission charges in a transparent, not unduly discriminatory fashion."[399] The Commission also acknowledged that such a materiality threshold "will not eliminate the risk" identified in the December Order, but found that it "will ensure that the risk is limited."[400] As the Commission explained in the December Order, an important part of the problem is that "PJM's existing retail BTMG netting rules do not limit the amount of qualifying load that a Network Customer may net by using BTMG."[401] We also note that, as discussed above, we set aside, in part, the December Order's elimination of BTMG netting as to certain cogeneration QFs. In addition, we note that above we set aside, in part, the December Order and extend the three new transmission services set forth in the December Order to Eligible Customers taking service on behalf of load with BTMG that are willing and able to limit their energy withdrawals from the transmission system under certain conditions, thereby providing such customers the option to elect to take a transmission service that matches their preferred use of the transmission system.[402] Lastly, we note that, while Industrials suggest the Commission find an alternative approach to a mandatory threshold to ensure that standby or backup costs are addressed for "very large loads,"[403] they fail to support their request with any specificity.[404]

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[399] December Order, 193 FERC ¶ 61,217 at P 221.

[400] *Id.*

[401] *Id.* P 186.

[402] *Id.* P 194 (stating that "Eligible Customers, on behalf of the Co-Located Loads that they represent, may choose the transmission services that match their preferred use of the transmission system").

[403] Industrials Request for Clarification or Rehearing at 43.

[404] FPA section 313(a) requires that an "application for rehearing shall set forth *specifically*" its grounds. 16 U.S.C. § 825*l*(a) (emphasis added). We follow Commission practice, with which courts have agreed, and reject arguments on rehearing, such as this one, lacking sufficient specificity. *PJM Interconnection, L.L.C.*, 171 FERC ¶ 61,040 at P 22; *see also Ind. Util. Regul. Comm'n*, 668 F.3d at 736; *LA Storage, LLC*, 182 FERC ¶ 61,026 at P 25 & n.75.

2. Necessary Study Process for Existing Interconnection Customers

a. Treatment of Capacity Interconnection Rights (CIRs) for Co-Located Generators

i. December Order

155. The Commission found that an existing generator may not begin serving Co-Located Load that is not Network Load until it has de-listed its CIRs for the portion of the generator to be designated to serve any Co-Located Load that is not receiving NITS.[405] A capacity resource's CIRs are rights to inject generation as a Generation Capacity Resource into the transmission system at the Point of Interconnection.[406]

ii. Request for Clarification and/or Rehearing

156. Constellation argues that the December Order appears to require a capacity resource to delist its CIRs even when the capacity resource remains fully capable of serving the grid during capacity emergencies.[407] Constellation explains that generators and Co-Located Load may seek contractual arrangements in which the generator will serve the grid rather than the Co-Located Load during a capacity emergency and the Co-Located Load will either curtail or rely on backup generation. Constellation claims that it would be inconsistent with PJM's existing rules to require delisting in these circumstances. According to Constellation, PJM's existing rules only require a capacity resource entering an external sale to delist its CIRs when the resource "has a financially and physically *firm* commitment to an external sale of its capacity."[408]

157. Constellation therefore seeks clarification that the December Order does not require a capacity resource to delist its CIRs to serve a Co-Located Load that is taking NFCD transmission service if PJM can verify that the Co-Located Load has no contractual right to energy from the generator during a capacity emergency and that the Co-Located Load has the ability either to curtail or draw on back-up power.[409]

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[405] December Order, 193 FERC ¶ 61,217 at P 230.

[406] *PJM Interconnection, L.L.C.*, 168 FERC ¶ 61,155, at P 7 n.15 (2019).

[407] Constellation Request for Clarification or Rehearing at 3 (citing December Order, 193 FERC ¶ 61,217 at P 230).

[408] *Id.* at 4 (quoting PJM, Intra-PJM Tariffs, OATT, attach. DD.6 § 6.6) (emphasis in original).

[409] *Id.* at 4-5 (referring to "the ability to (i) interrupt and/or (ii) turn on back-up diesels or other back-up power or draw on batteries when transmission under the

Constellation argues that the Commission could require the Co-Located Load to disclose information regarding its protective relay scheme and its interruptible commitment and could impose penalties on the Co-Located Load for failure to comply with its commitment.

158. To the extent that the Commission does not grant clarification, Constellation seeks rehearing. Constellation argues that requiring a capacity resource to delist its CIRs in these circumstances would be a failure of reasoned decision making.[410] Constellation also argues that it would be unduly discriminatory to require a capacity resource serving a Co-Located Load to delist for entering into an interruptible commitment but not to require capacity resources to delist before making other non-firm commitments.[411]

iii. Determination

159. We deny Constellation's request for clarification and sustain the December Order's finding that an existing generator may not begin serving Co-Located Load that is not Network Load until it has delisted its CIRs for the portion of the generator to be designated to serve any Co-Located Load that is not receiving NITS.[412]

160. Constellation proposes a scenario in which an Eligible Customer taking NFCD transmission service on behalf of Co-Located Load would not be allowed to withdraw power from the transmission system during emergency conditions and the Eligible Customer would guarantee that it would further curtail its demand in order to allow the Co-Located Generator to provide energy to the system. NFCD transmission service governs when an Eligible Customer may withdraw energy from the transmission system, but it does not govern the firmness of any bilateral agreement to supply energy between the Co-Located Load and the Co-Located Generator. We understand Constellation's scenario to be one in which the Co-Located Load—when relying on the Co-Located Generator—does not schedule its power by relying on FCD or NFCD transmission service.

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non-firm contract demand service is interrupted and the co-located generator is serving the grid").

[410] *Id.* at 6 (citing *Elec. Consumers Res. Council v. FERC*, 747 F.2d 1511, 1513-14 (D.C. Cir. 1984)).

[411] *Id.* (citing 5 U.S.C. § 706(2)(A); *Consol. Edison of N.Y., Inc. v. FERC*, 45 F.4th 265 (D.C. Cir. 2022)).

[412] December Order, 193 FERC ¶ 61,217 at P 230.

161. Under Constellation's scenario, the Co-Located Generator would not be capable of meeting its entire capacity requirement. In addition to the requirement to perform during emergencies, Generation Capacity Resources are required to offer into the Day-Ahead Market throughout the delivery year.[413] Constellation's proposal would allow a Generation Capacity Resource to violate this requirement and provide an inferior capacity product (compared to other Generation Capacity Resources) for the same capacity payment. We thus deny Constellation's request for clarification and sustain the December Order.

162. We also reject Constellation's argument that Generation Capacity Resources engaged in non-firm external bilateral transactions are not required to delist their CIRs and are comparable.[414] A Generation Capacity Resource engaged in a non-firm external bilateral transaction must still make offers into PJM's day-ahead market.[415]

b. Cost Responsibility for Network Upgrades

i. December Order

163. In the December Order, the Commission required PJM to revise its Tariff to expressly indicate that the Interconnection Customer will be responsible for the costs of any modifications or Network Upgrades that are needed as a result of PJM's study of the change to the Interconnection Service Agreement (ISA) or Generation Interconnection Agreement (GIA) to allow the existing generator to serve Co-Located Load, including to reflect any reduction in CIRs, inclusive of all necessary Network Upgrades. The Commission found that this change will clarify that costs associated with such Co-Location Arrangements will not be unfairly shifted to other transmission customers. The Commission further directed PJM to revise its Tariff to clarify that an existing generator may not commence service to a Co-Located Load until all required Network Upgrades, special protection schemes, and metering are in service.[416]

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[413] Under the Tariff, a capacity resource is required to offer its Installed Capacity (ICAP) equivalent of the resource's cleared Unforced Capacity (UCAP) into the PJM energy markets every day if not on outage or derated. PJM, Intra-PJM Tariffs, OATT, attach. K, app. § 1.10 (Scheduling) (46.1.1), § 1.10.1A(d).

[414] Constellation Request for Clarification or Rehearing at 6.

[415] PJM, Intra-PJM Tariffs, OATT, attach. K, app. § 1.10 (46.1.1), § 1.10.1A(d).

[416] December Order, 193 FERC ¶ 61,217 at P 228; *see also id.* P 176 (summarizing same).

ii. Request for Rehearing

164. Exelon and FirstEnergy challenge the Commission's directive that an Interconnection Customer seeking to serve Co-Located Load using an existing generator must bear the costs of all Network Upgrades.[417] Exelon and FirstEnergy contend that the Commission has departed, without explanation, from its policy that all transmission customers share the embedded costs of the transmission system, including Network Upgrade costs, consistent with cost causation principles.[418] Exelon and FirstEnergy assert that this policy is sensible because all loads benefit from the transmission network, including Co-Located Load. Exelon and FirstEnergy argue that the Commission acknowledges that Co-Located Load benefits from the transmission network as a whole because the Commission found Co-Located Load relies on regulation and black start.[419] Exelon and FirstEnergy contend that regulation and black start cannot be delivered in isolation: they depend on diverse resources around the grid transmitting power over transmission lines, on other operating reserves and voltage support services, and on Network Upgrades. Exelon and FirstEnergy also argue that the December Order is internally inconsistent and discriminatory because it preserves NITS as a just and reasonable approach, but the NITS funding model conflicts with the proposed assignment of costs to Co-Located Load.[420]

165. Exelon and FirstEnergy assert that the Commission should not erode its rolled-in rate policy and identify several consequences of such erosion.[421] First, Exelon and FirstEnergy contend that, if Co-Located Loads need only pay for incremental investment, they avoid paying for the broader system on which they depend, resulting in other customers paying a forced subsidy.[422] Exelon and FirstEnergy express concern that, once a Co-Located Load fulfills its responsibility for funding certain upgrades, prohibitions on "and" pricing mean the Co-Located Load would not be responsible for further transmission service payments even though the transmission system requires maintenance. Second, Exelon and FirstEnergy argue that the Commission's approach creates challenges akin to those in the generator interconnection space, such as the potential for future Co-Located Load customers to trigger significant upgrades, and

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[417] Exelon and FirstEnergy Request for Rehearing at 42-43.

[418] *Id.* at 42.

[419] *Id.* at 43.

[420] *Id.* at 44.

[421] *Id.* at 44-47.

[422] *Id.* at 45.

incentives for speculative behavior and Point of Interconnection shopping.[423] Third, Exelon and FirstEnergy argue that significant up-front requirements could hinder economic development for Co-Located Load customers that are not data centers.

iii. <u>Determination</u>

166. We sustain the December Order's requirement that an Interconnection Customer will be responsible for the costs of any modifications or Network Upgrades that are needed to allow the existing generator to serve Co-Located Load, including to reflect any reduction in CIRs, inclusive of all necessary Network Upgrades.[424] We disagree with Exelon and FirstEnergy's argument that the Commission created a "new paradigm" as to Interconnection Customers' cost responsibility for Network Upgrades needed to accommodate modifications those customers make to their own generators.[425] To the contrary, the Commission directed PJM to revise the Tariff to *expressly* state that Interconnection Customers have this cost responsibility in order to "*clarify* that costs associated with such Co-Location Arrangements will not be unfairly shifted."[426] In other words, even without this revision to improve the Tariff's *clarity*, this requirement was the preexisting one. The Tariff provides that an Interconnection Customer is responsible for the costs of additions to the Transmission System that are required to accommodate modifications to the generator.[427] For example, apart from Co-Location Arrangements, if an Interconnection Customer decreased the capacity of a generator due to technological changes at that facility, the Interconnection Customer would be responsible for the costs of Network Upgrades needed to accommodate that decrease.[428] This requirement

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[423] *Id.* at 46.

[424] December Order, 193 FERC ¶ 61,217 at P 228.

[425] Exelon and FirstEnergy Request for Rehearing at 42-47.

[426] December Order, 193 FERC ¶ 61,217 at P 228 (emphasis added).

[427] PJM, Intra-PJM Tariffs, pt. IX, subpt. B, app. 2 (2.0.0), § 3.4(b) (Modification Costs) ("Project Developer shall be responsible for the costs of any additions, modifications, or replacements to the Interconnection Facilities and Transmission Owner Upgrades or the Transmission System that are required, in accord with Good Utility Practice and/or to maintain compliance with Applicable Laws and Regulations or Applicable Standards, in order to accommodate additions, modifications, or replacements made by Project Developer to the Generating Facility or Merchant Transmission Facility or to the Project Developer Interconnection Facilities."); *see also, e.g.*, *id.* Attachment O, Appendix 2, § 3.4(b) Modification Costs (0.0.0).

[428] *Id.* Part IX.B, Appendix 2, § 3.4(b) Modification Costs (2.0.0).

likewise applies to Interconnection Customers seeking to modify their interconnection to serve Co-Located Load if the attendant decrease in energy injected to the transmission system necessitates Network Upgrades. Accordingly, if the Commission had not directed the revision at issue here, Interconnection Customers would still bear the cost responsibility at issue—the Commission simply acted to improve the clarity of the Tariff on this topic. Exelon and FirstEnergy thus attack a requirement in the Tariff that the Commission approved before this proceeding and that the Commission did not change in this proceeding.

167. For the same reason, Exelon and FirstEnergy are incorrect in arguing that the Commission "depart[ed] from prior precedent" with a requirement that "differs from the approach taken in the PJM Tariff."[429] As explained, the Commission did not change the preexisting Tariff regime. In any event, despite their assertion, Exelon and FirstEnergy do not include citations to precedent addressing this topic.[430]

168. Exelon and FirstEnergy also misunderstand the requirement they criticize. Exelon and FirstEnergy characterize the Commission's directive as ordering that "[C]o-[L]ocated [L]oad must self-fund any needed transmission upgrades."[431] The cost responsibility at issue, however, is limited to existing Interconnection Customers and pertains only to the specified Network Upgrades related to their own modifications.[432] In short, the Commission did not direct that Co-Located Load would self-fund Network Upgrades. Their criticisms of the clarification that the Commission directed to the current Tariff are thus flawed. The Commission specifically stated that the requirement to self-fund any needed Network Upgrades was appropriate because when "an *Interconnection Customer* seek[s] to serve Co-Located Load using an existing generating facility" "existing transmission customers" must be "protect[ed]" "from bearing the cost of Network Upgrades required for an *Interconnection Customer* to begin serving Co-Located Load."[433] Otherwise, costs could be "unfairly shifted" based on the conduct of

[429] Exelon and FirstEnergy Request for Rehearing at 42, 44.

[430] In the relevant section of Exelon and FirstEnergy's rehearing request, they do cite several cases and orders that do not address this topic. For example, Exelon and FirstEnergy cite *Coalition of MISO Transmission Customers v. FERC*, 45 F.4th 1004, 1009 (D.C. Cir. 2022), for a general statement of cost causation principles and they cite two orders regarding load-ratio share for NITS. *Id.* at 42-47 & nn.110-111.

[431] *Id.* at 42.

[432] PJM, Intra-PJM Tariffs, pt. IX, subpt. B, app. 2, (2.0.0), § 3.4(b) (Modification Costs).

[433] December Order, 193 FERC ¶ 61,217 at P 176 (emphasis added).

Interconnection Customers.[434] The entity responsible for causing the need for the Network Upgrade costs is therefore the relevant Interconnection Customer, and Exelon and FirstEnergy are incorrect to assert that a "load pays" framework should apply here.[435] It is the conduct of the Interconnection Customer that triggers the Network Upgrades at issue.

169. Exelon and FirstEnergy nonetheless contend that "[C]o-[L]ocated [L]oad should be charged for the benefits it receives from the grid and for the burdens it places upon the grid."[436] Exelon and FirstEnergy further give the example of the use of regulation and black start services.[437] The December Order appropriately addressed such use. The December Order determined, for example, that Eligible Customers serving Co-Located Loads that seek to rely on the transmission system to the same extent as Network Customers will continue to be eligible to take NITS, billed on a gross demand basis; Eligible Customers can take and pay for the new contract demand transmission services that reflect a Co-Located Load's ability to limit withdrawals from the transmission system; and Eligible Customers taking transmission service on behalf of Co-Located Load must be assessed charges for regulation and black start services on a gross demand basis, to ensure appropriate cost recovery for such services.[438] In sum, the findings we discuss here related to Interconnection Customer cost responsibility do not disturb the Commission's findings addressing appropriate charges for transmission service—an obligation on *Eligible Customers* not Interconnection Customers.

170. Exelon and FirstEnergy also argue that the Commission improperly assessed "cost causation" because it "randomly applied" "cost responsibility" "only to cases where the added load is served through an existing generator interconnection facility."[439] As explained above, however, the Commission simply applied the existing Tariff. The

[434] *Id.* P 228.

[435] Exelon and FirstEnergy Request for Rehearing at 43; *see also id.* at 43-44 n.113 (stating that the December Order "departs from th[e] longstanding approach" of "rolling the costs of load-driven network upgrades into transmission rates").

[436] *Id.* at 43; *see also id.* at 45-46; *id.* at 47 (stating that "it should not be assumed that large loads will trigger system upgrades with costs in excess of what they would otherwise contribute to the system if they paid traditional network rates based on their load-share ratio").

[437] *Id.* at 43.

[438] December Order, 193 FERC ¶ 61,217 at P 160.

[439] Exelon and FirstEnergy Request for Rehearing at 44.

Commission likewise affirmed the allocation of cost responsibility to the parties that cause the costs—the Interconnection Customers—who do so through their conduct in modifying their existing arrangement.[440] Accordingly, we disagree with Exelon and FirstEnergy's assertion that these costs should instead be spread "to all network customers." In PJM, the costs of Network Upgrades are directly assigned to the interconnection customer—referred to as participant funding.[441] In its Order No. 2003 compliance proceeding, PJM explained that "the 'but for' provisions of the PJM tariff . . . require an Interconnection Customer to pay 100 percent of the Network Upgrades that must be made for the Interconnection Customer to connect to the PJM grid."[442] In PJM, Interconnection Customers are also responsible for the costs of any changes to the transmission system that are required to accommodate additions, modifications, or replacements made by the Interconnection Customer to the generator or its interconnection facilities.[443] The Commission's directive thus adheres to Commission precedent and the Tariff and also does not conflict with (or change) "the Network Service funding model."[444]

171. We also find unavailing the "several issues" Exelon and FirstEnergy contend the Commission's determination created.[445] We find each speculative and unsupported by evidence. More specifically, Exelon and FirstEnergy assert that the Commission is improperly accounting for a "benefit to other customers to include new [C]o-[L]ocated [L]oads in the pool of payers for the existing transmission network."[446] Yet as explained above, the December Order establishes a set of transmission service options that ensures that Eligible Customers taking service on behalf of Co-Located Loads are allowed to

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[440] Indeed, Exelon and FirstEnergy acknowledge that "exiting incumbent generators" cause the relevant costs by referring to "transmission upgrade costs they *cause* by serving [C]o-[L]ocated [L]oad." *Id.*

[441] *PJM Interconnection, L.L.C.*, 108 FERC ¶ 61,025, at P 20 (2004).

[442] *Id.* P 19. PJM's current generator interconnection rules include similar "but for" provisions. *See* PJM, Intra-PJM Tariffs, pt. VIII, subpt. C, § 404 (1.0.0), § 404(A)(5) (Cost Allocation for Network Upgrades).

[443] PJM, Intra-PJM Tariffs, pt. IX, subpt. B, app. 2, § 3.4 (2.0.0), § 3.4(b) (Modification Costs).

[444] Exelon and FirstEnergy Request for Rehearing at 44.

[445] *Id.* at 45-47 (including argument that the Commission's "approach creates challenging dynamics like those we have seen in the generator interconnection space").

[446] *Id.* at 45-46.

choose the transmission service that aligns with their use of the transmission system and therefore aligns the charges for service with the benefits received. Exelon and FirstEnergy's conjecture that "significant up-front requirements could hinder economic development"[447] disregards the voluntary nature of Co-Location Arrangements, which reflect an additional opportunity for developers to consider.

3. New Generators Serving Co-Located Load

a. December Order

172. In the December Order, the Commission found that the Tariff is unjust and unreasonable because it does not contain provisions addressing with sufficient clarity or consistency the rates, terms, and conditions of service that apply to Interconnection Customers serving Co-Located Load and Eligible Customers taking transmission service on behalf of Co-Located Load.[448] Pertinent to new generators, the Commission directed PJM to revise its Tariff to clarify that PJM shall consider requests for interconnection service below the full generating capability of the generator, so that an Interconnection Customer may request interconnection service at a level below its maximum facility output to serve Co-Located Load;[449] that Interconnection Customers seeking to use new generators to serve Co-Located Load may use existing procedures to accelerate a new service request if the request has no cost allocation for Network Upgrades and does not require further studies;[450] that an Interconnection Customer seeking to use a new generator to serve Co-Located Load may request provisional interconnection service;[451] and that an Interconnection Customer seeking to use a new generator to serve Co-Located Load at an existing Point of Interconnection may request Surplus Interconnection Service, if the existing Interconnection Customer at that Point of Interconnection has made Surplus Interconnection Service available.[452]

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[447] *Id.* at 46-47.

[448] December Order, 193 FERC ¶ 61,217 at P 159.

[449] *Id.* P 232.

[450] *Id.* P 233.

[451] *Id.* P 234.

[452] *Id.* P 235.

b. Request for Clarification

173. Joint Parties request the Commission clarify that a Co-Located Load may nominate a net withdrawal limit in the same manner that it may nominate a net injection limit when requesting new or modifying existing interconnection service.[453] Joint Parties argue that the Commission found that creating new transmission services is necessary to ensure that Co-Located Loads pay only for the services they use and to avoid costly and inefficient transmission system buildout, and that the same logic "should compel complementary reforms to the generator interconnection process, because that process also may evaluate withdrawals from the Co-Located Load and therefore may also result—absent clarification—in 'costly and inefficient transmission system buildout.'"[454] Joint Parties argue that clarification is necessary to realize the Commission's intent of ensuring that Co-Located Loads do not pay for services that they do not use and do not trigger Network Upgrades that they do not need. Joint Parties explain that, to the extent PJM performs interconnection service study steps involving withdrawal assumptions from both the storage facility and the Co-Located Load, those steps "must allow the interconnection customer to provide for limits to the injection and withdrawal rights for the generation and co-located load facilities reflecting the proposed integration of those facilities."[455] Joint Parties clarify that they recommend against the Commission requiring Co-Located Load be included in the interconnection study process, as the timing of the load interconnection process may not match.[456]

174. Joint Parties argue that, without clarification, PJM may assume that the Co-Located Load and the charging load of the storage resource create overlapping grid impacts, when both could be managed to limit the overall withdrawal of the resource and avoid withdrawing energy when doing so would create grid impacts that necessitate Network Upgrades. Joint Parties explain that, while the December Order recognizes that "co-located resources" can limit withdrawals and prevent unnecessary transmission buildout, Joint Parties argue the order applies this logic only to transmission service and not interconnection service.[457] Joint Parties contend that not applying this logic to interconnection service would reduce the benefits of creating the non-firm transmission

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[453] Joint Parties Request for Clarification at 2-3, 5 (citing December Order, 193 FERC ¶ 61,217 at P 232).

[454] *Id.* at 3 (citing December Order, 193 FERC ¶ 61,217 at P 177).

[455] *Id.* at 5-6.

[456] *Id.* at 8 n.20.

[457] *Id.* at 10 (citing December Order, 193 FERC ¶ 61,217 at P 199).

service.[458] Joint Parties request that the Commission require PJM to specify what information about the Co-Located Load is required for the purposes of the new service request study process, similar to the Commission's requirement about the Necessary Study process, to ensure that PJM does not include overlapping load and energy storage withdrawals.[459]

c. Determination

175. We deny Joint Parties' request for clarification. Joint Parties' request misconstrues the findings in the December Order that the Tariff is unjust and unreasonable because it does not contain provisions addressing with sufficient clarity or consistency the rates, terms, and conditions of service that apply to Interconnection Customers serving Co-Located Load.[460] The December Order did not require PJM to integrate into the interconnection study process operating assumptions of both a Co-Located Load and electric storage resources that are part of a Co-Location Arrangement. PJM has already committed to studying the electric storage resources of Interconnection Customers as charging during off-peak periods, consistent with PJM's fuel-based dispatch assumptions set forth in its planning criteria.[461]

D. Informational Report

1. December Order

176. In the December Order, the Commission directed PJM to submit in Docket No. EL25-49-000, within 30 days of the date of issuance of the December Order, a detailed informational report addressing, among other things "the development of enhanced load forecasting . . . measures to assist PJM in determining the amount of new capacity that is needed to maintain system reliability."[462]

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[458] *Id.* at 9-10.

[459] *Id.* at 8 (citing December Order, 193 FERC ¶ 61,217 at P 227).

[460] December Order, 193 FERC ¶ 61,217 at P 159.

[461] *PJM Interconnection*, 195 FERC ¶ 61,031, at P 180 (2026) (accepting PJM's proposal, in relevant part, in compliance with the Commission's Order No. 2023 interconnection reforms).

[462] December Order, 193 FERC ¶ 61,217 at PP 237-239.

2. Request for Clarification

177. PIOs request clarification as to how the Commission intends to respond to or otherwise use information provided in the record regarding PJM's load forecasting practices. PIOs further request that any subsequent order from the Commission address the issues raised in the record regarding the continuing and ongoing deficiencies in PJM's load forecasting process. PIOs explain that PJM is using these load forecasts as inputs in the upcoming Base Residual Auction and RTEP and argue that, without a specific Commission directive, PJM is unlikely to timely resolve issues that PIOs allege exist with the load forecasts.[463] PIOs note that the Commission required PJM to provide an informational filing that includes an update regarding the development of "enhanced load forecasting" and acknowledge that the Commission stated that it "will not act on or notice this informational [f]iling."[464]

178. PIOs note that Commissioner Rosner submitted a letter to PJM about load forecasting in September 2025 and take issue with PJM's October 2025 response.[465] According to PIOs, PJM's response to this letter does not require or specify a particular methodology for forecasting large loads, without which PIOs allege that LSEs and Electric Distribution Companies will continue to report data with widely varying accuracy and that load forecasts will remain uncertain. PIOs also argue that PJM's response fails to identify a way for PJM to address the double counting of data centers or to enable PJM to respond dynamically to significant updates to load forecasts.[466]

179. PIOs contend that recent events have validated their concerns regarding the accuracy of PJM's load forecasts. For example, according to PIOs, PJM staff have acknowledged that the 2026 forecast would likely reflect a decrease in forecasted load for that time period in light of an update to how PJM implements load adjustments. Given the alleged inaccuracy of PJM's load forecasts, and because PJM uses its load forecasts to essentially set the demand curve for capacity obligations, for reliability studies, and to support the RTEP, PIOs question how these processes remain just and reasonable without significant revisions to PJM's load forecasting practices.[467]

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[463] PIOs Request for Clarification at 2-3.

[464] *Id.* at 2 (citing December Order, 193 FERC ¶ 61,217 at P 238 & n.486).

[465] *Id.* at 4-5.

[466] *Id.*

[467] *Id.* at 5-7.

3. Determination

180. We deny the request for clarification. The directive in the December Order to PJM to file an informational report that includes load forecasting represents the Commission's actions in this proceeding related to load forecasting.[468] The Commission will review the informational report in its normal course and remains committed to monitoring PJM's load forecasting. Separately, we note that in the order that we are issuing concurrently in Docket No. EL26-67-000, we direct PJM to show cause as to why its Tariff remains just and reasonable without sufficiently clear and consistent Tariff provisions that address the application process for requesting transmission service to Eligible Customers on behalf of large loads and the study procedures for studying the provision of transmission service to Eligible Customers on behalf of large loads, including a non-refundable application fee and sufficient readiness requirements that escalate at distinct phases of the study process to deter duplicative or speculative requests for transmission service (e.g., meaningful milestones and/or financial commitments).

V. Compliance

A. BTMG Rules

1. Materiality Threshold

a. December Order

181. The Commission found that PJM's existing retail BTMG netting rules were no longer just and reasonable and directed several changes, including directing PJM to propose a new MW threshold for the amount of load at a particular electrical location that Network Customers may net by using BTMG.[469] The Commission found that a materiality threshold would reduce the reliability and resource adequacy risks that large loads may pose to PJM, while also allowing for Network Customers to reduce their transmission charges in a transparent, not unduly discriminatory fashion. The Commission noted "as points of reference that PJM requires any generator larger than 10 MW to be individually metered and that the Commission's definition of a small generator is 20 MW."[470]

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[468] December Order, 193 FERC ¶ 61,217 at PP 237-239.

[469] *Id.* P 221. The Commission did not direct PJM to make any changes to its rules for Non-Retail BTMG, finding that the record did not demonstrate the need for changes given that Non-Retail BTMG is already capped. *Id.* P 222.

[470] *Id.* P 221 (citing PJM Manual 14G: Generation Interconnection Requests, Rev. 8 (eff. July 26, 2023), § 1.6.2; *Standardization of Small Generator Interconnection*

b. PJM Compliance Filing

182. PJM proposes to modify the existing Tariff definition of BTMG and add a new definition for Retail BTMG to establish a materiality threshold for Retail BTMG.[471] PJM explains that the current Tariff definition of BTMG includes both Retail and Non-Retail BTMG, but the Tariff only specifically defines Non-Retail BTMG.[472] Therefore, PJM proposes to separately define Retail BTMG as BTMG that is used to serve a retail load served by a Network Customer located at the same electrical location, where such generation has a cumulative nameplate rating of no greater than 50 MW.[473] PJM also proposes to clarify in the Tariff that Retail BTMG may not be part of a Co-Located Load configuration. PJM argues that this clarification is necessary "to avoid unexpected and unintended hybrid scenarios mixing BTMG and the new transmission service products."[474]

183. PJM states that the proposed materiality threshold, along with other exclusions discussed below, will avoid the "unintended consequence of causing Retail BTMG resources to prematurely cease operations and discontinue investment in grid-enhancing backup generation," which may otherwise impact system reliability.[475] PJM argues that a lower threshold of 10 or 20 MW would likely exclude Retail BTMG with limited impact on the transmission system in comparison to Co-Located Load coming online today.

Agreements & Procs., Order No. 2006, 111 FERC ¶ 61,220, at P 1, *order on reh'g*, Order No. 2006-A, 113 FERC ¶ 61,195 (2005), *order granting clarification*, Order No. 2006-B, 116 FERC ¶ 61,046 (2006)).

[471] Compliance Transmittal at 6-7 (citing December Order, 193 FERC ¶ 61,217 at P 179).

[472] *Id.* at 5-6 (citing PJM, Intra-PJM Tariffs, pt. I, Definitions A-B (24.0.0), Behind The Meter Generation; PJM, Proposed Tariff, PJM, pt. I, Definitions L-M-N (52.0.0), Non-Retail Behind The Meter Generation). PJM explains Non-Retail BTMG is BTMG used to net load through a distribution system. PJM clarifies that no substantive changes are proposed to the Non-Retail BTMG netting rules, but PJM does propose clarifying Tariff edits to avoid confusion with the new retail BTMG netting rules. *Id.* at 7, 15-16.

[473] *Id.* at 7.

[474] *Id.* at 18.

[475] *Id.* at 12.

PJM also contends that many of the lower MW generators would not be willing to enter the interconnection queue due to age and the potential cost of Network Upgrades.[476]

184. PJM also proposes to exclude on-site backup generation at the same electrical location as the retail load that can only be used to serve such retail load during conditions that may threaten the integrity or reliability of the PJM region or the regional power system from the 50 MW materiality threshold, arguing that to do otherwise would disincentivize retail customers from installing backup generation that would improve reliability.[477] PJM notes that the Department of Energy recently issued an order during Winter Storm Fern directing PJM to direct backup generation resources to operate before taking certain emergency actions.[478] PJM states that exempting backup generation from the materiality threshold will ensure this reliability tool remains available. Finally, PJM states that a materiality threshold based on the size of the generator that may qualify as Retail BTMG, rather than the amount of load that may net, establishes a clear and bright line for what can continue qualifying as Retail BTMG, given that the size of a load may fluctuate.[479]

185. PJM states that, should the Commission not accept PJM's proposal regarding grandfathering, discussed below, PJM requests the Commission to allow a higher interim initial materiality threshold for the start of the transition period to avoid causing Retail BTMG to cease operations and exacerbate the resource adequacy issues in PJM.[480] PJM states that, should the Commission take this path, PJM would commit to reviewing additional data on the size and extent of existing Retail BTMG to inform a final threshold.

c. Pleadings

i. Size of Threshold

186. Constellation argues that PJM's proposed 50 MW materiality threshold for BTMG is too high and urges the Commission to either reject it or require modifications to

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[476] *Id.* at 12-13.

[477] *Id.* at 13 (citing US Department of Energy, *Order No. 202-26-06* (Jan. 26, 2026), https://www.energy.gov/documents/doe-order-no-202-26-06-pjm).

[478] *Id.* at 13-14 (citing US Department of Energy, Order No. 202-26-06).

[479] *Id.* at 13-14.

[480] *Id.* at 14-15 (noting PJM ICC's request for a 200 MW threshold in PJM ICC's Request for Clarification or Rehearing, Docket No. EL25-49-000, et al., at 44).

address undue discrimination against Co-Located Loads. Constellation argues that this threshold will allow a significant number of loads with BTMG to take advantage of unjust and unreasonable netting and include backup generation as offsetting BTMG, but deny such treatment to Co-Located Load, despite there being no physical, technical, or economic reason why a netting construct should apply differently for customers with BTMG or with Co-Located Generators. Constellation argues that PJM has not provided any explanation for why the proposed threshold is relevant to reducing the reliability and resource adequacy risks that large or increasing BTMG may pose to PJM and argues that PJM's justifications for the threshold are unsupported.[481]

187. Other parties argue that PJM's proposed threshold is too low.[482] Industrials/Amtrak argue that a threshold of at least 200 MW would better capture the large loads driving reliability and cost-shifting concerns, while maintaining the existing retail BTMG netting rules that promote smaller resource adequacy investments, and avoid economic damage to industrial, institutional, and transportation sectors. Industrials/Amtrak argue that a 200 MW threshold is also appropriate because PURPA defines small generation for non-cogeneration QFs as 80 MW or smaller, meaning large generation must be greater than 80 MW. Industrials/Amtrak also argue that this threshold would simplify the transition process by eliminating most grandfathering issues and bolstering resource adequacy and grid efficiency, thereby avoiding inefficient transmission investment. Industrials/Amtrak argue that a 200 MW threshold would respect the importance of onshoring manufacturing and support Amtrak's operations, because Amtrak relies on more than 50 MW of retail BTMG, generated at 25 Hz, to provide energy supply and the only black start capability to the south end of Amtrak's Northeast Corridor traction power system.[483]

188. Energy Artisans also support a 200 MW materiality threshold.[484] Energy Artisans argue that, for sites that exceed this higher threshold, the Commission should require PJM to use the proposed Interim NITS because it would provide PJM with a "safety

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[481] Constellation Protest and Comments on Compliance Filing at 9-11.

[482] Industrials/Amtrak Joint Protest and Comments on Compliance Filing at 9, 25; Crusoe Comments on Compliance Filing at 4; Eastman Protest and Comments on Compliance Filing at 6; EDFps Comments on Compliance Filing at 4; Energy Artisans Protest of Compliance Filing at 1; DPN Comments on Compliance Filing at 4.

[483] Industrials/Amtrak Joint Protest and Comments on Compliance Filing at 9, 25, 31, 33, 39.

[484] Energy Artisans Protest of Compliance Filing at 2.

switch" to manage reliability during peak emergencies without forcing expensive upgrades or disconnection on industrial users.

189. Eastman similarly argues that, if the Commission does not maintain netting for BTMG facilities like Eastman's Kingsport facility, the Commission must establish a threshold of at least 200 MW on a permanent basis. Eastman explains that its Kingsport facility has generation with a nameplate capacity of 194 MW, but that it cannot withdraw that amount of energy through its interconnection with Kingsport Power and could not operate solely on electric power from the grid. Eastman argues that imposing an arbitrarily low materiality threshold would eliminate the grid benefits that its BTMG facilities have provided.[485]

190. Industrials/Amtrak and Eastman argue that setting the threshold too low will increase costs for many existing loads with BTMG and make a lot of existing BTMG uneconomic.[486] Industrials/Amtrak argue that even if load with BTMG were to have that generation participate in the PJM markets, there is no guarantee of that generation earning sufficient revenue to make up for the loss of netting, especially as transmission upgrades may be required to interconnect the generation. Industrials/Amtrak also argue that setting the threshold too low will force substantial burdens on existing customers to become Commission-regulated public utilities, secure PJM membership, and undertake related credit and risk requirements. Moreover, Industrials/Amtrak argue, a low threshold would remove the incentive to operate efficiently and during stressed system conditions, as well as create additional work for PJM staff to study BTMG that must either go through the interconnection queue or deactivate. Industrials/Amtrak contend that retirement of existing BTMG would increase demand and transmission planning needs in the near term, resulting in higher transmission rates.[487] Energy Artisans argue that PJM's proposed 50 MW materiality threshold is an arbitrary cap that ignores the capital-intensive investments made by large-scale industrial facilities.[488]

191. Industrials/Amtrak argue that BTMG can provide benefits to the transmission system, including reducing large loads on the system, congestion, and transmission

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[485] Eastman Protest and Comments on Compliance Filing at 6.

[486] Industrials/Amtrak Joint Protest and Comments on Compliance Filing at 7; Eastman Protest and Comments on Compliance Filing at 6.

[487] Industrials/Amtrak Joint Protest and Comments on Compliance Filing at 15, 25-26, 28.

[488] Energy Artisans Protest of Compliance Filing at 1.

system build out, as well as operating during system emergencies.[489] EDFps argues that BTMG can reduce grid congestion, avoid queue delays, lower Network Upgrade needs, and provide economic and community benefits such as tax revenues and jobs.[490]

192. Crusoe argues that while the 50 MW threshold aligns with PJM's definition of large load additions, this threshold is not a bright-line test for what constitutes a reliability risk. Crusoe contends that the materiality threshold should be flexible to account for the fact that Co-Location Arrangements can vary significantly and should be scaled in proportion to the load served. Crusoe argues that a lower threshold risks forcing existing BTMG resources offline during the transition period, which would increase burden on the grid by converting currently netted load into Network Load. Crusoe claims that BTMG arrangements benefit the transmission system by serving load on a streamlined basis, avoiding generator interconnection queue delays, and reducing the need for Network Upgrades.[491]

193. Energy Artisans also contend that the 50 MW materiality threshold is unduly discriminatory because it establishes a 50 MW nameplate cap for retail BTMG while maintaining a 3,000 MW regional cap for Non-Retail BTMG.[492] In the absence of demonstrated negative impacts from existing BTMG configurations, Energy Artisans claim that the 50 MW materiality threshold is a pretext for cost-shifting.

194. EDFps argues that PJM's proposed 50 MW threshold is arbitrary and will disincentivize large loads from installing their own generation and thereby stifle innovation. EDFps contends that the threshold will instead incentivize the development of smaller loads, as well as segmented loads close in proximity to avoid the threshold, leading to inefficient and redundant construction of interconnection facilities. EDFps notes that the "optimal sizing of Retail BTMG" for an artificial intelligence data center, for example, would be higher than 50 MW and that the threshold would force new large loads to develop grid-connected resources instead of BTMG resources.[493] EDFps argues that this threshold would result in generation going through the interconnection process unnecessarily.

[489] Industrials/Amtrak Joint Protest and Comments on Compliance Filing at 6.

[490] EDFps Comments on Compliance Filing at 2, 4.

[491] Crusoe Comments on Compliance Filing at 4-5.

[492] Energy Artisans Protest of Compliance Filing at 2.

[493] EDFps Comments on Compliance Filing at 4.

195. EDFps argues the materiality threshold should instead be 100% of the load size at the electrical location, "combined with operational safeguards and appropriate transmission charges."[494] Specifically, EDFps proposes that retail BTMG larger than 50 MW would still be permitted to net generation against load for the purposes of energy and capacity market settlements, but would pay transmission and/or distribution network charges on a gross basis.[495]

196. DPN similarly argues that PJM's proposal may be too restrictive for digital infrastructure projects, many of which operate at scales well above 50 MW, and that behind-the-meter configurations can provide a viable pathway to speed-to-power. Additionally, DPN argues, the Commission should not require projects to rely on a framework that may compound PJM's already significant queue and study delays without greater justification. DPN argues that the Commission should require PJM to better justify why 50 MW is the appropriate threshold at this stage and whether a higher threshold, at least on an interim basis, would better accommodate current uncertainty while PJM and the Commission continue to refine their understanding of large load impacts.[496]

197. AEU/SEIA claim that PJM's proposal to require site-located generation to enter the interconnection queue is unjust and unreasonable. AEU/SEIA assert that PJM requires BTMG arrangements that exceed the materiality threshold or do not qualify for grandfather status to transition to a Co-Location Arrangement, which entails pursuing a full interconnection agreement with PJM. AEU/SEIA contend that there is no benefit to subjecting these projects to the standard queue process as they do not require deliverability and will rarely trigger Network Upgrades. AEU/SEIA requests that PJM be encouraged to establish a streamlined, expedited process for resources that do not intend to export to the grid, which would allow PJM to maintain visibility while minimizing delays for non-exporting resources.[497]

ii. <u>PJM Proposal to Tie Threshold to Generator Nameplate Rating</u>

198. Several parties urge the Commission to reject PJM's proposal to base the materiality threshold on the amount of generation that can be netted rather than load,

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[494] *Id.* at 1-2.

[495] *Id.* at 4-5.

[496] DPN Comments on Compliance Filing at 4-5.

[497] AEU/SEIA Limited Protest of Compliance Filing at 11-13.

arguing that this proposal is inconsistent with the December Order.[498] BTMG Parties argue that the scale of the reduction in load (i.e., what PJM considers and plans for versus what PJM may actually need to serve) determines whether the potential for resource adequacy problems and cost shifts are problematic—not the nameplate of the generation used to effect the load reduction.[499] Similarly, Industrials/Amtrak argue that nameplate capacity does not necessarily reflect the actual capability of BTMG, such as, for example, a steam system where the generation output is limited by the steam system's capability.[500]

199. BTMG Parties further argue that such a nameplate generation-based threshold is unjust, unreasonable, and unduly discriminatory because it would also unnecessarily constrain commercial opportunities to serve loads with BTMG without better protecting reliability or commensurate reductions in resource adequacy or cost-shift risks and would treat differently BTMGs with similar resource adequacy and cost-shift impacts. BTMG Parties argue that accepting PJM's proposal would violate notice requirements and that the metering, telemetry, and control capabilities already deployed for existing BTMG resources demonstrate that BTMG can reliably comply with the operational requirements necessary to implement a netting-based threshold.[501]

200. BTMG Parties argue that, in the alternative, the Commission should require PJM to increase its proposed nameplate rating-based materiality threshold for retail BTMG eligibility to 200 MW to preserve opportunities for load to realize the commercial benefit of sizing nameplate generation above the amount of load that a retail customer seeks to net while still achieving the Commission's aim of limiting resource adequacy impacts and cost-shift concerns.[502]

201. AEU/SEIA argue that PJM's proposed threshold is inconsistent with how PJM assesses capacity accreditation in the capacity market and lacks the necessary flexibility to accommodate resource diversity and hybrid configurations such as storage paired with solar. AEU/SEIA add that there are a number of reasons that, in a BTMG configuration,

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[498] BTMG Parties Joint Protest of Compliance Filing at 1, 4-5; Industrials/Amtrak Joint Protest and Comments on Compliance Filing at 34-35 (citing December Order, 193 FERC ¶ 61,217 at P 179); AEU/SEIA Limited Protest of Compliance Filing at 3. *See also* Earthjustice Reply Briefing at 24.

[499] BTMG Parties Joint Protest of Compliance Filing at 6.

[500] Industrials/Amtrak Joint Protest and Comments on Compliance Filing at 35.

[501] BTMG Parties Joint Protest of Compliance Filing at 2, 6-12.

[502] *Id.* at 2, 12-13.

the generator's nameplate capacity exceeds the customer's netting. AEU/SEIA contend that a reasonable approach would be to permit facilities to exceed 50 MW nameplate capacity provided the customer's netting is limited to 50 MW, and the facility uses approved telemetry and automated system controls.[503] Appalachian Voices argues that PJM's compliance filing is unclear as to whether it will apply the 50 MW materiality threshold to all generation or to each individual generator at a single customer site.[504]

202. Industrials/Amtrak state that, if the Commission opts for a generation-based materiality threshold, they support PJM's proposal on backup generation.[505] Industrials/Amtrak explain that emergency backup generation is often sized similarly to other on-site generation to function as a full backup power source and provides additional generation options in emergency conditions, such as the Department of Energy's recent statement regarding the operation of private, behind-the-meter generation during Winter Storm Fern.[506] EDFps argues that the Commission should direct PJM to clarify that battery energy storage systems and hybrid systems functioning in a load-following, non-exporting capacity manner during a curtailment event qualify under the "backup generation" exception from the materiality threshold for the revised retail BTMG netting rules and can continue to serve the load regardless of their size.[507]

iii. <u>PJM Proposal to Disqualify Network Customers Above the Materiality Threshold</u>

203. Several parties argue that the Commission should allow netting up to the amount of the materiality threshold, rather than disqualifying a customer from netting for any amount of load if its BTMG exceeds the threshold.[508] Industrials/Amtrak argue that this allowance would be more consistent with the December Order, reduce discrimination concerns, and avoid incentivizing loads to reduce the size of their generation to ensure

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[503] AEU/SEIA Limited Protest of Compliance Filing at 4-5.

[504] Appalachian Voices Limited Protest of Compliance Filing at 4 (citing Compliance Transmittal at 11-12).

[505] Industrials/Amtrak Joint Protest and Comments on Compliance Filing at 10.

[506] *Id.* at 40-41 (citing U.S. Department of Energy, *Emergency Order No. 202-26-06*).

[507] EDFps Comments on Compliance Filing at 8.

[508] *Id.* at 9, 34; Eastman Protest and Comments on Compliance Filing at 7; Energy Artisans Protest of Compliance Filing at 2; EDFps Comments on Compliance Filing at 5.

netting eligibility.[509] Industrials/Amtrak contend that PJM's proposal would distort investment decisions, produce outcomes disconnected from actual system needs, harm resource adequacy, and harm economic development opportunities in PJM.[510]

204. Energy Artisans contend that by rejecting a hybrid BTMG and Co-Location approach, under which facilities could net up to the materiality threshold, PJM would force large loads off of BTMG status and onto the grid.[511] EDFps disagrees with PJM that allowing netting up to the amount of the materiality threshold would lead to additional metering costs, noting that grandfathered entities and those below the threshold would not incur any such costs. EDFps also argues that it should be up to individual entities whether the additional cost for metering is worth exceeding the threshold. EDFps states that load served by a retail BTMG resource would be required to purchase NFCD transmission service up to the amount covered by the retail BTMG and FCD transmission service for the remainder of the load and could not lean on the system.[512]

iv. <u>Answers</u>

205. Indicated TOs argue that PJM's proposed 50 MW materiality threshold strikes the appropriate balance between allowing continued use of retail BTMG and limitations to ensure reliability. Indicated TOs agree with PJM that 50 MW is reasonable because it aligns with the PJM Board's definition of large load additions, preserves existing treatment for smaller and longstanding retail BTMG arrangements, and avoids sweeping in retail customers whose grid impacts are comparatively limited. Indicated TOs argue that PJM reasonably based the threshold on generator size because generator capacity is static.[513]

206. Industrials/Amtrak argue that the Indicated TOs fail to substantiate their position with any evidence in support of the 50 MW threshold, and do not address any of the arguments for a 200 MW or greater threshold. Industrials/Amtrak contend that load under 200 MW, particularly industrial and institutional load, is not driving current

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[509] Industrials/Amtrak Joint Protest and Comments on Compliance Filing at 9-10.

[510] *Id.* at 36.

[511] Energy Artisans Protest of Compliance Filing at 2.

[512] EDFps Comments on Compliance Filing 2, 6-7.

[513] Indicated TOs April 24 Answer at 2-3.

reliability challenges.[514] Eastman contends that the Indicated TOs' answer inappropriately lumps together all industrial BTMG facilities, ignoring that not all loads using BTMG create reliability and resource adequacy risks.[515] BTMG Parties argue that Indicated TOs' defense of a nameplate-based threshold is non-responsive to the BTMG Parties' argument because the sole question before the Commission is compliance.[516] Indicated TOs respond that PJM's 50 MW threshold is reasonable and should be accepted.[517] Indicated TOs further argue that the Commission did not preclude a generation-based threshold, as it provided points of reference based on generator size, not the size of the load.[518] Indicated TOs lastly allege that parties conflate the two issues of the materiality threshold and the grandfathering provision, and that the need for an adequate grandfathering provision is not a convincing reason to increase the size of the materiality threshold.

d. <u>Determination</u>

207. We accept in part, and reject in part, PJM's compliance filing with respect to the BTMG materiality threshold. Specifically, we accept as just and reasonable PJM's proposal to set the materiality threshold at 50 MW and to exclude on-site backup power from that threshold. However, we reject PJM's proposal to apply the threshold to the cumulative nameplate capacity of generation that is used to serve a retail load served by a Network Customer located at the same electrical location, rather than to the total amount of load that can be netted at that electrical location, because this proposal does not comply with the Commission's directives in the December Order.[519] We thus direct PJM to file, within 60 days of the date of this order, a compliance filing to revise its proposed

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[514] Industrials/Amtrak Answer at 3-4 (citing Industrials/Amtrak Joint Protest and Comments on Compliance Filing at 25).

[515] Eastman Answer at 2 (citing December Order, 193 FERC ¶ 61,217 at P 107).

[516] BTMG Parties Answer at 2-3.

[517] Indicated TOs June 3 Answer at 3.

[518] *Id.* at 4.

[519] We therefore reject Proposed Tariff, § I.1 Definitions R-S (Retail Behind The Meter Generation) (46.0.0) and § VIII.A 400, Definitions R (Retail Behind The Meter Generation) (7.0.0). We accept Proposed Tariff, § I.1 Definitions A-B (Behind The Meter Generation) (24.0.0); § III.34.2 (Netting of Retail Behind the Meter Generation) (1.0.0); § III.34.3 (Netting of Non-Retail Behind The Meter Generation) (2.0.0); § VII.A 300, Definitions B (Behind The Meter Generation) (2.0.0); and § VIII.A 400, Definitions B (Behind The Meter Generation) (2.0.0).

definition of Retail BTMG in its Tariff to permit a Network Customer to net up to 50 MW of load that it is serving using BTMG at a particular electrical location.

208. In the December Order, the Commission explained the materiality threshold as follows: "Such a threshold should reduce the reliability and resource adequacy risks discussed above that large loads may pose to PJM, while also allowing for Network Customers to reduce their transmission charges in a transparent, not unduly discriminatory fashion."[520] Based on the record here, we find that a threshold of 50 MW is just and reasonable and preferable to the 200 MW threshold that some commenters propose because a 50 MW threshold will ensure that PJM plans its transmission system and procures sufficient capacity resources to serve a greater percentage of the load that, in the event that the BTMG that typically serves it is unavailable, PJM would be nonetheless obligated to serve. As such, we find that PJM's proposed 50 MW materiality threshold is more likely to help maintain resource adequacy and reliability relative to a larger threshold.[521] Whereas Constellation argues that PJM's proposed materiality threshold of 50 MW is too high and unsupported, we agree with PJM that 50 MW strikes a reasonable balance between a lower threshold, which may restrict netting more than necessary to respond to resource adequacy concerns, and a higher threshold, which would fail to address the resource adequacy concerns identified in the December Order.[522]

209. In response to protesters' concerns that the proposed materiality threshold of 50 MW is too low and will result in significant economic consequences to existing BTMG arrangements,[523] we note that the Commission addressed this concern in the

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[520] December Order, 193 FERC ¶ 61,217 at P 221.

[521] *See id.* P 186 ("We find that PJM's existing BTMG rules may lead to both reliability and resource adequacy risks because PJM, per its Tariff, is obligated to serve transmission customers using BTMG but does not consider such customers in transmission and resource adequacy planning.").

[522] *See Vonage Holdings Corp. v. FCC*, 489 F.3d at 1242; *ExxonMobil Gas Mktg. Co. v. FERC*, 297 F.3d 1071, 1085 (D.C. Cir. 2002) ("We are generally 'unwilling to review line-drawing performed by the Commission unless a petitioner can demonstrate that lines drawn . . . are patently unreasonable, having no relationship to the underlying regulatory problem.'") (citations omitted).

[523] Industrials/Amtrak Joint Protest and Comments on Compliance Filing at 27-28 (alleging economic damage to retail customers); DPN Comments on Compliance Filing at 4 (expressing concern that 50 MW risks foreclosing pathways for digital infrastructure projects "through imposing additional barriers to utilization"); Eastman Protest and Comments on Compliance Filing at 6 ("the proposed threshold would remove the economic benefits that Eastman has relied on to continue operating its BTMG at the

December Order and established separate mechanisms—a transition period of three years for Network Customers currently using PJM's retail BTMG netting rules and grandfathering for certain entities in a BTMG arrangement—in recognition of the potential impacts for existing BTMG customers of a change in the retail BTMG netting rules.[524] While we recognize the concerns raised in this record that adopting any limitations on netting may have economic consequences for individual Network Customers, we must balance those concerns against the Commission's finding that PJM's retail BTMG netting rules are unjust and unreasonable due to the reliability, resource adequacy, and cost-shifting concerns they create.[525] As discussed above, the materiality threshold primarily serves to reduce reliability and resource adequacy risks that large loads may pose to PJM, and we find that PJM's proposed 50 MW materiality threshold strikes a reasonable balance between mitigating those risks and limiting the costs associated with doing so.

210. We decline to require Eligible Customers seeking NITS on behalf of load with BTMG to take Interim NITS for load above the materiality threshold, as Energy Artisans request. Energy Artisans appear to contemplate taking a combination of Interim NITS and NITS at the same Point of Delivery, which is not permitted.[526] However, we note that such customers may take Interim NITS, as discussed in Part IV.[527]

211. We also disagree with arguments that the materiality threshold should be higher to ensure that BTMG resources have an incentive to operate efficiently.[528] This concern

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Kingsport facilities . . . ."); Energy Artisans Protest of Compliance Filing at 1 ("PJM's proposal to implement a 50 MW 'Materiality Threshold' for Retail BTMG is an arbitrary cap that ignores the long-term, capital-intensive investment cycles of large-scale industrial facilities.").

[524] December Order, 193 FERC ¶ 61,217 at PP 222-224.

[525] *Id.* P 186.

[526] Energy Artisans Protest of Compliance Filing at 2 ("For sites exceeding this 200 MW threshold, the Commission should direct PJM to utilize the proposed [Interim NITS] under the new Part XI of the Tariff.").

[527] *See supra* Part IV.C.1.b.i (extending the three new transmission services set forth in the December Order to Eligible Customers taking service on behalf of load with BTMG that are willing and able to limit their energy withdrawals from the transmission system under certain conditions).

[528] Industrials/Amtrak Joint Protest and Comments on Compliance Filing at 7, 16, 25, 32.

does not overcome the Commission's finding that large amounts of netted Network Load present reliability and resource adequacy risks. When BTMG operates during peak or emergency conditions, it may enhance resource adequacy in the short term by lowering the demand on the system, but when it fails to operate (which, despite any incentive to operate, is possible), the result would be that PJM would have an obligation to serve the load that such BTMG typically serves without having planned adequate transmission facilities or procured sufficient capacity resources to fulfill that obligation. The Commission found that risk unjust and unreasonable in the December Order.[529]

212. We also disagree with Energy Artisans that a 50 MW materiality threshold is unduly discriminatory because it establishes a 50 MW cap for Retail BTMG while maintaining a 3,000 MW regional cap for Non-Retail BTMG.[530] The materiality threshold and the cap on Non-Retail BTMG function differently—the Non-Retail BTMG cap is a region-wide cap on the amount of load that may net using Non-Retail BTMG,[531] whereas the materiality threshold for Retail BTMG is on the amount of load that may net at a *particular electrical location*.[532]

213. We acknowledge EDFps' concern that a 50 MW materiality threshold on Retail BTMG could encourage the development of smaller loads combined with smaller generators, and force new large loads to develop resources interconnected to the transmission system instead of BTMG resources.[533] As the Commission explained in the December Order, the Commission eliminated retail BTMG netting to prevent large loads from using the retail BTMG netting rules; the Commission agreed with PJM that allowing large loads to net is problematic because such loads do not carry reserves and are able to rely on the transmission system when the BTMG is not sufficient to meet the load.[534] EDFps' alternative proposal would not remedy this concern because it would continue to net BTMG for the purposes of capacity market settlements.[535]

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[529] December Order, 193 FERC ¶ 61,217 at P 186.

[530] Energy Artisans Protest of Compliance Filing at 2.

[531] *See* PJM, Intra-PJM Tariffs, OATT, § III, § 34.3 (Netting of Non-Retail Behind The Meter Generation) (1.0.0).

[532] December Order, 193 FERC ¶ 61,217 at P 221.

[533] EDFps Comments on Compliance Filing at 3-4.

[534] December Order, 193 FERC ¶ 61,217 at P 186.

[535] EDFps Comments on Compliance Filing at 4-5.

214. Further, we find AEU/SEIA's assertion that requiring BTMG arrangements that exceed the materiality threshold or do not qualify for grandfather status to transition to a Co-Location Arrangement, which entails pursuing an interconnection agreement with PJM, is unjust and unreasonable is an untimely request for rehearing of the December Order. In the December Order, the Commission found that PJM's existing retail BTMG netting rules are unjust and unreasonable because they may lead to both reliability and resource adequacy risks in PJM.[536] The Commission then directed PJM to revise its retail BTMG netting rules to establish a new MW materiality threshold for the amount of load at a particular electrical location that Network Customers may net using BTMG and to implement a transition process that includes the ability to grandfather certain entities with existing contracts.[537] Because AEU/SEIA's assertion challenges the Commission's finding that PJM's existing retail BTMG netting rules are unjust and unreasonable and the related compliance directives—and not whether PJM complied with those directives—we find that it is an untimely request for rehearing of the December Order and dismiss it on that basis.[538]

215. However, we agree with protesters that PJM's proposal to design the materiality threshold for netting based on whether the "generation has a cumulative nameplate rating of no greater than 50 MW" fails to comply with the Commission's directive in the December Order. Specifically, the Commission directed PJM to "propose a new MW threshold for the *amount of load* at a particular electrical location that Network Customers may net by using BTMG."[539] As such, PJM's proposal to instead apply the materiality threshold to the cumulative nameplate capacity of the generation used by a Network Customer to serve retail load located at the same electrical location is facially inconsistent with the December Order.

216. PJM alleges that its proposal to apply its proposed materiality threshold based on the cumulative nameplate capacity of the generation is consistent with or superior to the Commission's directive to limit reliability and resource adequacy risks. In particular, PJM alleges that its proposal is consistent with the Commission's points of reference to various generator sizes, as well as the recognition that BTMG is defined as a generation unit rather than a load. We find PJM's arguments unpersuasive. While the Commission

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[536] December Order, 193 FERC ¶ 61,217 at P 179 (finding that "the existing BTMG rules may lead to both reliability and resource adequacy risks because PJM, per its Tariff, is obligated to serve transmission customers using BTMG but does not consider such customers in transmission and resource adequacy planning").

[537] *Id.* P 179.

[538] *Louisville Gas & Elec. Co.*, 185 FERC ¶ 61,120, at P 39 (2023).

[539] December Order, 193 FERC ¶ 61,217 at P 221 (emphasis added).

referenced examples of generator sizes in the December Order, those examples were in reference to an unambiguous threshold for the amount of load that a Network Customer may net.[540] In addition, while BTMG is defined as a generation unit, that fact alone is not a reason to propose to apply the materiality threshold to a Network Customer based on the amount of generation at the same electrical location rather than applying that threshold to the amount of load that may be netted at that location. Lastly, PJM avers that, whereas load sizes can fluctuate, the nameplate capacity of a generator provides a bright line for purposes of qualifying for netting. This argument too is unpersuasive, because regardless of whether a Network Customer's load increases or decreases over time, the 50 MW materiality threshold we approve today makes clear how much of the load at a single electrical location a Network Customer may net using BTMG.

217. We also agree with protesters that PJM's interpretation of the December Order as prohibiting any netting when a Network Customer exceeds the materiality threshold is incorrect.[541] PJM supports its interpretation by pointing to the Commission's directive in the December Order that PJM "maintain the current BTMG rules for customers that fall below a new MW materiality threshold," but PJM reads this language out of context.[542] Read in full context, the Commission's replacement rate for BTMG in the December Order only involves setting a new materiality threshold "for *the amount of load at a particular electrical location that Network Customers may net* by using BTMG," which the Commission further stated would "allow[] for Network Customers *to reduce their transmission charges* in a transparent, not unduly discriminatory fashion."[543] Thus, we find that the Commission's directive in the December Order allows for netting of load up to the newly established materiality threshold.

218. Moreover, the Commission expressly states that a materiality threshold "for all BTMG should reduce the reliability and resource adequacy risks that large or increasing

[540] *Id.* ("Although we make no finding in this order on a threshold that would be just and reasonable, we note as points of reference that PJM requires any generator larger than 10 MW to be individually metered and that the Commission's definition of a small generator is 20 MW.") (footnotes omitted).

[541] Compliance Transmittal 10-11 ("[T]he proposal is based on an interpretation of the compliance directive that demands an 'all or nothing' approach to Retail BTMG qualification—meaning that a Retail BTMG cannot both net up to a certain threshold but still potentially have generation and load above that threshold which cannot be net"); *see* Eastman Protest and Comments on Compliance Filing at 7; Industrials/Amtrak Joint Protest and Comments on Compliance Filing at 34.

[542] *Compare* December Order, 193 FERC ¶ 61,217 at P 179, *with id.* P 221.

[543] *Id.* P 221 (emphasis added).

BTMG may pose to PJM."[544] To use an example similar to that provided by the BTMG Parties, PJM's proposal would prohibit a Network Customer serving 50.1 MW of load using BTMG from netting any load, but it would allow a Network Customer serving 50 MW of load using BTMG to net all of that 50 MW of load, even though they have virtually identical resource adequacy impacts on the transmission system.[545] We find that this outcome would be unduly discriminatory and conflict with the December Order.[546] We also note that protesters persuasively dispute PJM's suggestion that its proposal helps load with BTMG avoid incurring significant costs and compliance risks if their arrangements exceed the materiality threshold.[547] We agree with EDFps that Network Customers should decide whether the costs and requirements associated with complying with the revised retail BTMG netting rules are appropriate or cost-effective for their business when determining whether to maintain or pursue BTMG arrangements.[548]

219. In response to EDFps' request that the Commission clarify that electric storage resources and hybrid resources qualify for the back-up exemption, we note that PJM's retail BTMG netting rules do not restrict what resources may qualify as back-up generation, but instead specify only that the generation must be at the same electrical location as the retail load and that it can only be used to serve such retail load during conditions that may threaten the integrity or reliability of the PJM Region or the regional power system.[549]

220. Accordingly, we direct PJM to file, within 60 days of the date of issuance of this order, a compliance filing to revise its Tariff consistent with the Commission's directive in the December Order and our determination here. Specifically, we reject PJM's

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[544] *Id.* P 179.

[545] BTMG Parties Joint Protest of Compliance Filing at 10.

[546] December Order, 193 FERC ¶ 61,217 at P 221 ("Such a threshold should reduce the reliability and resource adequacy risks discussed above that large loads may pose to PJM, while also allowing for Network Customers to reduce their transmission charges in a transparent, not unduly discriminatory fashion.").

[547] *See, e.g.*, BTMG Parties Joint Protest of Compliance Filing at 11 n.20 ("PJM does not provide any factual support for these assertions, and these statements do not match BTMG Parties' experience as developers of BTMG in PJM.").

[548] EDFps Comments on Compliance Filing at 7.

[549] *Id.*, pt. VIII, Subpart A, section 400 Definitions R (definition of Retail Behind the Meter Generation) (7.0.0).

proposed definition of Retail Behind The Meter Generation[550] and direct PJM to submit a compliance filing modifying the Tariff to instead create a materiality threshold that allows Network Customers to net from their Network Load up to 50 MW of load served by using BTMG at a single electrical location.

2. Grandfathering and Transition Period

a. December Order

221. The Commission directed PJM to establish a transition period of three years for Network Customers currently using PJM's existing retail BTMG netting rules.[551] The Commission also directed PJM to include in its compliance filing revisions to grandfather entities with existing contracts for the specific purpose of effectuating a BTMG arrangement for the current term remaining under the existing contract.[552] The December Order did not direct any changes to Non-Retail BTMG.[553]

b. PJM Compliance Filing

222. PJM proposes to modify the existing Tariff definition of BTMG and add a new definition for Retail BTMG to implement a three-year transition period and provide the ability to grandfather certain entities with existing contracts.[554] Specifically, PJM proposes that any existing retail BTMG with a contract that was entered into as of the date of the December Order would be permitted to remain eligible to net against Network Loads as Retail BTMG irrespective of the materiality threshold through the term of the contract.[555] PJM explains that this proposal could include a wide variety of contracts, including "utility contracts, fuel contracts, maintenance contracts, and more."[556] PJM

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[550] PJM, Proposed Tariff, § I.1 Definitions R-S (Retail Behind The Meter Generation) (46.0.0) and § VIII.A 400, Definitions R (Retail Behind The Meter Generation) (7.0.0).

[551] December Order, 193 FERC ¶ 61,217 at P 223.

[552] *Id.* P 224.

[553] *Id.* P 222.

[554] Compliance Transmittal at 6-7 (citing December Order, 193 FERC ¶ 61,217 at P 179).

[555] *Id.* at 8.

[556] *Id.*

further proposes that this exemption would encompass existing renewal or extension rights recognized under any existing contracts to "avoid interference with such reliance expectations upon which investment decisions likely have been made . . . ."[557] PJM states that if the Commission accepts its proposal, it will explore with stakeholders whether manual language should be developed to help elaborate on what types of agreements may qualify.[558]

c. Pleadings

i. Comments

223. AEU/SEIA ask the Commission to reject PJM's proposal to transition existing retail BTMG through December 18, 2028 and instead extend the transition period until the effective date of PJM's compliance filing to avoid harming projects already underway. AEU/SEIA allege that setting the grandfathering date earlier than the effective date for the new co-location pathways would leave a problematic gap for projects that were moving forward in good faith and exacerbate uncertainty. AEU/SEIA argue that any project "in process" as of the transition date should be eligible for grandfathering if it has made significant progress toward completion though not fully operational.[559] Otherwise, AEU/SEIA allege, PJM's proposal will result in significant stranded assets.

224. Similarly, BTMG Parties argue that the deadlines for the transition period and grandfathering eligibility will exclude retail customers that recently finalized or will imminently finalize projects while providing limited system benefit. BTMG Parties argue that PJM should be required to instead use the date of a Commission order acting on PJM's filing, or, at minimum, 180 days from the December 18, 2025 date of the Co-Location Order (June 16, 2026), as the date from which the grandfathering and transition period run. BTMG Parties argue that this date would better afford a workable transition for market participants that does not penalize developers for attempting to develop resources during a historic resource adequacy crisis in PJM.[560]

225. AEU/SEIA also ask the Commission to clarify that the types of agreements that may qualify for PJM's proposal include utility interconnection study agreements, engineering, procurement, and construction contracts, and any form of binding agreement

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[557] *Id.* at 9.

[558] *Id.* at 9 n.32.

[559] AEU/SEIA Limited Protest of Compliance Filing at 7-9.

[560] BTMG Parties Joint Protest of Compliance Filing at 2-3, 13-16.

between the load and the BTMG developer.[561] Otherwise, AEU/SEIA warn, developers face the risk of delay and additional regulatory burdens that could remove projects underway.

226. Industrials/Amtrak support PJM's proposal to grandfather existing contracts, noting that BTMG customers operate under diverse agreements, some of which renew year to year, which should be eligible for grandfathering. Industrials/Amtrak also argue that grandfathering rules and status should be clear, broadly construed, and easily confirmed for existing BTMG customers to ensure stability and regulatory certainty.[562]

227. AEU/SEIA argue that PJM's proposal is unjust and unreasonable because it is not clear as to whether grandfathering status applies to the site itself or the generator asset. AEU/SEIA suggest that grandfathering the generation while allowing these existing customers to pursue additional BTMG below the materiality threshold is a logical extension of PJM's observation that additions below the materiality threshold would have little or no impact. AEU/SEIA argue that clarifying that customers with grandfathered BTMG have a "clean slate" to pursue additional BTMG up to the materiality threshold would also allow existing customers to help address PJM's resource adequacy and infrastructure needs. AEU/SEIA contend that many existing customers have neither the desire nor the economic incentive to pursue co-location and that, for smaller projects, PJM's full interconnection process will be too costly and complex.[563] Eastman similarly requests that the Commission require PJM's grandfathering provision to apply to BTMG facilities rather than the service agreement. Otherwise, Eastman argues, a BTMG facility could lose its grandfathered status if the relevant service agreement is modified because, for example, the facility was modified to become more efficient.[564]

228. Industrials/Amtrak argue that most BTMG differs from the large loads that the Commission addressed in the December Order. Specifically, Industrials/Amtrak argue that BTMG is not new, is not the cause of the changed circumstances, and does not present the reliability risks posed by large, inverter-based loads.[565] Further, Industrials/Amtrak contend, new large loads differ from BTMG in that new large loads do not have substantial cogeneration, do not generally operate large motors that can help

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[561] AEU/SEIA Limited Protest of Compliance Filing at 7-8.

[562] Industrials/Amtrak Joint Protest and Comments on Compliance Filing at 10, 39.

[563] AEU/SEIA Limited Protest of Compliance Filing at 9-11.

[564] Eastman Protest and Comments on Compliance Filing at 7.

[565] Industrials/Amtrak Joint Protest and Comments on Compliance Filing at 6-7, 13; *see also* Energy Artisans Protest of Compliance Filing at 1.

with stability on the grid, can turn off and on nearly instantaneously, and can reach sizes well beyond traditional BTMG and the 200 MW threshold proposed by Industrials/Amtrak. Industrials/Amtrak further claim the December Order "did not find that BTMG rules were unjust and unreasonable as used by manufacturers with cogeneration, other QFs (which are size limited under PURPA), or even traditional 'large' loads with BTMG . . . ."[566]

ii. Answers

229. Indicated TOs argue that PJM's materiality threshold should be paired with grandfathering provisions that appropriately recognize that customers have relied on retail BTMG netting rules and eliminating such rules could cause financial harm. Indicated TOs therefore propose several additions and clarifications to PJM's proposal. First, Indicated TOs argue that grandfathering treatment should extend to all projects that are not yet in service and would have been eligible for retail BTMG treatment, but have made "substantial progress towards completion."[567] Indicated TOs also argue that the exclusion regarding existing contracts should be construed broadly to cover a wide range of contracts and recognition of renewal rights in those contracts. Indicated TOs argue that existing retail BTMG arrangements that have been physically in service and operating for a significant period of time should be grandfathered to avoid disrupting long-standing arrangements.[568]

230. BTMG Parties and Industrials/Amtrak agree with Indicated TOs that grandfathering should extend to projects that would have been eligible for retail BTMG treatment but for the imposition of the materiality threshold and have made substantial progress toward completion in order to protect the investment-backed expectations of PJM customers (and the BTMG developers) and to ensure just and reasonable rates. BTMG Parties and Industrials/Amtrak also argue that the existing contract exception should be construed broadly to cover a wide range of contracts.[569] BTMG Parties also argue that arrangements that have been physically in service and operating for a significant period of time should be grandfathered.[570]

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[566] Industrials/Amtrak Joint Protest and Comments on Compliance Filing at 14 (emphasis in original).

[567] Indicated TOs April 24 Answer at 3.

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

[569] BTMG Parties Answer at 2-4; Industrials/Amtrak Answer at 6-7.

[570] BTMG Parties Answer at 4.

d. Determination

231. We find that PJM's proposed Tariff revisions comply with the directives in the December Order.[571]

232. First, we find that PJM complies with the directive to revise its Tariff to allow Network Customers already using the retail BTMG netting rules to continue to do so for a transition period of three years from the date of issuance of the December Order.[572] AEU/SEIA and BTMG Parties express concern that such a transition period unfairly harms entities that were planning to finalize arrangements in order to use PJM's retail BTMG netting rules. But these parties did not seek rehearing of the Commission's decision in the December Order to establish a transition period to minimize the impact on existing BTMG customers. In that order, the Commission explicitly directed PJM to "allow Network Customers already using the BTMG rules to continue to do so for a transition period of three years . . . from the date of issuance of this order."[573] Thus, we find that AEU/SEIA's and BTMG Parties' arguments constitute untimely requests for rehearing of the December Order.[574] However, even if these arguments were properly before us, AEU/SEIA and BTMG Parties offer no suggested transition period to encompass certain potential BTMG customers in a manner that would not be arbitrary.[575]

233. Second, we find that PJM complies with the directive to revise its Tariff to grandfather entities with existing contracts that effectuate a BTMG arrangement for the

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[571] *See* PJM, Proposed Tariff, § I.1 Definitions R-S (Retail Behind The Meter Generation) (46.0.0) and § VIII.A 400, Definitions R (Retail Behind The Meter Generation) (7.0.0).

[572] December Order, 193 FERC ¶ 61,217 at P 223; PJM, Compliance Filing, attach. B (defining Retail BTMG to provide "for a transition period through December 18, 2028" for Retail BTMG "used to serve a retail load served by a Network Customer to net load prior to December 18, 2025.").

[573] December Order, 193 FERC ¶ 61,217 at P 223.

[574] *See, e.g.*, *Louisville Gas & Elec. Co.*, 185 FERC ¶ 61,120 at P 39; *ISO New Eng. Inc.*, 132 FERC ¶ 61,098, at P 12 (2010) ("The Commission has held that requests to alter a compliance filing in a manner that differs from the order requiring the compliance filing constitute a collateral attack on the order requiring the compliance filing.").

[575] *See* BTMG Parties Joint Protest of Compliance Filing at 15 (characterizing a "limited class of BTMG developers that were very close to finalizing their projects").

current term remaining under the existing contract.[576] In response to concerns from AEU/SEIA and BTMG Parties, we clarify that the Tariff proposal applies to a contractual arrangement—for which generation used to serve retail load served by a Network Customer to net load is the subject—"that was in effect as of December 18, 2025." Therefore, entities with projects that have contractual arrangements "in place, even if they are not yet fully operational" by December 18, 2025 may qualify under the Tariff proposal.[577] In addition, in response to AEU/SEIA, we clarify that the types of agreements that may qualify under PJM's proposal may include engineering, procurement, and construction contracts, and we encourage PJM, as it states in its transmittal, to explore developing language in its manuals on what other types of agreements may qualify.[578] Moreover, in response to AEU/SEIA and Eastman, who raise overlapping concerns about whether grandfathering applies to the generator, we clarify that it does apply to the generator, as the Tariff proposal on grandfathering reflects.[579] In further response to Eastman, parties to an existing BTMG contract could modify the agreement to, for example, make the facilities more efficient—provided that the modification is not prohibited by the existing contract and does not fundamentally alter the contractual arrangement that was in effect as of December 18, 2025. And in further response to AEU/SEIA, we clarify that customers with BTMG within the scope of this grandfathering provision may also avail themselves of the new materiality threshold to net up to 50 MW of load served by a Network Customer because this threshold applies to a particular electrical location.

3. QFs and Cogeneration Facilities

a. PJM Compliance Filing

234. PJM proposes that the new materiality threshold should not apply to any QF over 50 MW serving as Retail BTMG as of the date of the December Order. PJM

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[576] December Order, 193 FERC ¶ 61,217 at P 224; PJM, Compliance Filing, attach. B (defining Retail BTMG to include "any generation used to serve a retail load served by a Network Customer to net load if it is the subject of a contractual arrangement (including but not limited to a bilateral agreement or interconnection agreement) that was in effect as of December 18, 2025 through the end of the term of such agreement, which may be renewed or extended per the terms of such agreement").

[577] AEU/SEIA Limited Protest of Compliance Filing at 7.

[578] Compliance Transmittal at 9 n.32.

[579] PJM, Compliance Filing, attach. B (defining Retail BTMG in part to include "any generation used to serve a retail load served by a Network Customer to net load if it is the subject of a contractual arrangement . . .").

acknowledges that the December Order does not reference PURPA, yet because the December Order was issued against the backdrop of PURPA, "PJM interprets the Commission's [grandfathering] compliance directive as allowing the extension of legacy treatment" to such facilities. PJM states that some of the QFs impacted by this exemption are cogeneration facilities that provide economic and energy efficiency benefits.[580] In support of its proposal, PJM notes that QFs have size limitations and cogeneration QFs must meet efficiency requirements.[581] PJM explains that BTMG with existing contractual arrangements or QF status have been in place without any known operational issues to date, and so should be allowed to continue netting under their existing arrangements.[582]

b. <u>Pleadings</u>

235. Industrials/Amtrak argue that QFs should be eligible for retail netting for their full load, but the eligibility should not be linked to QF status as of the date of the order.[583] Industrials/Amtrak explain that, without retail netting, QFs may be denied the backup service to which they are entitled under PURPA. Industrials/Amtrak argue that for cogeneration QFs, "the BTMG netting construct aligns with their efficient, reliable energy production configurations, matching the intent of Congress and the [Commission]."[584] Industrials/Amtrak argue that QFs have stronger operational and financial incentives to operate reliably and efficiently than other generators and must meet certain efficiency standards. However, Industrials/Amtrak note that many resources eligible to be QFs have not maintained QF status because PURPA permits the Commission to deem certain QFs as having sufficient market access that it removes (for those QFs) the utility's obligation to purchase excess power generated by the QF. Industrials/Amtrak explain that many customers with QFs were required by this status change to secure interconnection service and market-based rate authority to sell excess energy into the PJM markets.[585] Industrials/Amtrak argue this "history should not limit

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[580] Compliance Transmittal at 9-10.

[581] *Id.* at 10 (citing 16 U.S.C. § 824a-3; 18 C.F.R. § 292.204 (2025)).

[582] *Id.*

[583] Industrials/Amtrak Joint Protest and Comments on Compliance Filing at 8, 17.

[584] *Id.* at 8.

[585] *Id.* at 8, 20, 22.

the ability of retail customers with cogeneration facilities to avail themselves of retail BTMG netting for energy production behind the retail meter."[586]

236. Industrials/Amtrak argue that the BTMG netting rules ensure QFs have access to backup power to which they are entitled by PURPA, at rates that are not based upon an assumption that forced outages or other reductions in electric output by all QFs on the system will occur simultaneously, during system peak, or both.[587] Industrials/Amtrak contend that the FCD or NFCD transmission services would not be sufficient to replace netting, because the FCD transmission service is calculated on the maximum the load might draw from the grid when the QF would only use the system sporadically, and NFCD transmission service must be scheduled in advance. Industrials/Amtrak also argue that these services do not align with the costs or risk profile of cogeneration QFs, such that, without netting, QF customers may lose their ability to manage costs even if their load and generation are synchronized or they never rely on transmission services, creating a cost-causation gap.[588]

237. Industrials/Amtrak argue that exempting QFs is appropriate and consistent with the goals of the December Order because the Commission did not address PURPA. Industrials/Amtrak also argue that no circumstances have changed with regards to QFs, which have been operating similarly for decades, and that PJM acknowledges that existing retail BTMG arrangements with QFs have been in place without operational issues. Industrials/Amtrak further argue that QFs contribute to resource adequacy and reliability because some are limited in their use of the transmission system by the integration between the load and generation.[589]

238. Eastman argues that the proposed changes to BTMG netting ignore the operational realities of facilities like Eastman's Kingsport facility, which uses its on-site electrical generation not only to provide electric power but also steam necessary for industrial processes at the facility. Eastman explains that if the Kingsport facility is unable to generate power, it also cannot generate steam, which reduces the industrial output and the need for additive power from the grid. Eastman claims that during periods of grid stress, the Kingsport facility is more likely to support the grid than to create operational

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[586] *Id.* at 22.

[587] *Id.* at 19.

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

[589] *Id.* at 17-19, 21.

constraints. Therefore, the Commission should allow BTMG facilities like the Kingsport facility to continue to net.[590]

c. Answer

239. Industrials/Amtrak note that many of the customers impacted by the change in BTMG netting rules are QFs under PURPA, subject to efficiency standards (and for non-cogeneration QFs, size limits).[591]

d. Determination

240. Consistent with our determination on rehearing,[592] PJM must submit a further compliance filing that includes a process to exempt certain cogeneration QFs from the new retail BTMG netting rules if they demonstrate that they are integrated with load such that, when their generating facility trips offline, the load follows. We therefore reject PJM's compliance filing as it relates to QFs. Specifically, we reject PJM's proposal to exempt from the materiality threshold all QFs serving as retail BTMG as of the date of the December Order.[593] PJM has not demonstrated that all load with BTMG that is either designated, or eligible to be designated, as a QF is meaningfully distinguishable from load with other categories of BTMG for purposes of the concerns and directives discussed in the December Order.

241. In the December Order, the Commission found that PJM's retail BTMG netting rules could create resource adequacy and reliability risks because PJM is obligated to serve transmission customers using BTMG but does not consider such customers in transmission and resource adequacy planning.[594] The Commission found that PJM's existing retail BTMG netting rules do not limit the amount of qualifying load that a Network Customer may net by using BTMG and do not provide any protections against this potential transmission and resource adequacy planning problem or against the costs of maintaining sufficient resources to serve these loads being shifted onto other

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[590] Eastman Protest and Comments on Compliance Filing at 5, 8.

[591] Industrials/Amtrak Answer at 3, 5-6.

[592] *See supra* Part IV.C.1.c.i.

[593] Compliance Transmittal at 9; PJM, Proposed Tariff, § I.1 Definitions R-S (Retail Behind The Meter Generation) (46.0.0) and § VIII.A 400, Definitions R (Retail Behind The Meter Generation) (7.0.0).

[594] December Order, 193 FERC ¶ 61,217 at P 186.

customers.[595] The Commission did not distinguish in its determination between load served by QFs that are BTMG and load served by other categories of BTMG.

242. PJM argues that some QFs may have economic benefits and are energy efficient, but PJM does not demonstrate that loads served by QFs that are BTMG do not cause the concerns the Commission discussed in the December Order.[596] Nor does PJM demonstrate why these loads are not similarly situated to other loads served by other categories of BTMG.

243. PJM also notes that QFs have size limitations and cogeneration QFs must meet efficiency requirements.[597] However, the Commission in the December Order directed a materiality threshold because netting a smaller amount of load does not raise the same level of resource adequacy and reliability concerns as netting above the threshold.[598] PJM does not demonstrate why the materiality threshold should apply differently to load served by QFs that are BTMG and load served by other categories of BTMG. Further, efficiency requirements are not unique to QFs—other generators may have efficiency requirements for other reasons or meet similar efficiency targets on their own. PJM has not demonstrated why such requirements are a meaningful consideration in whether to apply disparate treatment to load served by QFs that are BTMG and load served by other categories of BTMG. Industrials/Amtrak similarly argue that QFs contribute to resource adequacy and reliability because some are limited in their use of the transmission system due to the integration between the load and generation.[599] However, as Industrials/Amtrak acknowledge, this is only true of some QFs, and above we have recognized that a particular subgroup, cogeneration QFs, warrant different treatment.

244. Industrials/Amtrak also argue that it is not clear whether QFs will have access to the FCD or NFCD transmission services.[600] As discussed supra, Eligible Customers taking transmission service on behalf of Co-Located Loads, as well as Eligible Customers taking transmission service on behalf of a load with BTMG, may elect to take FCD

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[595] *Id.*

[596] *See* Compliance Transmittal at 10 (broadly asserting that BTMG arrangements with QF status have been netting within PJM without known operational issues to date).

[597] Compliance Transmittal at 10 (citing 16 U.S.C. § 824a-3; 18 C.F.R. § 292.204).

[598] December Order, 193 FERC ¶ 61,217 at P 221.

[599] Industrials/Amtrak Joint Protest and Comments on Compliance Filing at 18-19, 21.

[600] *Id.* at 20.

and/or NFCD transmission services.[601] While we acknowledge that Industrials/Amtrak also argue that these new transmission services will not replace netting,[602] our determination herein to allow Eligible Customers taking transmission service on behalf of loads with BTMG to take transmission service based on contract demand rather than NITS should they so choose could help such Eligible Customers to manage costs if they infrequently rely on transmission service or can reserve needed transmission service in advance (such as when the QF that serves them is on a planned maintenance outage).

245. Industrials/Amtrak argue that without retail netting, QFs may be denied access to backup service at rates that are not based upon an assumption that forced outages or other reductions in electric output by all QFs on the system will occur simultaneously, during system peak, or both, as required by PURPA. Under the Commission's PURPA regulations, the rates at which a host utility provides backup service must be just and reasonable and (1) shall not be based upon an assumption (unless supported by factual data) that forced outages or other reductions in output by all QFs on an electric utility's system will occur simultaneously, or during system peak, or both; and (2) shall consider the extent to which scheduled outages of the QF can be usefully coordinated with scheduled outages of the utility's facilities.[603] The Commission's directive in the December Order to PJM to revise its Retail BTMG netting rules implicates the terms of the Tariff for the provision of transmission service, specifically NITS, not back-up service. Therefore, Industrials'/Amtrak's concern regarding backup service appears to conflate rates for sales of back-up power and rates for transmission service, rendering the concern misplaced. As is already the case elsewhere, such as in Midcontinent Independent System Operator, Inc. (MISO),[604] NITS transmission rates in PJM, going forward, will be based on gross demand during the system peak. Because this directive from the December Order has no bearing on the rates at which a host utility provides backup service to QFs, it necessarily does not conflict with the requirement in the Commission's PURPA regulations that the rates for such backup service not assume all QFs are on forced outage.

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[601] *See supra* Part IV.B.3.c.

[602] Industrials/Amtrak Joint Protest and Comments on Compliance Filing at 20.

[603] 18 C.F.R. § 292.305(c).

[604] *See Midwest Indep. Transmission Sys. Operator, Inc.*, 106 FERC ¶ 61,073, at P 26 (2004) ("[MISO]'s proposal to base Network Service charges for delivery of station power on the basis of coincident-peak output is not consistent with its OATT or with Commission precedent. Accordingly, [MISO] should include load served by behind-the-meter generation, including station power load met through on-site self-supply, in Network Load when it charges for Network Service.").

246. With respect to Eastman's arguments, Eastman appears to reference a cogeneration facility, which uses its on-site electrical generation to provide not only electric power but also steam necessary for industrial processes at the facility.[605] Because we set aside, in part, the December Order and find that certain cogeneration QFs should be exempted from the replacement rate upon a demonstration that they do not present the reliability or resource adequacy concerns discussed in the December Order, Eastman's concern appears to be addressed.[606]

B. Transmission Service

1. December Order

247. The Commission directed PJM to modify its Tariff to require that the Eligible Customer taking transmission service on behalf of a Co-Located Load takes one of three transmission services: (1) NITS or Interim NITS, (2) a new FCD transmission service, or (3) a new NFCD transmission service.[607] The December Order set many of the terms and conditions of these services for paper hearing procedures.[608]

248. The December Order stated that Interim NITS must allow an Eligible Customer that has requested NITS on behalf of a Co-Located Load to take non-firm transmission service that can be interrupted until the Network Upgrades necessary to provide NITS are complete and the Co-Located Load can be designated as Network Load.[609] The Commission also found that this service should be temporary, available only to Eligible Customers that have requested NITS on behalf of Co-Located Loads that cannot yet be reliably served with NITS and only until the necessary Network Upgrades are completed and the Co-Located Load is designated as Network Load. The December Order further stated that Interim NITS would be optional for an Eligible Customer seeking NITS on behalf of a Co-Located Load and only available to the extent PJM determines that it can provide some level of interim service reliably. The Commission found that Eligible Customers should pay the NITS rate for this service, as well as ancillary services charges and charges for black start service, but they will not be charged for generation capacity because, as interruptible loads, capacity will not be procured on their behalf until such time as the Network Upgrades are in place to serve them. The Commission clarified that

[605] Eastman Protest and Comments on Compliance Filing at 5.

[606] *See supra* Part IV.C.1.c.i.c.

[607] December Order, 193 FERC ¶ 61,217 at P 193.

[608] *Id.* P 194.

[609] *Id.* P 200.

Interim NITS may not be combined with the FCD transmission service or NFCD transmission service.

249. With respect to FCD and NFCD transmission services, the Commission found these services should be permanent transmission services available to Eligible Customers taking transmission service on behalf of Co-Located Load.[610] The December Order provided that the Co-Located Load must be able and willing to prevent or limit its energy withdrawals and must be separately metered from the associated generator. The December Order also stated that Eligible Customers taking transmission service on behalf of Co-Located Loads may take a combination of FCD transmission service and NFCD transmission service, but that Eligible Customers taking transmission service on behalf of Co-Located Loads that will not withdraw energy from the transmission system must take NFCD transmission service at 0 MW. The Commission also found that Eligible Customers taking either service on behalf of Co-Located Load would be charged for regulation and black start services based on gross demand, rather than the reserved amount of transmission service.[611]

250. The Commission found that FCD transmission service should have the same reservation and curtailment priority as existing firm transmission services at the level of the contract demand and be charged for transmission, ancillary services, and capacity based on the contract demand, with the exception of regulation and black start services.[612] The Commission explained that PJM would only have an obligation to plan for the Network Upgrades necessary to serve Eligible Customers taking this new FCD transmission service on behalf of Co-Located Loads at their contract demand, and that PJM would procure capacity for these customers and should charge them based on their contract demand.[613] The Commission further found that FCD transmission service should have a minimum term of one year and that PJM should propose an anti-toggling mechanism for Eligible Customers switching between FCD and NFCD transmission services.[614]

251. With respect to NFCD transmission service, the Commission found the service should be available during normal operation and curtailed during emergency operations, similar to existing non-firm transmission service options. The Commission found the

[610] *Id.* P 206.

[611] *Id.* PP 209, 216.

[612] *Id.* PP 208-209.

[613] *Id.* P 210.

[614] *Id.* P 213.

service should be available for terms ranging from one hour to one month and charged based on as-reserved contract demand.[615] The December Order clarified that PJM should not include NFCD transmission service loads in its transmission or resource adequacy planning.[616]

2. PJM Compliance Filing

252. PJM clarifies that the compliance filing only includes the organizational Tariff changes needed to implement the Commission's compliance directives regarding creating new transmission services and that the majority of the changes will be determined through the paper hearing.[617] First, PJM submits several "shell" Tariff sheets, including a new Part XI governing the new transmission services, new Attachment F-3A for the service agreement for Eligible Customers taking NITS or Interim NITS on behalf of a Co-Located Load, and Attachment F-4 for the service agreement for Eligible Customers taking FCD transmission service or NFCD transmission service on behalf of a Co-Located Load.[618] PJM states that it will file the full text of these sections upon the Commission's decision following the conclusion of the paper hearing.[619]

253. PJM states that it further proposes modifications to Tariff Part III, governing NITS, to clarify that an Eligible Customer taking transmission service on behalf of Co-Located Load must take a transmission service or take steps to disconnect the load from the transmission system.[620] PJM also proposes new language clarifying that an Eligible Customer taking transmission service on behalf of a Co-Located Load may not take NITS or Interim NITS at the same time as FCD or NFCD transmission service.[621] Finally, PJM proposes that Co-Located Load that is not served by an Eligible Customer

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[615] *Id.* PP 215-216.

[616] *Id.* P 218.

[617] Compliance Transmittal at 18-19.

[618] *Id.* at 19-21.

[619] *Id.* at 21.

[620] *Id.* at 22.

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

taking transmission service on its behalf "must take all necessary steps to disconnect from the Transmission System."[622]

3. Pleadings

254. EDFps supports PJM's proposed framework for the new transmission services.[623] Constellation requests modifications to PJM's proposed Tariff revisions for Interim NITS, including: (1) replacing a load's "option to seek" Interim NITS with an "option to take"; (2) revising section 28.1 of the Tariff to clarify that Interim NITS is available to Eligible Customers taking service on behalf of Co-Located Load; and (3) revising section 29.1 of the Tariff to clarify that the required conditions to receive NITS also apply to Interim NITS.[624]

255. Crusoe argues that PJM's proposal in the paper hearing does not answer critical questions such as how the initial contract demand quantity is determined, whether contract demand quantities can be adjusted as Co-Located Load grows in phases, or how PTPS interacts with Co-Location Arrangements where both generation and load sit on the developer's side of the Point of Change in Ownership.[625]

256. Crusoe supports Interim NITS as a workable, near-term solution to allow load to operate on the transmission system while a Co-Located Generator and/or retail BTMG is still being built and interconnected.[626] Crusoe claims, however, that PJM's proposed approach appears to treat a new Co-Located Generator as equivalent to a Network Resource prior to it receiving such status. On that basis, Crusoe speculates that PJM may intend to prevent a Co-Located Generator or retail BTMG from supplying energy to Co-Located Load during a grid curtailment event if that load is being served via Interim NITS. Crusoe contends that this prohibition would create a disincentive to large load customers using Interim NITS as an option for speedy interconnection.

257. DCC similarly alleges that PJM's proposal to prohibit customers from relying on a Co-Located Generator during curtailment events makes the proposal unworkable and without practical value. DCC also requests that PJM define the trigger, scope, and sequence of Interim NITS curtailment with respect to the operational limits identified in

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[622] PJM, Proposed Tariff, Part III (NITS) (4.0.0).

[623] EDFps Comments on Compliance Filing at 8.

[624] Constellation Protest and Comments on Compliance Filing at 18-19.

[625] Crusoe Comments on Compliance Filing at 8.

[626] *Id.* at 6.

the study and should not be able to curtail load for unrelated, broader resource adequacy concerns.[627]

258. Joint Parties argue that the Commission should reject PJM's proposed Tariff revisions that preclude retail loads served by BTMG from taking the new transmission services and otherwise limit eligibility for the new transmission services to load that is connecting to a generator with interconnection rights. Joint Parties argue that these retail loads are similarly situated to Co-Located Loads in their willingness and ability to limit their energy withdrawals from the transmission system under certain conditions.[628]

259. DCC argues that PJM's proposal does not provide clear timelines for customers to be transitioned from Interim NITS to NITS.[629] DCC expresses concern that, without clear timelines, Interim NITS could persist indefinitely, creating uncertainty for customers making long-term investments.

4. Answers

260. Indicated TOs argue that the Commission should reject requests to reject or defer action on PJM's proposal to limit the new transmission services to Co-Located Load, because, Indicated TOs contend, the December Order limited such services to Eligible Customers taking transmission service on behalf of Co-Located Load. Indicated TOs argue that there is no evidence in the record to support that load-only customers should be entitled to use the new transmission services, which Indicated TOs explain are tied to generator-specific attributes that load-only customers do not share, such as an associated generator, separate metering from the generator, and the ability and willingness to prevent or limit withdrawals through the Co-Location Arrangement itself.[630]

261. Indicated TOs state they do not oppose the requested clarification that Interim NITS customers be permitted to continue serving on-site load with a Co-Located Generator during a curtailment event, provided that PJM implements safeguards to ensure that any such operation does not result in unreserved use of the transmission system or otherwise compromise reliability.[631]

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[627] DCC Comments on Compliance Filing at 6-7.

[628] Joint Parties Protest of Compliance Filing at 10.

[629] DCC Comments on Compliance Filing at 8.

[630] Indicated TOs April 24 Answer at 6-7.

[631] *Id.* at 7-8.

262. BTMG Parties argue that the record contains ample evidence to support extending new transmission service eligibility to all customers willing and able to limit withdrawals from the grid, including load-only customers served by BMTG or otherwise able to consume flexibly.[632] BTMG Parties contest Indicated TOs' claim that there is absolutely no evidence in the record, noting that the Commission relied on Antora's comments explaining that its thermal battery technology provides for an inherently flexible, low-load factor load, whether or not co-located with generation.[633] BTMG Parties argue that the ability to inject to the grid is not required to enable a load to limit withdrawals from the transmission system, and that the Commission should require PJM to tailor new transmission service eligibility more closely to the Commission's justification in issuing the Co-Location Order, namely the willingness and ability to limit withdrawals from the transmission system under specified circumstances.[634] BTMG Parties contend that if a load is able to meet technology-neutral technical requirements to demonstrate reliable curtailment eligibility, it should be allowed to take the new transmission services.

5. <u>Determination</u>

263. We accept PJM's compliance filing with respect to outlining new transmission services in the Tariff, noting that, as discussed above in Part IV.B.3, we set aside, in part, the December Order and direct PJM to submit further compliance to revise its Tariff to extend the three new transmission services set forth in the December Order to Eligible Customers taking service on behalf of load with BTMG that are willing and able to limit their energy withdrawals from the transmission system under certain conditions.[635] We find that PJM complies with the directive in the December Order to modify its Tariff to require that an Eligible Customer taking transmission service on behalf of Co-Located Load takes one of three transmission services: (1) NITS or Interim NITS, (2) a new FCD

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[632] BTMG Parties Answer at 8.

[633] *Id.* at 5-6 (citing December Order, 193 FERC ¶ 61,217 at P 199).

[634] *Id.* at 8-9.

[635] Specifically, we accept Proposed Tariff, § III.28.1 (Scope of Service) (2.0.0); § III.29.1 (Conditions Precedent for Receiving Service) (4.0.0); § III.29.2 (Application Procedures) (4.0.0); § III.31.6 (Annual Load and Resource Information Update) (4.0.0); Part XI (Transmission Services Available for Eligible Customers Taking Service on Behalf of Co-Located Loads) (0.0.0); attach. F-3A (Service Agreement for Regional Network Integration Transmission Service And/or Interim Regional Network Integration Transmission Service (For Co-Located Load)) (0.0.0); and attach. F-4 (Service Agreement For Contract Demand Transmission Service (For Co-Located Load)) (0.0.0).

transmission service, or (3) a new NFCD transmission service.[636] We acknowledge PJM's statement that it filed on compliance only a limited number of the changes directed in the December Order, given the number of issues set to be resolved through the paper hearing.

264. However, we reject the Tariff provisions proposing that Co-Located Load that is not served by an Eligible Customer taking transmission service on its behalf "must take all necessary steps to disconnect from the Transmission System."[637] We find this provision duplicative of PJM's proposed changes to Part VIII, Subpart B, section 403(A)(1)(r)(iv), which specify that "[t]o the extent that a Project Developer seeks to serve Co-Located Load using its generating facility but not identify an Eligible Customer, then the Project Developer must terminate its generating facility's interconnection to the Transmission System and serve the Co-Located Load fully islanded from the Transmission System."

265. We reject Constellation's request to direct PJM to modify its proposed tariff language such that a load has an "option to take" Interim NITS instead of an "option to seek" Interim NITS.[638] We acknowledge, as Constellation notes, that the December Order stated that "[t]his new interim, non-firm transmission service must allow an Eligible Customer that has requested NITS on behalf of a Co-Located Load to take non-firm transmission service that can be interrupted until the Network Upgrades necessary to provide NITS are complete . . . ."[639] However, the December Order also stated that Interim NITS "would only be available to the extent PJM determines that it can provide some level of interim service reliably."[640] We accept PJM's proposal and clarify that Interim NITS is an option but not a right, as it is available to an Eligible Customer taking transmission service on behalf of Co-Located Load only to the extent that PJM determines it can be provided reliably. Constellation appears to request that the Commission require PJM to provide Interim NITS regardless of this reliability limitation, which would not be just and reasonable or consistent with the December Order. We reject Constellation's other requested clarifications on the required conditions to receive Interim NITS as not required for PJM to comply with the December Order. Further, because PJM proposes to create a new Tariff section governing Interim NITS,

[636] December Order, 193 FERC ¶ 61,217 at P 193.

[637] PJM, Proposed Tariff, Part III (General) (4.0.0).

[638] Constellation Protest and Comments on Compliance Filing at 18-19.

[639] December Order, 193 FERC ¶ 61,217 at P 200.

[640] *Id.*

Constellation has not shown why it is necessary to add details regarding Interim NITS to the existing Tariff sections addressing NITS.[641]

266. In its comments on the compliance filing, Crusoe makes several misplaced arguments about the illustrative tariff PJM submitted in the paper hearing.[642] Crusoe argues that PJM's illustrative tariff does not explain how the initial contract demand quantity is determined. It is not clear what Crusoe means, given that the purpose of FCD and NFCD transmission services is to allow an Eligible Customer taking service on behalf of Co-Located Load to request a specific contracted amount of transmission service.[643] The initial level of transmission service will thus be determined in the first instance by the requesting Eligible Customer. PJM will evaluate those requests pursuant to its study process, which we address below.[644] Crusoe also argues that PJM does not explain how PTPS interacts with Co-Location Arrangements where both the generator and load sit on the Interconnection Customer's side of the Point of Change in Ownership. However, this arrangement appears to refer to PJM's proposed change to the definition of Co-Located Load, which we reject herein.[645]

267. Crusoe's request for clarification as to how phased-in load will be treated under FCD and NFCD transmission services is addressed below in Part VI.A.2. Crusoe and DCC also make arguments about curtailment rules or procedures for Eligible Customers taking Interim NITS on behalf of Co-Located Load, and that issue is addressed below in Part VI.G. Finally, comments urging the Commission to reject PJM's compliance filing for failing to make the new transmission services available to Eligible Customers on behalf of non-Co-Located Loads are untimely requests for rehearing. These commenters argue for a modification of the December Order, not that PJM has failed to comply with it.[646] However, we address related arguments on rehearing of the December Order above in Parts IV.B.3 and IV.C.1.b.ii.

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[641] Compliance Transmittal at 19-20.

[642] Crusoe Comments on Compliance Filing at 8. To accompany its initial brief on paper hearing, PJM submitted an illustrative tariff with proposed rates, terms, and conditions for the three new transmission services.

[643] *See* December Order, 193 FERC ¶ 61,217 at PP 208, 216.

[644] *See infra* Part VI.A.3.

[645] *See infra* Part V.D.5.a.

[646] *See, e.g.*, *ISO New Eng. Inc.*, 132 FERC ¶ 61,098 at P 12 ("The Commission has held that requests to alter a compliance filing in a manner that differs from the order

268. Finally, we note that DCC's concerns regarding the terms and conditions of Interim NITS are misplaced arguments about the illustrative tariff PJM submitted in the paper hearing and are discussed in Part VI.H.

C. Necessary Studies

1. December Order

269. The Commission directed PJM to revise the Tariff to clarify that an existing Interconnection Customer seeking to modify its ISA or GIA to allow its generator to serve Co-Located Load, including to reflect any reduction in its CIRs, must follow the Necessary Study process to effectuate such Co-Location Arrangement.[647] In addition, the Commission directed PJM to add to the Tariff a description of the scope of the analysis that it will perform as part of the Necessary Study process when an Interconnection Customer seeks to use its existing generator to serve Co-Located Load, consistent with PJM's discussion of how it conducts necessary studies associated with Interconnection Customers seeking to amend their ISAs or GIAs to use existing generators to serve Co-Located Load, including to reflect any reduction in CIRs. The Commission found that PJM must include a description of the information that the Interconnection Customer must provide about the Co-Located Load for the purposes of the Necessary Study, and that the Necessary Study process must assess any special protection scheme that is part of a Co-Location Arrangement.[648]

270. The Commission directed PJM to revise the Tariff to indicate that the Interconnection Customer will be responsible for the costs of any modifications or Network Upgrades that are needed as a result of PJM's study of the change to the ISA or GIA to allow the existing generator to serve Co-Located Load, including to reflect any reduction in CIRs, inclusive of all necessary Network Upgrades.[649] The Commission found that the Tariff should make clear that an existing generator may not commence service to a Co-Located Load until all required Network Upgrades, special protection schemes, and metering are in service.[650] Finally, the Commission clarified that an existing generator may not begin serving Co-Located Load that is not Network Load until

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requiring the compliance filing constitute a collateral attack on the order requiring the compliance filing.").

[647] December Order, 193 FERC ¶ 61,217 at P 226.

[648] *Id.* P 227.

[649] *Id.* P 228.

[650] *Id.*

it has delisted its CIRs for the portion of the generator to be designated to serve any Co-Located Load that is not receiving NITS.[651]

2. PJM Compliance Filing

271. PJM states that it proposes changes to Parts III and VIII of the Tariff to comply with the Commission's directives regarding the Necessary Study process for existing Interconnection Customers, including clarifying that customers must enter into a Necessary Study Agreement with PJM.[652] PJM also proposes to require customers to provide PJM with all information needed to perform the Necessary Studies, which PJM proposes to detail in the PJM manuals.[653] PJM states that a Project Developer may not make changes to its facilities until it has completed the Necessary Study process and the amended GIA is effective. PJM proposes that the Tariff state that Necessary Studies to be performed include thermal, short circuit, and stability studies under various seasonal and load conditions, as detailed in the PJM manuals, and assess any necessary control technologies and protection systems required. Lastly, PJM states that the Tariff will require the Project Developer to be responsible for the cost of any modifications or Network Upgrades necessary as a result of an Interconnection Customer's decision to serve the Co-Located Load.[654]

272. PJM clarifies that these changes apply to all existing interconnection customers, regardless of whether they have effective interconnection agreements issued pursuant to Parts IV, VI, VII, or VIII of the Tariff.[655] PJM states that, should an interconnection customer not have a three-party interconnection agreement involving PJM, the customer would need to first convert to a three-party agreement before following the Necessary Study process.

3. Pleadings

273. A number of parties have concerns with PJM's compliance filing. Several parties protest PJM's compliance filing and urge the Commission to require PJM to establish

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[651] *Id.* P 230.

[652] Compliance Transmittal at 24-25.

[653] *Id.* at 25 (citing December Order, 193 FERC ¶ 61,217 at P 227).

[654] *Id.* at 25-28.

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

deadlines to complete the Necessary Study process.[656] Constellation urges the Commission to direct PJM to detail the specific provisions in the PJM manuals to which the proposed Tariff language refers because it does not specify whether PJM is proposing to use the existing Necessary Study process or a new process, and the existing requirements set forth in PJM Manual 14C do not specifically reference the studies to be performed. Crusoe and Constellation urge the Commission to direct PJM to revise the proposed Tariff's scope of the analysis to explicitly relate to reliability impacts only, rather than impacts generally.[657] Crusoe contends that PJM should create a clear, published standard for what triggers the Necessary Study process.

274. Energy Artisans argue that PJM's proposed Necessary Study requirements will force industrial users to fund thermal, short circuit, and stability studies and bear the costs of Network Upgrades, control technologies and protection systems, and redundant metering equipment identified during these studies. Energy Artisans allege that these requirements will force many industrial facilities to cease operations, which will lead to higher Network Loads and exacerbate resource adequacy issues in PJM.[658]

275. Vistra and Constellation request that PJM clarify how the proposed Tariff revisions describing the Necessary Study process would apply to interconnection customers who have already submitted requests and are undergoing studies. Constellation and Vistra assert that Co-Location Arrangements will face significant delays if they must reenter the Necessary Study process.[659] Vistra maintains that PJM's failure to include a transition mechanism is an unjustified departure from the Commission's approach to interconnection reform, in which the Commission has regularly required transition mechanisms to avoid disruption and stranded investments.[660] Constellation proposes to clarify that Project Developers with existing requests for Necessary Studies for Co-Location Arrangements will be allowed to rely on the results of those studies to the extent relevant in light of the transmission service the Eligible

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[656] Constellation Protest and Comments on Compliance Filing at 12, 17; DCC Comments on Compliance Filing at 7; Crusoe Comments on Compliance Filing at 9.

[657] Constellation Protest and Comments on Compliance Filing at 12-14; Crusoe Comments on Compliance Filing at 9.

[658] Energy Artisans Protest of Compliance Filing at 1-2.

[659] Constellation Protest and Comments on Compliance Filing at 15; Vistra Protest of Compliance Filing at 4, 6-8.

[660] Vistra Protest of Compliance Filing at 4-5.

Customer plans to request on behalf of the Co-Located Load.[661] Constellation and Vistra argue that requiring interconnection customers to restart the process would be inconsistent with the filed-rate doctrine and rule against retroactive ratemaking and would effectively penalize parties for failing to comply with rules that did not exist at the time they acted.[662]

276. Vistra contends that PJM neither justifies its proposal to require interconnection customers with older interconnection agreements to enter into the new *pro forma* GIA nor shows how this proposal is consistent with the Commission's directives. Vistra suggests that this proposal is unrelated to the Commission's compliance directives and requests clarity about when the interconnection customer needs to enter into the new GIA in the Necessary Study process. Vistra also asserts that PJM's proposal could result in disputes about whether and how provisions in the updated *pro forma* GIA apply to older generators, disrupting long-standing Commission precedent. Separately, Vistra indicates that, because PJM locates Necessary Study revisions in Part VIII, which applies to New Service Requests on or after October 1, 2021, it is unclear whether interconnection customers that entered the interconnection process before that date may use the Necessary Study process.[663]

277. Joint Parties argue that PJM should be required to clarify that an existing interconnection customer can nominate a joint withdrawal limit in the Necessary Study process.[664] Joint Parties argue that this clarification is necessary to realize the December Order's stated intent of ensuring that Co-Located Loads do not pay for services that they do not use and do not trigger Network Upgrades that they do not need.[665] Joint Parties argue that PJM's proposed Tariff revisions appear to remain silent as to how it will treat energy withdrawals in studying Co-Located Load interconnection requests. Joint Parties state that they seek modest clarifications from PJM that, to the extent PJM performs interconnection study steps involving withdrawal assumptions for Co-Located Loads, an energy storage interconnection customer will be able to specify limits to the injection and

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[661] Constellation Protest and Comments on Compliance Filing at 14-15.

[662] *Id.* at 15; Vistra Protest of Compliance Filing at 4, 6.

[663] Vistra Protest of Compliance Filing at 14-16.

[664] Joint Parties Protest of Compliance Filing at 4-6. *See also* Earthjustice Reply Brief at 22.

[665] Joint Parties Protest of Compliance Filing at 4-5.

withdrawal rights reflecting the proposed integration of the storage and Co-Located Load facilities.[666]

278. Parties argue that PJM's proposal for delisting CIRs may be unjust, unreasonable, unduly discriminatory, or inconsistent with the Commission's directives in the December Order. Vistra claims that PJM's proposal would require existing generators to provide PJM with the amount of reduction to CIRs to facilitate the Co-Located Load configuration, which Vistra argues is vague and potentially overbroad because it could be read to require that generators include in their CIR reduction any portion of a facility that will ever provide power to a Co-Located Load. Vistra and DCC express concern that PJM's proposal could require generators to delist more CIRs than necessary.[667] Vistra further contends that allowing secondary units to provide occasional, interruptible service to Co-Located Load and to retain their CIRs would be consistent with the Tariff. Vistra and Constellation argue that capacity resources that serve Co-Located Load on an interruptible basis should not be required to delist CIRs.[668] Vistra presents an additional concern with PJM's proposal for reducing CIRs, namely, that PJM fails to explain how it will assess the impact of the reduction of CIRs.[669] Vistra alleges that because PJM's proposal is vague on this point, PJM could, for example, improperly incorporate resource adequacy considerations into its Necessary Study process.

4. <u>Determination</u>

279. We find that PJM's proposed revisions to its Necessary Study process partially comply with the directives set forth in the December Order and therefore accept the Tariff revisions in part, reject them in part, and direct a further compliance filing as discussed below.

280. We accept PJM's proposed revisions to Part VIII, Subpart A, section 401 and Part IX, Subpart G of the Tariff to comply with the directives in the December Order by: (1) adding a description of the scope of the analysis that it will perform as part of the Necessary Study process when an Interconnection Customer seeks to use its existing generator to serve Co-Located Load; (2) requiring the Interconnection Customer to be responsible for the costs of any modifications or Network Upgrades that are needed as a

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[666] *Id.* at 5.

[667] Vistra Protest of Compliance Filing at 8-10; DCC Comments on Compliance Filing at 7.

[668] Vistra Protest of Compliance Filing at 11; Constellation Protest and Comments on Compliance Filing at 19.

[669] Vistra Protest of Compliance Filing at 12.

result of PJM's study of the change to the ISA or GIA to allow the existing generator to serve Co-Located Load, including to reflect any reduction in CIRs, inclusive of all necessary Network Upgrades; and (3) clarifying that an existing generator may not commence service to a Co-Located Load until all required Network Upgrades, special protection schemes, and metering are in service.[670] We also accept PJM's proposed revisions to Part IX, Subpart A, Form of Application and Studies Agreement to facilitate PJM's collection of the information necessary to perform requested Necessary Studies.[671] However, with respect to Constellation's argument that PJM's proposed Tariff revisions may lack clarity, we direct PJM to specify in its compliance filing what types of additional detail about the studies will be available in the PJM manuals.

281. We also note in response to Constellation that, per the December Order, PJM's proposal seeks to clarify the existing Necessary Study process, not create a new one.[672] While parties request that the Commission establish deadlines for the Necessary Study process, we note the December Order did not include any such requirement, and our review of these proposed Tariff revisions is limited to whether PJM complies with the directives in the December Order.[673] In response to parties' requests regarding the trigger and scope of the Necessary Study process, we note that the Commission in the December Order directed PJM to clarify its study procedures for an Interconnection Customer that will use its generator to serve Co-Located Load but did not otherwise direct changes to the trigger or scope of the Necessary Study process. Per the Tariff, the scope of the Necessary Study is to determine whether planned modifications to an Interconnection Customer's facilities "will have a permanent material impact on the Transmission System and to identify the additions, modifications, or replacements to the Transmission System,

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[670] December Order, 193 FERC ¶ 61,217 at PP 227-228. We also accept the conforming edit to the definition of Necessary Study in Proposed Tariff, § VII.A 300, Definitions N (3.0.0) and § VIII.A 400, Definitions N (4.0.0).

[671] Compliance Transmittal at 27; PJM, Proposed Tariff, pt. IX, subpt. A, (Form of Application and Studies Agreement) (4.0.0).

[672] *See* Compliance Transmittal at 25 ("The thrust of PJM's proposed revisions require any Existing Interconnection Customer that seeks to serve Co-Located Load to follow a clarified necessary study process detailed in Part VIII of the Tariff and the related Form of Necessary Study Agreement set forth in Tariff, Part IX, Subpart G.").

[673] *See, e.g.*, *PJM Interconnection LLC*, 119 FERC ¶ 61,179, at P 12 (2007) ("The purpose of a compliance filing is to make the directed changes and the Commission's focus in reviewing them is whether they comply with the Commission's previously stated directives.") (citing *AES Huntington Beach, LLC*, 111 FERC ¶ 61,079, at P 60 & n.25 (2005)).

if any, that are necessary, in accordance with Good Utility Practice, and/or to maintain compliance with Applicable Laws and Regulations or Applicable Standards, to accommodate the planned modifications."[674] Regarding Joint Parties' requests regarding study processes for Co-Located Loads paired with electric storage resources, we note that the December Order did not address or otherwise direct changes as to any generator interconnection study procedures for such resources.

282. We reject in part PJM's proposed revisions to Part III of its Tariff regarding the requirement for Interconnection Customers with effective ISAs pursuant to Part VI of the Tariff or effective GIAs pursuant to Part VII of the Tariff to enter into a new GIA pursuant to Part VIII of the Tariff and the *pro forma* GIA in Part IX, Subpart B. We agree with Vistra that such a requirement is inconsistent with the Commission's recognition in the December Order that existing Interconnection Customers that seek to modify their ISAs or GIAs must follow the Necessary Study process to effectuate a Co-Location Arrangement.[675] Interconnection Customers with effective ISAs or GIAs must be able to modify those agreements and undergo the Necessary Study process without entering into new GIAs.

283. We also agree with protesters that PJM's proposed revisions lack clarity with respect to how they apply to Interconnection Customers that have already executed Necessary Study Agreements and for which PJM has already completed Necessary Studies.[676] The Commission found in the December Order that the Necessary Study process lacked sufficient clarity and directed PJM to add the scope of the analysis it performs as part of the Necessary Study process to its Tariff.[677] However, the Commission did not direct changes to the scope of the study, and PJM does not otherwise demonstrate why Interconnection Customers seeking to serve Co-Located Load cannot

[674] PJM, Intra-PJM Tariffs, pt. VIII.A, § 400 (Definitions N) (2.0.0) (definition of Necessary Study).

[675] December Order, 193 FERC ¶ 61,217 at P 226 ("[W]e direct PJM to submit, within 60 days of the date of issuance of this order, a compliance filing to revise the Tariff to clarify that an existing Interconnection Customer *seeking to modify its ISA or GIA* to allow its generating facility to serve Co-Located Load, including to reflect any reduction in its CIRs, must follow the necessary study process to effectuate such Co-Location Arrangement.") (emphasis added).

[676] Constellation Protest and Comments on Compliance Filing at 15; Vistra Protest of Compliance Filing at 4, 6.

[677] December Order, 193 FERC ¶ 61,217 at P 227.

rely on the results of Necessary Studies that have already been performed if the scope of the study has not changed.

284. For these reasons, we direct PJM to submit a compliance filing within 60 days of the date of issuance of this order to remove the requirement for Interconnection Customers with existing ISAs pursuant to Part VI of the Tariff and GIAs pursuant to Part VII of the Tariff to enter into a new *pro forma* GIA. We recognize that removing the requirement for Interconnection Customers with existing ISAs pursuant to Part VI of the Tariff and GIAs pursuant to Part VII of the Tariff to enter into a new *pro forma* GIA will necessitate duplicating the appropriate Necessary Study Tariff provisions (Part VIII, Subpart A, section 401.H.3) in those Tariff sections, and therefore we direct PJM to include these Tariff revisions in its compliance filing. We find that this directive will ensure that Interconnection Customers with effective ISAs or GIAs will not be required to enter into new GIAs if they seek to modify their ISA or GIA to allow their generator to serve Co-Located Load.

285. We also direct PJM to explain in its compliance filing how its changes ensure the prohibition on Interconnection Customers serving Co-Located Loads from existing generators until all required Network Upgrades, necessary control technologies and/or protection systems, and metering identified as necessary are complete and in service, applies to Interconnection Customers with currently effective GIAs, ISAs, and Necessary Study Agreements, in addition to Interconnection Customers seeking new Necessary Study Agreements and GIAs.

286. In response to Constellation's request that the Commission clarify that Interconnection Customers with existing requests for Necessary Studies for Co-Location Arrangements may rely on the results of those studies to the extent relevant in light of the transmission service the associated Eligible Customer plans to request on behalf of the Co-Located Load, we clarify that the studies applicable to a transmission service request for one of the new transmission services are distinct from the Necessary Study process, which studies the modification of a generator interconnection. If an Eligible Customer seeks to take one of the new transmission services on behalf of Co-Located Load, it must request transmission service and follow the appropriate transmission service study procedures as directed in this order.

287. With respect to Energy Artisans' argument that requiring industrial users to bear the costs of modifications or Network Upgrades will force industrial facilities to cease operations and exacerbate resource adequacy issues in PJM, we dismiss this argument as an untimely request for rehearing of the December Order's finding that PJM's existing retail BTMG netting rules were no longer just and reasonable.[678] We reiterate that the

[678] *Id.* P 221; *see supra* P 232 & n.585.

requirement to be responsible for costs of modifications or Network Upgrades applies only to *Interconnection Customers* that seek to modify their ISA or GIA to allow their generator to serve Co-Located Load, and this is a clarification of existing Tariff provisions in the *pro forma* ISA and GIA, as explained above.[679] Interconnection Customers may choose to maintain their current ISAs or GIAs with no modifications, and Interconnection Customers who do not wish to bear these costs may choose not to pursue Co-Location Arrangements.

288. Consistent with our above discussion, we disagree with Vistra and Constellation that capacity resources should not have to reduce their CIRs to serve Co-Located Load.[680] We also reject without prejudice PJM's proposed Tariff, Part IX, Subpart G, Form of Necessary Studies Agreement, because PJM has proposed changes to the Cost Responsibility section without explanation.[681]

D. Other

1. December Order

a. Definition of Co-Located Load

289. In the December Order, the Commission directed PJM to adopt the definition of Co-Located Load specified in the order: "a configuration that refers to end-use customer load that is physically connected to the facilities of an existing or planned Customer Facility on the Interconnection Customer's side of the Point of Interconnection to the PJM Transmission System."[682]

b. Generation Interconnection Procedures, *pro forma* GIA, and Common Service Provisions

290. The Commission also directed PJM to revise its Tariff, VIII, Subpart B, section 403 - Application Rules to add to the list of requirements for a New Service

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[679] Tariff, Intra-PJM Tariffs, OATT, Attachment O, Appendix 2, § 3.4(b) Modification Costs (0.0.0); *id.*, Part IX.B, Appendix 2, § 3.4(b) Modification Costs (2.0.0).

[680] *See supra* Part IV.C.2.a.iii.

[681] PJM, Proposed Tariff, pt. IX, subpt. G (Form of Necessary Studies Agreement) (3.0.0), § 15 (Cost Responsibility). Specifically, PJM proposes to raise the initial deposit for the Necessary Studies from $25,000 to $50,000.

[682] December Order, 193 FERC ¶ 61,217 at P 164.

Request that an Interconnection Customer who will use its generator to serve Co-Located Load must specify an Eligible Customer who will take transmission service on behalf of the Co-Located Load.[683] The Commission further directed PJM to submit revisions to the generation interconnection procedures to specify any operational procedures or data exchange requirements that PJM deems necessary for Co-Location Arrangements to remedy the Tariff deficiencies, such as unique operational procedures and data exchange requirements.[684] The Commission noted that these revisions would establish a requirement in the Tariff for the Eligible Customer to be charged for transmission and ancillary services that the Eligible Customer must take on behalf of the Co-Located Load. The Commission clarified that, should an Interconnection Customer wish to serve Co-Located Load using its generator but not identify an Eligible Customer, then the Interconnection Customer may take steps to terminate its generator's interconnection to the PJM transmission system and serve the Co-Located Load fully islanded from PJM's transmission system.[685]

291. The Commission also directed revisions to the Tariff, Part IX, Subpart B GIA to specify that an Interconnection Customer that will use its generator to serve Co-Located Load must specify an Eligible Customer that will take transmission service on behalf of the Co-Located Load.[686] The Commission directed PJM to add a new provision to Part I, Common Service Provisions, of the Tariff that requires Interconnection Customers with ISAs or GIAs executed, or requested to be filed unexecuted, prior to the effective date of the revised generation interconnection procedures and *pro forma* GIA directed in this order that wish to add Co-Located Load or are currently serving Co-Located Load to publicly notify PJM of that addition and identify the Eligible Customer that will take transmission service on behalf of that Co-Located Load.

2. <u>PJM Compliance Filing</u>

a. <u>Definition of Co-Located Load</u>

292. On April 16, 2026, the Commission issued an order rejecting the portion of PJM's first compliance filing proposing to define Co-Located Load in a manner that deviated

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[683] *Id.* P 188.

[684] *Id.* P 188 & n.405.

[685] *Id.* P 189.

[686] *Id.* P 190.

from the December Order, without sufficient explanation, by replacing the term "Point of Interconnection" with "Point of Change in Ownership."[687]

293. In the instant filing, PJM states that it proposes modifying the definition of Co-Located Load directed by the Commission in the same manner as proposed in PJM's first compliance filing.[688] PJM states that changing "Point of Interconnection" to "Point of Change in Ownership" is consistent with or superior to the December Order's directive because it provides additional clarity to interconnection parties, is easier to administer, and reduces litigation potential.[689] PJM further explains "[w]hile Point of Change in Ownership describes where a developer's portion of the Interconnection Facilities connect to the Transmission Owner's portion of the Interconnection Facilities, Point of Interconnection is a technical and physical term about 'where' those Interconnection Facilities connect to the PJM Transmission System."[690] PJM states that the Commission has broad authority to establish the replacement rate under FPA section 206 and that "one stakeholder's conditional protest in Docket No. ER26-1088 offers another alternative for the Commission to consider in reliance on this Commission authority."[691] PJM explains that "Point of Change in Ownership" will reduce litigation because parties "know what interconnection facilities they own and can plan the connection of Co-Located Load to such facilities accordingly" but that the protest in Docket No. ER26-1088 "does not appear inconsistent with recognizing the principle that Co-Located Loads should only interconnect to a Project Developer's portion of the Interconnection Facilities."[692] PJM notes that under the GIP, the Project Developer's Interconnection Facilities are the Interconnection Facilities between a Generating Facility and the Point of Change in Ownership, and include the facilities and equipment and any modification to those facilities and equipment that are necessary to physically and electrically interconnect the Generating Facility.[693]

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[687] *PJM Interconnection, L.L.C.*, 195 FERC ¶ 61,030 (2026).

[688] Compliance Transmittal at 31 (citing PJM, Transmittal, Docket No. ER26-1088-000, at 3 n.14 (filed Jan. 20, 2026)).

[689] *Id.* at 31-32.

[690] *Id.* at 32.

[691] *Id.* at 33.

[692] *Id.* at 33-34.

[693] *Id.* at 34-35.

b. Generation Interconnection Procedures, *pro forma* GIA, and Common Service Provisions

294. PJM states that it proposes the prescriptive clarifications directed in the December Order. PJM explains that the proposed Tariff revisions comply by: (1) adding to the list of requirements for a New Service Request that an Interconnection Customer who will use its generating facility to serve Co-Located Load must specify an Eligible Customer who will take transmission service on behalf of the Co-Located Load,[694] (2) explaining that if an Interconnection Customer wants to serve Co-Located Load but not identify an Eligible Customer, then it may take steps to terminate its generating facility's interconnection and serve the Co-Located Load fully islanded from PJM's transmission system,[695] (3) explaining that these requirements apply to all Interconnection Customers requesting to interconnect generating facilities to serve Co-Located Load,[696] (4) creating a new schedule in the *pro forma* GIA in the form of a placeholder to specify operational procedures or data exchange requirements as may be required,[697] and (5) revising the *pro forma* GIA to reflect the requirement to specify an Eligible Customer that will take transmission service on behalf of the Co-Located Load.[698]

295. In addition, PJM states that it complies with the requirement to add a transition mechanism for existing customers that wish to add Co-Located Load by including the transition mechanism in (1) the definition of Co-Located Generating Facility in Part I of the Tariff, (2) Part III (NITS), and (3) the definition of Co-Located Generating Facility[699]

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[694] *Id.* at 28 (citing PJM, Proposed Tariff, pt. VIII, subpt. B, § 403 (4.0.0), § 403(1)(r)).

[695] *Id.* at 29 (citing PJM, Proposed Tariff, pt. VIII, subpt. B, § 403 (4.0.0), § 403 (1)(r); Proposed Tariff, Part III (NITS) (4.0.0)).

[696] *Id.* (citing PJM, Proposed Tariff, pt. VIII, subpt. B, § 403 (4.0.0), § 403(1)(r); Proposed Tariff, Part III (NITS) (4.0.0)).

[697] *Id.* (citing PJM, Proposed Tariff, pt. IX.B (GIA), (0.0.0), Schedule O).

[698] *Id.* (citing PJM, Proposed Tariff, pt. IX.B (GIA), (0.0.0), Schedule O).

[699] PJM proposes the following definition of a Co-Located Generating Facility: "an existing or planned Generating Facility that is physically connected to a Co-Located Load. Any Generation Project Developer with an effective Service Agreement that plans to use a Generating Facility to serve Co-Located Load must provide PJM and the Transmission Owner with advance written notice to begin the Necessary Studies process provided in Tariff, § VIII.A 401(H)(3)(b). If such a Generation Project Developer has an effective Interconnection Service Agreement pursuant to Tariff, Part VI or a Generation Interconnection Agreement pursuant to Tariff, Part VII, such agreement must be

in Part VIII, Subpart A, section 400 of the Tariff. PJM asserts that these proposed revisions to the Tariff are "superior to or consistent with the Commission's directive because it promotes tariff readability and usability."[700]

c. Definition of Non-Retail BTMG

296. PJM states that it is also seeking to avoid any inadvertent changes to the substantive rules pertaining to Non-Retail BTMG.[701] For this reason, PJM proposes to add clarifying language in Tariff, Part III, section 34.3 providing that "The daily load of a Network Customer does not include load served by operating Non-Retail Behind The Meter Generation."[702] PJM states that this insertion preserves the status quo on this issue for Non-Retail BTMG.

3. Pleadings

a. Definition of Co-Located Load

297. Constellation urges the Commission to reject PJM's proposal to replace the term "Point of Interconnection" in the definition of Co-Located Load with the "Point of Change in Ownership."[703] Constellation argues that changing the specific definition of Co-Located Load already approved by the Commission in the December Order is outside the scope of compliance. Constellation asserts that Point of Change in Ownership is not a defined physical point and may lead to delays or discrimination against certain Co-Location Arrangements. Constellation states that, alternatively, if the Commission accepts PJM's proposed definition of Co-Located Load, it should (1) direct PJM to revise its Tariff to provide that PJM will determine the Point of Change in Ownership if parties cannot agree; (2) establish deadlines for parties to mutually agree to, or for PJM to determine, the location for Point of Change in Ownership; (3) ensure that the location selected for the Point of Change in Ownership does not eliminate the load from being Co-Located Load unless the Project Developer and Co-Located Load desire it; and

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superseded by a Generation Interconnection Agreement pursuant to Tariff, Part VIII and the pro forma GIA in Part IX, Subpart B." PJM, Proposed Tariff, § VII.A 300 (Definitions C) (4.0.0); § VIII.A 400, Definitions C (4.0.0).

[700] Compliance Transmittal at 29-30.

[701] *Id.* at 16.

[702] *Id.*

[703] Constellation Protest and Comments on Compliance Filing at 2.

(4) not tolerate any discrimination or delay and use its enforcement authority or other mechanisms to ensure non-discriminatory open access.[704]

298. Constellation asserts that recent experience has borne out the concern raised in its initial protest that PJM's deviation from the Commission's definition of Co-Located Load will allow transmission owners to effectively block Co-Location Arrangements.[705] Constellation states that a transmission owner recently notified Constellation that it would not study Constellation's proposed design for a Co-Location Arrangement unless Constellation agreed to transfer ownership of certain facilities to the transmission owner, which would mean that the load would no longer be on the generator's side of the Point of Change in Ownership.[706] Constellation argues that, by conditioning the load's interconnection on the transmission owner's ownership of those facilities, the transmission owner would prohibit Constellation's ability to host Co-Located Load at the site and limit the ability of the Co-Located Load to access the transmission services adopted in the December Order.

299. Vistra requests that the Commission reject PJM's use of "Point of Change in Ownership" in its proposed definition of Co-Located Load.[707] Vistra argues that PJM's proposed revision to the definition of Co-Located Load creates uncertainty and an opportunity for transmission owners to unduly discriminate against certain customers. Vistra requests that, if the Commission accepts PJM's proposed definition, then the Commission should direct further compliance to prevent undue discrimination.[708]

300. Energy Artisans oppose PJM's definition of Co-Located Load and its use of Point of Change in Ownership rather than Point of Interconnection as arbitrary and a pretext for cost shifting.[709] Energy Artisans allege that the definition "is strategically designed to shrink the legal definition of the facility boundary, thereby capturing more load for grid-service billing and excluding it from the BTMG actual use category."[710]

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[704] *Id.* at 3-5, 7-8.

[705] Constellation Supplemental Protest of Compliance Filing at 2.

[706] *Id.* at 3.

[707] Vistra Protest of Compliance Filing at 17.

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

[709] Energy Artisans Protest of Compliance Filing at 2.

[710] *Id.*

b. Generation Interconnection Procedures, *pro forma* GIA, and Common Service Provisions

301. Invenergy argues that PJM proposes to continue operating a bifurcated study process in which there is no requirement for generator interconnection and transmission service request studies to be conducted in concert, on similar time frames, or using similar study assumptions. As a result, Invenergy contends that distinct studies may identify duplicative or unnecessary Network Upgrades. Invenergy requests that the Commission and PJM clarify how the definition of Eligible Customer applies to co-located generators and co-located loads.[711]

302. Constellation urges the Commission to direct PJM to revise its proposed definition of Co-Located Generating Facility to clarify that the definition only applies to the portion of the facility serving and physically connected to the Co-Located Load.[712]

c. Definition of Non-Retail BTMG

303. AMP argues that PJM's proposed revision to the definition of Non-Retail BTMG could be construed as preventing generating units that are merely eligible for application of the Non-Retail BTMG rules from participating in Co-Located Load configurations. Specifically, AMP asserts that the use of the word "qualifies" in the proposed definition of Non-Retail BTMG may exclude generation from participating in Co-Located Load configurations even if the generator is not engaged in netting. AMP argues that this apparently unintentional exclusion would restrict Co-Located Load from accessing service from a broad set of PJM generators. AMP avers that revising the Non-Retail BTMG definition is unnecessary and outside the scope of the Commission's compliance directives. AMP urges the Commission to reject the proposed definition of Non-Retail BTMG or, alternatively, revise the definition to specify that the exclusion applies to generators both qualifying as Non-Retail BTMG and being used for netting under the Tariff.[713]

d. Timing with Planned Reliability Backstop Auction

304. The Maryland OPC urges the Commission to defer action on PJM's proposed revisions until PJM announces details regarding its planned reliability backstop auction, including specifics on how the reliability backstop auction will interact with Co-Location Arrangements to ensure that new Co-Located Loads pay the costs of any new capacity.

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[711] Invenergy Comments on Compliance Filing at 3, 6.

[712] Constellation Protest and Comments on Compliance Filing at 17.

[713] AMP Limited Protest of Compliance Filing at 3, 5-8.

The Maryland OPC argues that the proposed Tariff revisions fail to explain how increased capacity costs of allowing existing generators to serve Co-Located Load, as opposed to new generators, will be paid by Co-Located Load and not by existing ratepayers.[714]

4. Answers

305. In response to Invenergy, Indicated TOs argue that the Commission should not mandate a combined interconnection and transmission study process for Co-Located Loads and Co-Located Generators. Indicated TOs contend this goes beyond the issues the Commission set for hearing, as well as the compliance directed, in the December Order. Indicated TOs argue that PJM's proposed coordinated study approach is just and reasonable.[715]

306. Exelon argues that Constellation's motion for supplemental protest should be denied because it suggests that Constellation's experience with one transmission owner implies a universal policy. Exelon states that it is not attempting to prevent large loads, co-located or otherwise, and their load serving entities from receiving transmission service in Exelon's territories. Exelon also argues that whether a transmission owner owns certain equipment does not necessarily inform where the Project Developer's interconnection facilities connect to the transmission owner's interconnection facilities.[716]

5. Determination

a. Definition of Co-Located Load

307. As in the Commission's order addressing PJM's first compliance filing with the December Order, we reject PJM's proposed change to the definition of Co-Located Load.[717] We note that no party, including PJM, sought rehearing or clarification of this directive, let alone the definition, in response to the December Order. Even here, PJM does not allege that the definition of Co-Located Load set out in the December Order is unjust and unreasonable. Rather, PJM proposes to deviate from this definition by replacing the term "Point of Interconnection" with "Point of Change in Ownership"

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[714] Maryland OPC Protest of Compliance Filing at 10-11.

[715] Indicated TOs April 24 Answer at 4-5.

[716] Exelon Answer at 1, 5-6.

[717] *PJM Interconnection, L.L.C.*, 195 FERC ¶ 61,030; PJM, Proposed Tariff, § I.1 Definitions C-D (Co-Located Load) (46.0.0); § VII.A 300, Definitions C (Co-Located Load) (4.0.0); § VIII.A 400, Definitions C (Co-Located Load) (4.0.0).

without sufficient explanation as to how this proposed deviation complies with the Commission's directive in the December Order.[718]

308. Accordingly, we direct PJM to file, within 60 days of the date of issuance of this order, a compliance filing that revises the Tariff's definition of Co-Located Load to use "Point of Interconnection" instead of "Point of Change in Ownership," consistent with the Commission's directive in the December Order.

b. Generation Interconnection Procedures, *pro forma* GIA, and Common Service Provisions

309. We accept the following of PJM's proposed revisions to establish rules for Interconnection Customers serving Co-Located Load as complying with the December Order: (1) adding to the list of requirements for a New Service Request that an Interconnection Customer who will use its generator to serve Co-Located Load must specify an Eligible Customer who will take transmission service on behalf of the Co-Located Load;[719] (2) establishing a new schedule in the *pro forma* GIA that serves as a placeholder for specifying any operational procedures or data exchange requirements that PJM deems necessary for Co-Location Arrangements;[720] (3) applying these requirements to all Interconnection Customers requesting to interconnect their generators to the transmission system and seeking to use those facilities to serve Co-Located Load;[721] (4) clarifying that to the extent that an Interconnection Customer wishes to serve Co-Located Load using its generator but not identify an Eligible Customer, then the Interconnection Customer may take steps to terminate its generator's interconnection to the PJM transmission system and serve the Co-Located Load fully islanded from PJM's

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[718] *See, e.g.*, *PJM Interconnection LLC*, 119 FERC ¶ 61,179 at P 12 ("The purpose of a compliance filing is to make the directed changes and the Commission's focus in reviewing them is whether they comply with the Commission's previously stated directives.") (citing *AES Huntington Beach, LLC*, 111 FERC ¶ 61,079 at P 60 & n.25).

[719] *See* December Order, 193 FERC ¶ 61,217 at P 188; PJM, Proposed Tariff, pt. VIII, subpt. B, 403 (4.0.0), § 403(1)(r).

[720] *See* December Order, 193 FERC ¶ 61,217 at P 188; PJM, Proposed Tariff, Part IX.B, Schedule O (0.0.0). PJM explains that it proposes to add a new schedule in the *pro forma* GIA in the form of a placeholder for such information as the case may require. Compliance Transmittal at 29. We also accept conforming changes to Tariff, Part IX.B, GIA Appendices and Schedules.

[721] *See* December Order, 193 FERC ¶ 61,217 at P 189; PJM, Proposed Tariff, pt. VIII, subpt.B, 403 (4.0.0), § 403(1)(r).

transmission system;[722] and (5) revising the *pro forma* GIA to specify that an Interconnection Customer that will use its generator to serve Co-Located Load must specify an Eligible Customer that will take transmission service on behalf of the Co-Located Load.[723]

310. However, we reject PJM's proposed revisions to comply with the Commission's directive in the December Order to require Interconnection Customers with ISAs or GIAs executed (or requested to be filed unexecuted) prior to the effective date of the revised generation interconnection procedures and *pro forma* GIA directed in that order that wish to add Co-Located Load or are currently serving Co-Located Load to publicly notify PJM of that addition and identify the Eligible Customer that will take transmission service on behalf of that Co-Located Load.[724] Consistent with our discussion above in Part V.C.4, we agree with protesters that PJM's proposed revisions here go beyond the directives in the December Order by requiring Interconnection Customers with existing ISAs or GIAs that are currently serving Co-Located Load or wish to add Co-Located Load (and have executed Necessary Study Agreements) to initiate a new Necessary Study process and enter into a new GIA—which the December Order did not require.[725] Therefore, while we appreciate PJM's intent to promote Tariff readability and usability, we find that PJM's language in the definition of Co-Located Generating Facility does not comply with the December Order, consistent with our findings regarding the same language in Part III of the Tariff.[726] We further find that PJM has failed to include a general provision in the Tariff to comply with the Commission's directive in the December Order to require Interconnection Customers with ISAs or GIAs executed (or requested to be filed unexecuted) prior to the effective date of the revised generation interconnection procedures and *pro forma* GIA directed in that order that wish to add Co-Located Load or are currently serving Co-Located Load to publicly notify PJM of that addition and

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[722] *See* December Order, 193 FERC ¶ 61,217 at P 189; PJM, Proposed Tariff, pt. VIII, subpt. B, § 403 (4.0.0), § 403(1)(r).

[723] *See* December Order, 193 FERC ¶ 61,217 at P 190; PJM, Proposed Tariff, pt. IX (GIA), subpt. B, Schedule O (0.0.0).

[724] *See* December Order, 193 FERC ¶ 61,217 at P 191; PJM, Part III (NITS) (4.0.0); § VII.A 300, Definitions C (Co-Located Generating Facility) (4.0.0); § VIII.A 400, Definitions C (Co-Located Generating Facility) (4.0.0). We note that the definition of Co-Located Generating Facility in § I.1 Definitions C-D does not include the language that we are rejecting here.

[725] *See, e.g.*, Vistra Protest of Compliance Filing at 4, 14.

[726] *See supra* Part V.C.4.

identify the Eligible Customer that will take transmission service on behalf of that Co-Located Load, separate from the Necessary Study process.

311. Therefore, we direct PJM to submit a compliance filing within 60 days of the date of issuance of this order to: (1) revise the definition of Co-Located Generating Facility to remove the following requirement: "If such a Generation Project Developer has an effective Interconnection Service Agreement pursuant to Tariff, Part VI or a Generation Interconnection Agreement pursuant to Tariff, Part VII, such agreement must be superseded by a Generation Interconnection Agreement pursuant to Tariff, Part VIII and the pro forma GIA in Part IX, Subpart B," and (2) add to Part III a requirement that Interconnection Customers with ISAs or GIAs executed (or requested to be filed unexecuted) prior to the effective date of the revised generation interconnection procedures and *pro forma* GIA directed in December Order that wish to add Co-Located Load or are currently serving Co-Located Load publicly notify PJM of that addition and identify the Eligible Customer that will take transmission service on behalf of that Co-Located Load.

312. We disagree with Constellation that PJM's proposed definition of Co-Located Generating Facility should only apply to the portion of the facility that is serving Co-Located Load. Constellation claims that the definition does not recognize that the entire facility may not serve the Co-Located Load, but Constellation has not identified any substantive concern with that outcome. We find the proposed definition is broad enough to capture both scenarios. Further, PJM's proposed Tariff language recognizes this possibility elsewhere, such as, for example, Part IX, Subpart A Form of Application and Studies Agreement, section 2, which leaves a space for the Interconnection Customer to list both the Co-Located Load and any requested CIRs.

313. With respect to Invenergy's request that PJM perform generator interconnection and transmission service request studies in concert, we note that the December Order did not direct PJM to create such a new study process. Thus, we find that Invenergy's request is beyond the scope of this proceeding.

c. <u>Definition of Non-Retail BTMG</u>

314. We agree with AMP that PJM's proposed revisions to the definition of Non-Retail BTMG may inadvertently prevent generators that could merely qualify as Non-Retail BTMG from participating in Co-Location Arrangements, regardless of whether the generator is being used to net. As PJM recognizes, the December Order "did not direct any changes to Non-Retail BTMG rules."[727] PJM did not provide any justification for its proposed changes to the definition of Non-Retail BTMG, nor did the Commission direct

[727] Compliance Transmittal at 7.

any changes to PJM's rules for Non-Retail BTMG in the December Order.[728] Therefore, we reject PJM's proposed revisions to the definition of Non-Retail BTMG and direct PJM to file, within 60 days of the date of issuance of this order, a compliance filing to revise its Tariff to remove the proposed changes, consistent with the December Order's determination.[729]

d. Timing with Planned Reliability Backstop Auction

315. As discussed below, we decline Maryland OPC's request that the Commission defer action.[730] We find that Maryland OPC's concerns about PJM's capacity market are beyond the scope of this compliance proceeding, which pertains solely to PJM's compliance with the Commission's directives in the December Order.

E. Effective Date

1. PJM Compliance Filing

316. PJM requests a placeholder effective date of 12/31/9998 because PJM cannot implement the Tariff changes until the Commission sets the terms and conditions of the new transmission services in the paper hearing.[731] PJM states that it will submit a clean-up filing proposing an effective date after the Commission issues an order on the paper hearing.[732]

2. Effective Date Pleadings

317. Though Vistra says it will address PJM's proposed June 1, 2029 effective date in its paper hearing brief, Vistra argues in its protest of the compliance filing that PJM has not shown that its proposed effective date is just and reasonable.[733] Vistra alleges that the three-year forward capacity market schedule cannot justify a delay in the provision of non-capacity-backed transmission service. Vistra also contends that the forecasts for the

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[728] December Order, 193 FERC ¶ 61,217 at P 222 ("We clarify we do not direct PJM to change its rules for non-retail BTMG.").

[729] PJM, Proposed Tariff, § I.1 Definitions L-M-N (Non-Retail Behind The Meter Generation) (52.0.0).

[730] *See supra* Part VI.K.2.

[731] Compliance Transmittal at 35.

[732] *Id.* at 35-36.

[733] Vistra Protest of Compliance Filing at 7.

2027/2028 and 2028/2029 Base Residual Auctions (BRA) include the new large loads likely to come online in that timeframe, undermining PJM's position that the capacity market schedule should delay the provision of firm transmission service. Vistra also argues that PJM has not explained why it will take until 2029 to update its software to accommodate the new curtailment logic.

318. DCC argues that PJM's effective date should be earlier than June 1, 2029.[734] DCC argues that PJM should work with stakeholders to implement workable solutions in a timely manner that ensures the transmission services can meet the immediate need within the PJM region.

3. Determination

319. As discussed below in Part VI.J, we direct PJM to submit, within 60 days of the date of issuance of this order, a further compliance filing providing additional information on the effective date.

VI. Paper Hearing

320. The Commission directed PJM to modify its Tariff to require that the Eligible Customer taking transmission service on behalf of a Co-Located Load takes one of three transmission services: (1) NITS or Interim NITS, (2) FCD transmission service, or (3) NFCD transmission service.[735] With respect to the new transmission services that the Commission required, the Commission established paper hearing procedures to determine the appropriate rates, terms, and conditions of those transmission services.[736] PJM did not file tariff revisions in eTariff, but rather, chose to submit illustrative tariff revisions that mirror the arguments PJM filed in its initial brief as part of that brief. The illustrative tariff is not filed as a rate with the Commission, but we consider it as part of the record in response to the paper hearing as we establish the replacement rate set forth below. As discussed in detail below, as the replacement rate, we direct PJM to submit within 60 days of the date of issuance of this order, a compliance filing revising its Tariff to include rates, terms, and conditions for the new transmission services consistent with our findings in the below sections.

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[734] DCC Comments on Compliance Filing at 7.

[735] December Order, 193 FERC ¶ 61,217 at P 193.

[736] *Id.* PP 194, 203, 207, 219.

A. Rates, Terms, and Conditions for Firm and Non-Firm Contract Demand Transmission Service

1. December Order

321. With respect to FCD transmission service and NFCD transmission service, the Commission found in the December Order that these transmission services should be permanent transmission services available to Eligible Customers taking transmission service on behalf of Co-Located Load.[737] The Commission further stated that for the Eligible Customer taking transmission service on behalf of a Co-Located Load to be eligible for these new transmission services, the Co-Located Load must be able and willing to prevent or limit its energy withdrawals and must be separately metered from the associated generator.[738] The Commission also stated that Eligible Customers taking transmission service on behalf of Co-Located Loads may take a combination of FCD transmission service and NFCD transmission service, but that Eligible Customers taking transmission service on behalf of Co-Located Loads that will not withdraw energy from the transmission system must take NFCD transmission service at 0 MW.[739] The Commission also found that Eligible Customers taking either transmission service on behalf of Co-Located Loads would be charged for regulation and black start services based on gross demand, rather than the reserved amount of transmission service.[740]

322. The Commission found that FCD transmission service should have the same reservation and curtailment priority as existing firm transmission services at the level of the contract demand and be charged for transmission, ancillary services, and capacity based on the contract demand, with the exception of regulation and black start services.[741] With respect to NFCD transmission service, the Commission found that the service should be available during normal operations and curtailed during emergency operations, similar to existing non-firm transmission service options.[742]

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[737] *Id.* P 206.

[738] *Id.*

[739] *Id.*

[740] *Id.* PP 209, 216.

[741] *Id.* PP 208-209.

[742] *Id.* P 215.

2. Nature of FCD and NFCD Transmission Services

a. Initial Briefs

323. PJM proposes to define FCD transmission service as the transfer of capacity and energy for an Eligible Customer on behalf of a designated Co-Located Load, up to a defined, pre-determined MW level of transmission service as requested by the Eligible Customer and confirmed by PJM, using capacity and energy procured by PJM.[743] PJM proposes to define NFCD transmission service as a service offering the transmission of energy for an Eligible Customer on behalf of a designated Co-Located Load, on an as-available basis, up to a defined, pre-determined MW level of transmission service as requested by the Eligible Customer and confirmed by PJM, using energy procured by PJM.[744]

324. PJM states that it has conceptualized the FCD and NFCD transmission services based on two key principles: (1) the services are designed to serve loads willing and able to control their withdrawals from the transmission system, and (2) the services are designed to allow PJM to maintain system reliability.[745] PJM explains that, to maintain reliability, any portion of the gross demand of the Co-Located Load not served by the Co-Located Generator must be covered by FCD transmission service. PJM also states that, to ensure reliability, PJM's studies of the transmission service requests for the Co-Located Load must capture the effects of any unscheduled energy withdrawals and validate that such events would not jeopardize system reliability.[746] PJM then asserts that, if the Co-Located Load's gross demand is not covered by FCD transmission service, then the Eligible Customer must cover the remaining gross demand by applying for NFCD transmission service. PJM further states that an Eligible Customer taking service on behalf of a Co-Located Load must request NFCD transmission service equal to the MW level of the Co-Located Generating Facility dedicated to serving the Co-Located Load, so that the customer is eligible to obtain NFCD transmission service if the Co-Located Generating Facility is on outage.[747] PJM states that it anticipates that, in practice, requests for NFCD transmission service will be at the MW level that the Co-Located Generating Facility has dedicated to serving the Co-Located Load. PJM states that the Eligible Customer may then, on any given day, reserve NFCD transmission

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[743] PJM Initial Brief at 13.

[744] *Id.* at 30.

[745] *Id.* at 6.

[746] *Id.* at 6-7.

[747] *Id.* at 9, 16.

service up to the amount specified in the Service Agreement, but only when PJM has determined there is available transmission capacity. If there is not sufficient capacity to grant the request for NFCD transmission service, PJM explains the Eligible Customer may apply for FCD transmission service for the necessary amount, or NITS to serve the entire Co-Located Load.[748] PJM maintains that its approach provides flexibility, allowing Eligible Customers to mix and match FCD and NFCD transmission services, so long as the combination of the two services covers the entire gross demand of the Co-Located Load.[749]

325. PJM argues that, to prevent FCD and NFCD transmission services from adversely impacting system reliability, it is crucial for the Eligible Customer to show and prove its ability to limit withdrawals from the system. PJM maintains that, for FCD transmission service to properly function, it is essential that any NFCD transmission service for the same Co-Located Load has in place necessary control technologies and/or protective systems approved by PJM and that can effectively limit withdrawals from the transmission system that serve the Co-Located Load.[750] PJM proposes to require Eligible Customers taking NFCD transmission service to work with PJM and the affected Transmission Owners to establish necessary control technologies and protection systems for each Service Agreement to ensure reliability.[751]

326. PJM explains that FCD transmission service will have priority over NFCD transmission service and equal priority, at the level of the contract demand, with other firm transmission services, including NITS. PJM proposes that NFCD transmission service be curtailed before FCD transmission service and NITS, as discussed further below, and proposes to curtail NFCD transmission service prior to dispatching Pre-Emergency Load Response Program resources or in response to a transfer capability shortage.[752]

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[748] *Id.* at 32-33.

[749] *Id.* at 11.

[750] *Id.* at 15, 31.

[751] *Id.* at 34-35.

[752] *Id.* at 15, 34.

b. Response Briefs

327. Indicated TOs support PJM's proposal to require Eligible Customers taking service on behalf of Co-Located Load to take a combination of FCD and NFCD transmission services equivalent to the entire gross demand of the Co-Located Load.[753]

328. However, a number of parties protest PJM's proposed requirement that NFCD transmission service be available only when the Co-Located Generating Facility is on an outage.[754] Parties argue that the December Order does not impose such a limit on this transmission service and that PJM provides no justification for the change.[755] AEU/SEIA contend that the December Order required that NFCD transmission service be available "as needed during normal, non-emergency system operating conditions," and that, while it cited the use of NFCD transmission service during an outage as one potential use case, the December Order did not impose the limitation described in PJM's proposed Tariff revisions.[756] AEU/SEIA claim that the practical consequences of this limitation are significant, particularly for Co-Located Loads served by resources with variable or intermittent output profiles, which may require supplemental grid withdrawals during any period in which the Co-Located Generator's output is constrained, reduced, or otherwise insufficient to meet the full gross demand of the Co-Located Load. AEU/SEIA argue that this gap in the availability of NFCD transmission service will force many transmission customers to take NITS.

329. AEU/SEIA contend that PJM attempts to justify this restriction on operational and planning complexity grounds, but argues that the Commission considered these objections before the December Order and nonetheless required PJM to provide NFCD transmission service.[757] AEU/SEIA also contend that this restriction cannot be justified on resource adequacy or reliability grounds, because NFCD transmission service is

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[753] Indicated TOs Response Brief at 4; Industrials/Amtrak Response Brief at 24.

[754] Joint Co-Location Developers Response Brief at 6-13; AEU/SEIA Response Brief at 5; Vistra Response Brief at 25; DCC Response Brief at 4; Constellation Response Brief at 10.

[755] Vistra Response Brief at 26; AEU/SEIA Response Brief at 5-6; Joint Co-Location Developers Response Brief at 7; DCC Response Brief at 5; Constellation Response Brief at 10.

[756] AEU/SEIA Response Brief at 6-8 (citing December Order, 193 FERC ¶ 61,217 at PP 214-215); Joint Co-Location Developers Response Brief at 6-7.

[757] AEU/SEIA Response Brief at 8-10 (citing PJM March 24, 2025 Response at 13-15).

designed to be curtailed before firm transmission services and is available only when transmission capacity exists. AEU/SEIA therefore request that the Commission direct PJM to revise and file Tariff revisions that remove the outage-only limitation and allow for the use of NFCD transmission service on an as-available basis during normal, non-emergency system operating conditions and subject to available transmission capacity and appropriate curtailment priority.

330. Joint Co-Location Developers argue that PJM's proposal undermines economic efficiency, restricts competition, may threaten reliability for other customers, and is unclear as applied to partial outages.[758] Joint Co-Location Developers maintain that PJM's proposal is inconsistent with its other transmission service offerings, such as PTPS, which is not designed based on whether generation is on an outage. Joint Co-Location Developers add that PJM's Interim NITS proposal shows PJM's ability to offer non-firm service during normal conditions without the need to request a reservation.

331. DCC argues that PJM's proposal effectively confines NFCD transmission service to a narrow, outage-only function and prohibits its use to address foreseeable and manageable transmission constraints. DCC argues that PJM has not demonstrated why NFCD transmission service that is (a) requested in advance, (b) subject to PJM approval, (c) fully curtailable, and (d) supported by required protection and control mechanisms, may appropriately be used to address generator outages but may not be used to address temporary transmission constraints.[759]

332. Constellation also criticizes PJM's view that this proposal is needed to avoid overuse and responds that the Commission indicated that penalty charges should solve that concern.[760]

333. Constellation also protests PJM's proposal to require FCD transmission service for any portion of the Co-Located Load not served by the Co-Located Generating Facility. Constellation argues that the Commission established no such requirement, nor did the Commission require that Eligible Customers take FCD transmission service along with NFCD transmission service.[761]

[758] Joint Co-Location Developers Response Brief at 8-11.

[759] DCC Response Brief at 5.

[760] Constellation Response Brief at 11-12.

[761] *Id.* at 10, 12.

334. DCC argues that PJM's proposal does not provide a workable pathway for phased development or load ramping.[762] DCC argues that PJM's proposal requires that gross load and generation configurations be specified upfront and treats material changes in those configurations as requiring new applications and studies while prohibiting the mixing of NITS and Contract Demand transmission services for the same load. DCC argues that, while PJM has acknowledged limited flexibility in certain circumstances, it does not provide a clear or workable pathway for customers to (a) ramp load over time, (b) transition between service constructs, or (c) seek to align transmission service with phased project development. DCC argues that the absence of a defined ramping framework introduces uncertainty, increases the risk of delay, and may require repeated study cycles that are not aligned with project timelines. DCC argues that the Commission should require PJM to establish clear rules and processes that enable incremental load additions without triggering unnecessary re-study or requiring customers to fundamentally restructure their service arrangements.[763]

335. Market Monitor argues that the assumption underlying NFCD transmission service, that load pays for transmission only when it needs transmission, is untenable.[764] Market Monitor states that although NFCD transmission service can only be a standby service, the equivalent availability factor of generators in PJM demonstrates that NFCD transmission service would have to be used regularly. Market Monitor argues that if all or a significant part of data center users wanted to use NFCD transmission service, the system would become unmanageable and the service would not be available consistently, making it meaningless. Market Monitor asserts that there can be no such service as NFCD transmission service that is fully consistent with maintaining a reliable PJM transmission system, and all transmission customers should pay for full NITS service.

c. <u>Reply Briefs</u>

336. PJM argues that its proposal to limit NFCD transmission service to circumstances where the Co-Located Generator is on outage is just and reasonable, consistent with the December Order, and otherwise appropriate. PJM argues that, if customers could take unlimited NFCD transmission service, that would be tantamount to offering Interim NITS permanently.[765] PJM next argues that the Commission stated in the December Order that NFCD transmission service would be available "as needed" for customers able to limit withdrawals, which suggests the Commission did not intend for this service to be used on

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[762] DCC Response Brief at 6.

[763] *Id.* at 6-7.

[764] Market Monitor Response Brief at 5-6.

[765] PJM Reply Brief at 6-7.

an everyday basis.[766] Moreover, PJM argues, its proposal is appropriate given the inherent risks to the transmission system and operational complexities associated with providing this service continuously, given the limited time period the non-firm service will be required. PJM asserts that the transmission system is not planned and designed to accommodate these non-firm services under North American Electric Reliability Corporation (NERC) reliability standards.

337. PJM maintains that several aspects of NFCD transmission service are challenging from a reliability perspective, given the range of requirements of NERC reliability standards. PJM alleges that the nature of NFCD transmission service dictates that PJM will not include this service in PJM's long-term transmission planning and the system will not be evaluated for potential Corrective Action Plans, nor will PJM have procured capacity to serve this load.[767] PJM also claims that, because NFCD transmission service relies on transmission capacity that is not currently used, PJM is unlikely to be in a position to provide this service during peaks or other times when the system is operating under stressed conditions. PJM argues that, from a transmission planning perspective, NFCD transmission service increases the operational risk of System Operating Limit and Interconnection Reliability Operating Limit (SOL/IROL) exceedances by operating the system with a reduced margin for contingency to accommodate high-volume loads.[768] PJM contends that this operation increases the risk of an emergency occurring if unexpected conditions occur. PJM argues that providing NFCD transmission service will almost inevitably require significant adjustments to PJM's Operating Plan to mitigate exceedances of SOLs/IROLs each time service is provided due to the nature of the service. PJM maintains that, by definition, NFCD transmission service involves a customer drawing large quantities of power over transmission facilities that were not designed to serve that load and thus will almost certainly necessitate flowing power over various facilities near system limits.[769]

338. Indicated TOs support PJM's proposals to restrict the use of NFCD transmission service to periods when on-site generation is on outage and claim that the Commission did not intend for this service to be a substitute for FCD transmission service or NITS for the portion of on-site load that will not be served by on-site generation. Indicated TOs argue that there is no compelling reason for NFCD transmission service to be available

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[766] *Id.* at 7 (quoting December Order, 193 FERC ¶ 61,217 at P 215).

[767] *Id.* at 9-10.

[768] *Id.* at 11-12.

[769] *Id.* at 12-13.

during non-outage conditions.[770] Indicated TOs claim that limiting the use of NFCD transmission service is necessary to ensure the reliable operation of the PJM transmission system, particularly because of the increasing use of special protection schemes, remedial action schemes, and other control technologies and protective systems. Indicated TOs recommend that PJM clarify in the Tariff that an "outage" for these purposes is limited to periods where a generator is offline due to a breakdown or maintenance issues and does not cover other instances when a generator is not operating.[771]

339. Joint Co-Location Developers urge the Commission to reject PJM's attempt to limit the availability of NFCD transmission service and require PJM to establish a NFCD transmission service product available during normal system conditions as required by the December Order.[772] Joint Co-Location Developers contend that the workable non-firm transmission service offerings that are broadly available are fully consistent with reliable system operation, as demonstrated in other regions that are rapidly moving to implement non-firm transmission service offerings.[773] Joint Co-Location Developers argue that limiting the scope of NFCD transmission service scheduling to generator outages, as PJM proposes, will increase reliance on simple withdrawal-limiting protection systems rather than decrease it because it will increase the frequency with which a customer will not be authorized to withdraw.[774] Joint Co-Location Developers explain that this is because withdrawal-limiting protection systems are only active when the customer cannot withdraw, i.e., because no transmission service has been scheduled. Joint Co-Location Developers argue that PJM should limit the arming of remedial action schemes, or avoid installing them in the first place, and instead maximize use of pre-contingency NFCD transmission service curtailment through scheduling, which is similar to how Southwest Power Pool, Inc. (SPP) and Electric Reliability Council of Texas (ERCOT) envision curtailment under the non-firm transmission services that they are developing.[775]

340. In response to DCC's concerns about phasing in Co-Located Load, PJM maintains that its proposal provides a workable pathway for phased development or load

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[770] Indicated TOs Reply Brief at 3-4.

[771] *Id.* at 5-6.

[772] Joint Co-Location Developers Reply Brief at 10-11.

[773] *Id.* at 1.

[774] *Id.* at 7.

[775] *Id.* at 8.

ramping.[776] PJM argues that the obvious path for Co-Located Load that increases over time is NITS, a transmission service designed to accommodate load growth. If an Eligible Customer elects Contract Demand transmission service, any change to the contracted amount would require a new service request. PJM adds that the Eligible Customer could elect to request Interim NITS or FCD transmission service for their full load amount ahead of time and use that capacity as their demand increases up to the applied for service level. PJM explains that the Commission directed PJM to offer FCD and NFCD transmission services as an alternative to NITS; thus, it is reasonable for this new service to not accommodate load growth as NITS does.

d. Answer

341. Geronimo Power asserts that PJM's proposed restrictions on NFCD transmission service are inconsistent with the December Order and should be rejected.[777] In response to PJM's and Indicated TOs' concerns with making this service more broadly available, Geronimo Power argues that PJM does not need to expand its transmission system or otherwise change its operations to accommodate this load; rather, it merely needs to allow such load to take transmission service when it is available.[778] Geronimo Power argues that the effect of PJM's proposal will be to severely limit co-location opportunities in PJM, because large loads will need to either co-locate with a resource that can be called upon at all times or to take NITS or FCD transmission service that will result in the same inefficient and costly grid buildout that the December Order sought to avoid.[779]

e. Determination

342. As discussed below, we find that PJM's proposal does not comply with the Commission's directives in the December Order and would fundamentally alter the nature of the FCD and NFCD transmission services that the Commission directed PJM to develop. PJM proposes to require that the Eligible Customer taking transmission service on behalf of a Co-Located Load must take sufficient transmission service to account for the entire gross demand of the Co-Located Load.[780] PJM states that an Eligible Customer taking service on behalf of a Co-Located Load must request NFCD transmission service equal to the MW level of the Co-Located Generator dedicated to serving the Co-Located

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[776] PJM Reply Brief at 37-38.

[777] Geronimo Power May 21 Answer at 4.

[778] *Id.* at 6.

[779] *Id.* at 7.

[780] PJM Initial Brief at 6, 9.

Load, so that the customer is eligible to obtain NFCD transmission service if the Co-Located Generator is on outage.[781] PJM also explains that any portion of the gross demand of the Co-Located Load not served by the Co-Located Generator must be covered by FCD transmission service.[782] This proposal would tie the amount of FCD and NFCD transmission services that an Eligible Customer can request to the size of the Co-Located Generator, rather than allowing the Eligible Customer to select any amount, including 0 MW for NFCD transmission service, as the Commission directed. Specifically, the December Order stated that Eligible Customers on behalf of Co-Located Loads would be able to take a combination of FCD and NFCD transmission services, but that "Eligible Customers taking transmission service on behalf of Co-Located Loads that will not withdraw energy from the transmission system must take [NFCD] transmission service at 0 MW."[783] PJM's proposal would do the opposite. An Eligible Customer taking transmission service on behalf of a Co-Located Load that wished to be served entirely by the Co-Located Generator, and not withdraw any energy from the transmission system, would be required under PJM's proposal to request NFCD transmission service at a level of contract demand equal to the Co-Located Load's gross load.[784] Moreover, contrary to PJM's proposal, nothing in the December Order would require an Eligible Customer taking transmission service on behalf of a Co-Located Load to take FCD transmission service at a level of contract demand that reflects the amount of load not served by the Co-Located Generator (or, for that matter, to take FCD transmission service at all). In short, the December Order does not link the level of contract demand for either FCD or NFCD transmission service that an Eligible Customer may take on behalf of a Co-Located Load to the size of the Co-Located Generator or the size of the Co-Located Load.

343. Taken together, PJM's proposed new conditions on FCD and NFCD transmission services mean that if PJM determines as a result of studies that it cannot accommodate a request for NFCD transmission service, the Eligible Customer will be required to request and take a firm transmission service (FCD transmission service or NITS) on behalf of the Co-Located Load instead. In the December Order, the Commission directed PJM to implement FCD and NFCD transmission services in response to a finding that the Tariff is unjust and unreasonable because it does not include transmission services that reflect Eligible Customers taking service on behalf of Co-Located Loads that are willing and able to limit their energy withdrawals from the transmission system under certain

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[781] *Id.* at 9, 16.

[782] *Id.* at 6-7.

[783] December Order, 193 FERC ¶ 61,217 at P 206.

[784] PJM Initial Brief at 9.

conditions.[785] PJM's proposal does not address this finding and proposes to create FCD and NFCD transmission services that continue to fail to recognize this flexibility. Moreover, requiring an Eligible Customer seeking to take transmission service on behalf of a Co-Located Load to take FCD transmission service or NITS instead of NFCD transmission service when it does not seek to take firm transmission service would be inconsistent with the Commission's finding in the December Order that the lack of the required new transmission services could result in unnecessary, costly, and inefficient Network Upgrades, increasing Network Upgrade costs.[786] While we recognize that PJM may determine that there is insufficient available transmission capacity to fulfill a request for NFCD transmission service,[787] in that scenario, the Eligible Customer seeking to take that service on behalf of a Co-Located Load should then be able to decide whether it would prefer to request FCD transmission service or NITS to serve the load – in which case it may be responsible for Network Upgrade costs – or to take 0 MW of NFCD transmission service and thus have no contractual right to withdraw power from the transmission system.

344. PJM's proposal is also inconsistent with the December Order in that PJM proposes to limit the amount of NFCD transmission service that may be reserved by an Eligible Customer to a MW level equivalent to the amount of the Co-Located Generator that is on outage.[788] The December Order did not require such a restriction and instead contemplated that NFCD transmission service would be available during "normal" operations when there is sufficient available transmission capacity,[789] providing Eligible Customers seeking to take transmission service on behalf of Co-Located Loads the

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[785] December Order, 193 FERC ¶ 61,217 at P 193.

[786] *See id.* P 177 ("[F]or Eligible Customers taking service on behalf of Co-Located Loads that do not reserve transmission or take energy from the transmission system but which receive only regulation and black start services, or that otherwise are willing and able to limit their energy withdrawals from the transmission system, requiring such Eligible Customers to take NITS on behalf of these Co-Located Loads may in some circumstances result in costly and inefficient transmission system buildout that may not be necessary if such Eligible Customers are willing and able to take a transmission service that requires fewer Network Upgrades to provide, and therefore may result in lower Network Upgrade costs, than would NITS.").

[787] *See id.* P 215 (stating that reservations for NFCD transmission service "would be available only when there is available transmission capacity, similar to existing non-firm transmission service options in the Tariff").

[788] PJM Initial Brief at 32.

[789] December Order, 193 FERC ¶ 61,217 at PP 214-215.

flexibility to request to reserve any amount of NFCD transmission service, regardless of whether the Co-Located Generator was on outage. The Commission's reference to NFCD transmission service and generator outages was an example and not a threshold requirement for an Eligible Customer to use this service.[790] Regardless, because the Commission contemplated that the service would be available during normal operations when there is sufficient available transmission capacity, Eligible Customers seeking to take NFCD transmission service on behalf of Co-Located Loads must be permitted to request such service on an everyday basis. Further, contrary to the December Order, PJM's proposal to allow Eligible Customers taking transmission service on behalf of Co-Located Loads to take NFCD transmission service only when the Co-Located Generator is on outage fails to reflect Eligible Customers taking transmission service on behalf of Co-Located Loads that are willing and able to limit their energy withdrawals from the transmission system under certain conditions because it removes the option to take NFCD transmission service instead of FCD transmission service for portions of the Co-Located Load that are not served by the Co-Located Generator.

345. PJM argues that these changes to NFCD transmission service are necessary for reliability, to ensure all load is studied. We disagree. Co-Located Load is, as defined in the December Order, behind the Point of Interconnection of an interconnected generator, and PJM would already know the size of the generator and any Co-Located Load from the interconnection process (or Necessary Study), and possibly the transmission service application process. While the portion of load for which the Eligible Customer does not request transmission service would not be modeled by PJM in a transmission service request as withdrawing energy from the transmission system, this outcome is appropriate because the Eligible Customer is not intending to withdraw energy from the transmission system. However, the potential impact of the Co-Located Load on the reliability of the transmission system will still be studied as part of the Necessary Study process for the generator interconnection modification, or as part of a New Service Request. PJM already conducts dynamic studies for Co-Located Load, which evaluate all applicable NERC, PJM, and transmission owner-specific contingencies and criteria, consistent with PJM's responsibilities to ensure system reliability.[791] These studies utilize a composite load model that includes power electronics, cooling, and lighting loads, and the impact of the facility during this study is dependent on the physical parameters of the facility and

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[790] *See id.* P 214 ("Eligible Customers taking service on behalf of such loads may, however, still seek to withdraw energy from the transmission system from time to time when transmission capacity is available and not needed by firm customers. *For example*, an Eligible Customer could seek a transmission reservation for a Co-Located Load in advance for the duration of an expected outage of the associated generator.") (emphasis added).

[791] PJM March 24, 2025 Response at 53.

its control behavior, not the level or type of transmission service taken.[792] This model is a complete model of the facility.[793] As such, PJM, as it currently does, will know the full impact of factors unrelated to the contract demand of the Co-Located Load, including impacts on stability margins, short circuit limits, power quality and harmonic distortion, voltage flicker, interaction of active power electronic controls with the system (e.g., mitigation of oscillatory behavior), impact of STATCOMs or other reactive compensation devices, and cyclical demand ramps in the sub-synchronous frequency range. PJM provides no explanation why this data already available to them is insufficient to fully study a Co-Located Load absent changes to NFCD transmission service.

346. PJM also argues that providing NFCD transmission service will require adjustments to PJM's Operating Plan to mitigate exceedances of SOLs/IROLs each time service is provided due to the nature of the service. While serving load using NFCD transmission service may reduce operating margins on the transmission system, PJM has presented no evidence that changes to PJM's Operating Plan will be regularly needed. However, should PJM find, based on operating experience in implementing the NFCD transmission service, that significant and frequent manual adjustments are necessary, PJM may consider filing an FPA section 205 filing to adjust the curtailment priority of NFCD transmission service.

347. PJM also argues that, by definition, NFCD transmission service involves a customer drawing large quantities of power over transmission facilities that were not designed to serve that load and thus will almost certainly necessitate flowing power over various facilities near system limits. While we acknowledge that NFCD transmission service is designed to use available transmission capacity that is not needed by firm transmission customers, we find that PJM's assertion that providing such service will necessitate flowing power over various transmission facilities near system limits is speculative. In any case, as the Commission stated in the December Order, "[r]eservations under this service would be available only where there is available transmission capacity, similar to existing non-firm transmission service options in the

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[792] *Id.* We note that NERC has recommended use of the Power Electronic Reconnecting and Ceasing (PERC1) model, which is a different model than the current model PJM utilizes. However, the general principles are the same. *See* NERC, *Essential Action to Industry: Computational Load Modeling, Studies, Instrumentation, Commissioning, Operations, Protection, and Control at 3* (2026), https://www.nerc.com/globalassets/programs/bpsa/alerts/level-3-computational-load-alert.pdf.

[793] *See, e.g.*, PJM, PJM Dynamic Model Development Guidelines for Interconnection Analysis § 6, PJM Dynamic Model Development Guidelines.

Tariff."[794] And consistent with the Commission's findings in establishing non-firm transmission service under its *pro forma* Open Access Transmission Tariff, providing non-firm transmission service increases efficiency by allowing customers to use lumpy transmission investment on an as-available basis and may reduce the costs for firm transmission service customers by allowing NFCD transmission service customers to offset the costs of that investment.[795] However, we note that if PJM determines that there may be increased operational risks associated with providing NFCD transmission service, it may address those risks by increasing the transmission reliability margin that it uses when studying and determining whether to grant requests for NFCD transmission service.

348. We recognize that the new FCD and NFCD transmission services represent a significant change in how transmission service has been historically offered in PJM. We also recognize that significant changes to PJM's software may be necessary to integrate the FCD and NFCD transmission services, including to potentially automate some processes that are currently handled manually by operators with respect to curtailing non-firm transmission services. However, the Commission directed the new FCD and NFCD transmission services as the replacement rate after finding PJM's existing Tariff unjust and unreasonable. We therefore direct PJM to submit a compliance filing within 60 days of the issuance of this order proposing Tariff revisions to permit Eligible Customers to elect to take FCD transmission service or NFCD transmission service without the limitations that PJM proposes (i.e., (1) the requirement that the Eligible Customer taking transmission service on behalf of a Co-Located Load must take sufficient transmission service to account for the entire gross demand of the Co-Located Load, (2) the requirement for an Eligible Customer taking transmission service on behalf of a Co-Located Load to take FCD transmission service at a level of contract demand that reflects the amount of load not served by the Co-Located Generator, (3) the requirement that an Eligible Customer taking service on behalf of a Co-Located Load must request NFCD transmission service equal to the MW level of the Co-Located Generating Facility dedicated to serving the Co-Located Load if that portion of the Co-Located Load is not covered by FCD transmission service, and (4) the restriction on the use of NFCD transmission service to only those circumstances where the Co-Located Generator is on outage). Consistent with our determination above to extend the three new transmission services set forth in the December Order to Eligible Customers taking service on behalf of load with BTMG that are willing and able to limit their energy withdrawals from the

[794] December Order, 193 FERC ¶ 61,217 at P 215.

[795] Order No. 888-A, FERC Stats. & Regs. ¶ 31,048 at 30,272 (finding "non-firm transmission prices should reflect the interruptibility of the service and should promote efficient use of the transmission system").

transmission system under certain conditions, we further direct PJM to reflect this change in its compliance filing.

349. With respect to DCC's argument that PJM's proposal does not provide a workable pathway for phased development or load ramping,[796] we disagree. Because FCD transmission service is based on a reserved amount of contract demand and does not account for load growth in the way that NITS does, Eligible Customers seeking to increase the amount of load for which they are taking transmission service over time should be required to submit new transmission service requests for any increases in contract demand. As an alternative, they may request a level of contract demand in their initial transmission service request that reflects their planned total load, even though they may not need the full level of contract demand immediately. To the extent that neither of these options work for a particular Eligible Customer taking transmission service on behalf of a Co-Located Load, that Eligible Customer should consider taking NITS, which accommodates load growth over time, as PJM suggests.[797]

350. DCC also argues that PJM prohibits the mixing of NITS and FCD or NFCD transmission service for the same load.[798] However, in the December Order, the Commission explicitly stated that NITS cannot be combined with any of the new transmission services.[799] As such, we find that DCC's argument is an untimely request for rehearing of the December Order and dismiss it.[800]

351. With respect to DCC's argument that Eligible Customers serving Co-Located Load should be able to transition between transmission services,[801] we note that Eligible Customers taking transmission service on behalf of Co-Located Load that wish to transition from one transmission service to another may do so through the same process

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[796] DCC Response Brief at 6.

[797] PJM Reply Brief at 37-38.

[798] DCC Response Brief at 6.

[799] December Order, 193 FERC ¶ 61,217 at P 195 n.408 ("Eligible Customers taking NITS on behalf of Co-Located Load may not combine NITS with any of the other transmission services discussed herein.").

[800] *See, e.g.*, *ISO New Eng. Inc.*, 132 FERC ¶ 61,098 at P 12 ("The Commission has held that requests to alter a compliance filing in a manner that differs from the order requiring the compliance filing constitute a collateral attack on the order requiring the compliance filing.").

[801] DCC Response Brief at 6.

as any other party requesting new transmission service, with the exception of the anti-toggling procedures discussed below in Part VI.E.

352. Finally, with respect to Market Monitor's argument that NFCD transmission service is untenable, we dismiss this argument as an untimely request for rehearing of the December Order. We disagree that NFCD transmission service is untenable if it is not available constantly; to the contrary, NFCD transmission service is designed to be non-firm and as-available, meaning that it will sometimes be unavailable or curtailed. It is possible that if, for example, a significant number of Eligible Customers taking transmission service on behalf of Co-Located Loads were to switch to NFCD transmission service, it would be frequently curtailed, but that is the nature of non-firm, as opposed to firm, transmission service. Eligible Customers taking transmission service on behalf of Co-Located Loads that do not wish to be curtailed should consider requesting a firm transmission service instead.

3. Study Process

a. Initial Briefs

353. PJM states that it will coordinate with the affected transmission owner to complete studies, obtain relevant data, and identify any necessary enhancements to the transmission system to accommodate the requested level of service.[802] PJM also states that, during the study period, it may perform other studies.

354. PJM proposes that it notify the affected transmission owner of an application for FCD transmission service to allow for coordination to study the potential impacts of providing this service on the transmission owner's system.[803] PJM states that it will determine any necessary studies to provide the requested transmission service. If studies are needed, PJM explains, it will provide an application and studies agreement to the Eligible Customer in which the Eligible Customer will agree to reimburse PJM for study costs. PJM also states that it will consider the results of any transmission owner studies.

355. PJM proposes that, upon receiving a service request, it will coordinate with the affected transmission owner to complete necessary studies to determine whether, and at what level, NFCD transmission service can be reliably provided.[804] PJM proposes that it and the affected transmission owner will determine whether additional studies are required to assess the NFCD transmission service request, and if so, which studies are

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[802] PJM Initial Brief at 17-18.

[803] *Id.* at 24.

[804] *Id.* at 32-33.

appropriate. PJM proposes that it will provide a written explanation if it determines that none or only a portion of the requested service can be reliably provided.

b. Response Briefs

356. Indicated TOs support PJM's proposed study processes for FCD transmission service and state that it appropriately recognizes the role of transmission owners in evaluating load interconnection requests.[805] Indicated TOs argue, however, that the Tariff should specify that load integration studies should be completed first and inform the determination of whether additional studies are necessary for purposes of an Eligible Customer's request for transmission service on behalf of a Co-Located Load and the interconnection of any on-site generation. Indicated TOs contend that this requirement would maximize the speed and efficiency of the overall process and avoid potential duplication of effort and expense as between PJM and the PJM transmission owners.

357. Indicated TOs state that PJM appears to contemplate that an Eligible Customer's initial application for NFCD transmission service would serve as a "holding" request and that the actual reservation and use of the service would require the Eligible Customer to make a request and PJM to determine whether or not the requested amount of service is available.[806] Indicated TOs further state that the available amount of NFCD transmission service presumably would serve as the basis for determining the relevant charge to the Eligible Customer. Indicated TOs request that PJM confirm these understandings and add appropriate Tariff language. Indicated TOs also request that PJM clarify whether the study process set forth in section 710.3 of the illustrative tariff provisions is intended to cover only the initial service study or also subsequent determinations as to specific reservation requests. Generally, Indicated TOs argue that more detail should be provided as to the process for evaluating and granting requests for NFCD transmission service, including the timelines associated with such requests, particularly with respect to forced rather than planned outages.[807] Indicated TOs also contend that PJM should specify in Tariff language that NFCD transmission service will be available for periods from one month to one hour in duration.

358. Several parties argue that PJM's proposed study process is unjust and unreasonable.[808] Constellation argues that PJM fails to sufficiently describe its proposed study procedures for the three new services. Vistra similarly argues that PJM's study

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[805] Indicated TOs Response Brief at 5-7.

[806] *Id.* at 4.

[807] *Id.* at 4-5.

[808] Vistra Response Brief at 31, 33-35; Constellation Response Brief at 14-15.

process provides too much discretion to PJM and transmission owners to determine whether studies are required, which studies to conduct, the timeline for doing so, and how to prioritize different requests. First, Vistra asserts that PJM does not propose a mechanism to assign customers a queue position based on the submission of a complete application. Vistra also charges that PJM reserves to itself full discretion to determine whether studies must be conducted and what analyses those studies will involve, and alleges that the proposed tariff does not appear to limit the results of PJM's analysis of transmission service requests to the results of duly conducted studies because it states that PJM will "consider" the results of the study procedures.[809] Vistra and Constellation also argue that PJM provides no timelines or deadlines for processing transmission service requests. Vistra also argues that PJM provides itself total discretion to set study fees with no parameters for setting those fees. Vistra and Constellation express concern that the discretion in PJM's proposal creates a risk of undue discrimination. Vistra and Constellation argue that PJM's proposal violates the Commission's rule of reason policy because the information missing from the tariff proposal significantly affects rates, is readily susceptible of specification, and is not so readily understood as to render recitation superfluous.[810] Vistra also contends that PJM's proposal is unclear on what it means to ensure that non-firm transmission service can be provided "reliably," and requests that PJM articulate the standard.[811]

c. Reply Briefs

359. PJM maintains that its illustrative tariff contains an appropriate amount of detail on the study process and states that it will work with stakeholders to develop implementation details to be set forth in the PJM manuals.[812] PJM avers that the illustrative tariff provides more than enough detail to satisfy the Commission's rule of reason policy. PJM alleges that its proposal builds on its existing processes for studying requests for new transmission service requests. PJM contends that its evaluation of firm transmission service requests will require and follow similar study procedures to what is now required for NITS. For non-firm transmission service requests, PJM asserts that the study approach could differ widely for each request and will depend on a number of factors.

360. PJM explains that, currently, the transmission owners study in the first instance all requests to connect new load to the transmission system. PJM states that, for each zone,

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[809] Vistra Response Brief at 33-34 (citing PJM, Initial Brief, attach. A § 702.3).

[810] *Id.* at 36-37, 53; Constellation Response Brief at 15-18.

[811] Vistra Response Brief at 39.

[812] PJM Reply Brief at 22-23, 26, 32.

the transmission owner studies the integration of the requested load and identifies upgrades. PJM says that it then performs a "do no harm" analysis of how those transmission owner-identified upgrades would affect the regional transmission system. PJM notes that NITS can then be provided consistent with the in-service date of the identified upgrades.[813] PJM contends that the allocation of responsibilities between the transmission owners and PJM in the current study process follows the division of rights recently affirmed by the Commission and courts, i.e., transmission owners' reservation of rights over local transmission planning and PJM's responsibility for the regional transmission system.[814] PJM claims that it maintains this division of rights in the illustrative tariff provisions.

361. PJM also rejects protesters' arguments that its proposal affords PJM and the transmission owners inappropriate discretion. PJM argues that it seeks no more discretion than it currently has under its existing study processes. PJM argues that its evaluation of the transmission system to determine whether it can reliably provide the requested transmission service requires an exercise of engineering judgment, which inherently entails a reasonable exercise of discretion.[815]

362. PJM argues that reliability reviews inherently require PJM to make judgment calls as the transmission provider and a NERC-designated Reliability Coordinator, and the flexibility to determine whether new transmission facilities are reasonably likely to be in-service fits squarely within PJM's expertise. PJM asserts that protesters' concerns about the level of detail generally concern the transmission owner's load integration studies, which PJM argues does not inherently implicate the Commission's jurisdiction under the FPA.[816] In response to concerns about study timelines, PJM contends that its evaluation of any transmission service request is dependent on the load integration studies performed by the applicable transmission owner.[817] PJM asserts that it does not

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[813] *Id.* at 24.

[814] *Id.* at 24 & n.68 (citing *PJM Interconnection, L.L.C.*, 172 FERC ¶ 61,136, *order on reh'g*, 173 FERC ¶ 61,225, at P 19 (2020), *aff'd sub nom. Am. Mun. Power, Inc. v. FERC*, 86 F.4th 922 (D.C. Cir. 2023); *PJM Interconnection, L.L.C.*, 173 FERC ¶ 61,242 (2020), *order on reh'g*, 176 FERC ¶ 61,053 (2021), *aff'd sub nom. Am. Mun. Power, Inc.*, 86 F.4th 922; *Monongahela Power Co.*, 164 FERC ¶ 61,217, at P 14 (2018); *Appalachian Power Co.*, 170 FERC ¶ 61,196, at P 59 (2020)).

[815] *Id.* at 25-26.

[816] *Id.* at 34.

[817] *Id.* at 28.

have authority to dictate timelines to transmission owners to complete their studies, given that load integration studies are a matter of local transmission planning.

363. PJM also alleges that concerns that PJM will reject transmission service requests without basis are unfounded.[818] PJM maintains that it will generally grant requests for NITS and FCD transmission service, and PJM will grant Interim NITS requests consistent with the results of any study/studies. As to NFCD transmission service, PJM explains that, if it denies a request in whole or in part, PJM will provide a written explanation to the customer of PJM's reasoning for the denial, which could form the basis for any complaint to the Commission.

364. Moreover, PJM argues that the illustrative tariff puts all parties on sufficient notice as to how PJM will determine whether it can provide the requested transmission service and the study procedures to arrive at that determination.[819] PJM asserts that the illustrative tariff provides the standard to which PJM will evaluate the requests—whether the requested level of service can be provided reliably.

365. Indicated TOs concede that more detail regarding the study processes for the new transmission services could be helpful, but they argue that commenters' concerns as to the potential for delays and undue discrimination are overstated. Indicated TOs contend that it is appropriate and consistent with the Commission's rule of reason to reference the need to incorporate each transmission owner's technical requirements in the Tariff while omitting the details. Indicated TOs do not oppose making explicit in the Tariff that the studies referred to are those that the transmission owners will conduct to integrate large load facilities. Indicated TOs reject claims that they will use their role in the study process to delay or deny Co-Location Arrangements or discriminate against Co-Located Load.[820]

366. Constellation requests that the Commission deter delays and potential disputes by (1) establishing deadlines for studies and other transmission owner approvals or consultation requirements, and (2) require PJM's and transmission owners' standards, requirements, guidance, and practices on Co-Location Arrangements to be on file with the Commission on a standalone basis or reflected in the Tariff.[821]

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[818] *Id.*

[819] *Id.* at 30.

[820] Indicated TOs Reply Brief at 9-11.

[821] Constellation Reply Brief at 11-12.

367. PJM argues that Vistra oversimplifies the provision of non-firm transmission service.[822] PJM states that it is not the case that the transmission system has significantly underutilized capacity to provide the envisioned services. PJM alleges that it needs to carefully identify and manage operational risk instead of spontaneously managing non-firm load under an increasingly stressed system. Constellation also argues that PJM should clarify how it will determine the future and real-time availability of NFCD transmission service, which should be based on when transmission capacity is available and not needed by firm customers, consistent with the December Order.[823]

d. Answers

368. Constellation argues that the Commission has jurisdiction to regulate load integration studies in connection with jurisdictional transmission service.[824] Constellation contends that the Commission should exercise jurisdiction over the load integration studies needed to provide jurisdictional transmission service and direct that these studies be on file, including study deadlines and violations to be studied.[825]

369. Indicated TOs argue that transmission owner processes for studying the integration of new retail loads do not implicate the Commission's jurisdiction, even though such studies will be used as an input in PJM's process for studying applications for the new transmission services.[826] Indicated TOs point out that, even as to studies for Commission-jurisdictional services, the Commission does not require transmission providers to file studies.[827] Indicated TOs maintain that, if an Eligible Customer disputes the outcome of PJM's study process for the new transmission services, the customer can seek redress through the Commission.

e. Determination

370. We find that PJM's proposal regarding study procedures for FCD and NFCD transmission services is not sufficiently detailed to be just and reasonable, and we direct

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[822] PJM Reply Brief at 35-36.

[823] Constellation Reply Brief at 18 (citing December Order, 193 FERC ¶ 61,217 at P 214).

[824] *Id.* at 6.

[825] *Id.* at 7.

[826] Indicated TOs May 28 Answer at 8.

[827] *Id.* at 9.

PJM to file, as the replacement rate, more detailed study procedures that mirror the existing study procedures for transmission service on compliance.[828] First, with respect to FCD transmission service, we agree with parties on briefing that PJM's proposal is vague and unclear. We direct PJM to file Tariff revisions on compliance to study requests for FCD transmission service using the same process PJM uses for new service requests for NITS, i.e., the cluster study process.[829] This requirement is just and reasonable because it will treat new firm transmission service requests similarly.

371. PJM contends that its proposal "has built on its existing processes for studying requests for new transmission services . . . with additional processes necessary to study the novel aspects of Interim NITS and [FCD and NFCD] Transmission Services."[830] PJM also states that "[e]valuation of firm service requests will require and follow similar study procedures to what is now required for NITS."[831] However, PJM's proposal is lacking in detail. It is not clear whether PJM proposes to study requests for FCD transmission service serially or through its existing cluster study process.[832]

372. Regardless, we find that it is just and reasonable to study requests for FCD transmission service through PJM's existing cluster study process, and we direct PJM to file Tariff revisions on compliance consistent with this directive. We find a serial study process for new FCD transmission service requests, rather than a cluster study as for new NITS requests, would provide disparate treatment to FCD transmission service requests. PJM also does not address a timeline for its study process, meaning FCD transmission service requests could be studied more quickly or more slowly than requests in the new services queue. PJM does not provide a reason for this difference or any explanation as to why such requests should not be studied in the normal cluster process for new service requests. Further, studying such requests as part of the established cluster study process

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[828] We discuss PJM's proposed study procedures for Interim NITS below in Part VI.H.

[829] PJM, Intra-PJM Tariffs, OATT, § III.32.3 Initial Study Procedures (3.0.0) ("A request for service for which a Phase I System Impact Study is required is subject to the System Impact Study Procedures, as set forth in Tariff, Part VII or Tariff, Part VIII, as applicable.").

[830] PJM Reply Brief at 23.

[831] *Id.* at 26.

[832] *See* PJM, Initial Brief, attach. A, § 712.1 ("After receiving the Application for Firm Contract Demand Transmission Service, the Transmission Provider shall determine, in accordance with the PJM Manuals, any necessary studies for reliably providing the requested Firm Contract Demand Transmission Service.").

would address many of the concerns in the record because it would ensure Eligible Customers have more detail, transparency, and certainty regarding the study process, which is the primary concern of the protesters.[833] Thus, we direct PJM to submit a compliance filing within 60 days of the date of issuance of this order to revise its Tariff to provide that it will study FCD transmission service requests using its existing process for studying firm transmission service requests. Consistent with our determination above to extend the three new transmission services set forth in the December Order to Eligible Customers taking service on behalf of load with BTMG that are willing and able to limit their energy withdrawals from the transmission system under certain conditions, we further direct PJM to reflect this change in its compliance filing.

373. With respect to NFCD transmission service, we agree with parties arguing that PJM's proposal lacks specificity. PJM argues that "the study approach could differ widely for each request, given the different nature of the risks involved, as the system would be operated on an as-conditions-permit basis."[834] The lack of detail creates a level of discretion that is not just and reasonable; while some amount of discretion is likely necessary to ensure PJM is able to perform any additional studies necessary to maintain reliability, Eligible Customers must have some understanding of the study process PJM will use to evaluate transmission service requests. Therefore, we direct PJM to submit a compliance filing within 60 days of the date of issuance of this order that revises its Tariff to include study procedures for NFCD transmission service requests. We note that the Tariff includes detailed procedures for the study of Non-Firm PTPS, which serve as a useful reference. In particular, the Tariff provides that, following receipt of a tendered schedule, PJM will make a determination on a non-discriminatory basis of available transfer capability for PTPS requests, based on a specific methodology detailed in Tariff, Attachment C.[835] No party has shown why a similar process should not apply for NFCD transmission service, and PJM has not demonstrated that having so little detail in the Tariff regarding the process for studying requests for NFCD transmission service is just and reasonable. PJM's compliance filing must also include details about the term length of NFCD transmission service, including the minimum term. Consistent with our determination above to extend the three new transmission services set forth in the December Order to Eligible Customers taking service on behalf of load with BTMG that

[833] *See* PJM, Intra-PJM Tariffs, pt. VIII, § 404 (1.0.0) (providing overview of system impact studies, including scope of studies).

[834] PJM Reply Brief at 26.

[835] *See* PJM, Intra-PJM Tariffs, OATT, §§ II.15.2, II.18.4; *id.* attach. C (Methodology to Assess Available Transfer Capability).

are willing and able to limit their energy withdrawals from the transmission system under certain conditions, we further direct PJM to reflect this change in its compliance filing.

374. Indicated TOs request that the Tariff specify that transmission owner load integration studies will be completed first and thereby inform what additional studies are necessary. However, it is not clear from the record what these studies entail, as these studies are not defined in either the Tariff or any of PJM's manuals, or how transmission owners will study the load. For example, the record indicates that Indicated TOs view a load integration study for Co-Located Load as potentially analyzing "(i) what, if any, upgrades are needed to accommodate the physical *gross* load amount behind the point of interconnection."[836] To the extent PJM intends to permit transmission owners to study Co-Located Load as if it were native load with NITS, that would not be just and reasonable for FCD and NFCD transmission services. We therefore direct PJM to specify in a compliance filing, which it must submit within 60 days of the date of issuance of this order, how transmission owners shall participate in PJM's study process for Eligible Loads for FCD and NFCD transmission services and specify in detail the related roles and responsibilities of PJM and the transmission owners in such studies. We decline at this time to adopt Indicated TOs' requests to incorporate further revisions to the Tariff related to load integration studies.[837]

4. <u>Rates and Charges</u>

a. <u>Initial Briefs</u>

375. Indicated TOs propose that the rate for the FCD transmission service be based on the zonal NITS rates and underlying NITS revenue requirements.[838] Indicated TOs argue that Eligible Customers taking FCD transmission service on behalf of Co-Located Load and Network Customers should be charged the same rate because the level of service provided to both is the same for all relevant purposes. For example, Indicated TOs argue that both services are firm transmission services for which PJM procures capacity for the customers. Indicated TOs argue that it would be unjust and unreasonable and unduly discriminatory to charge FCD transmission service customers a rate lower than the NITS rate as it would subsidize FCD transmission service customers at the expense of Network Customers. Indicated TOs contend that it is appropriate to use the single peak coincident demand to calculate the FCD transmission service rate because it is an annual service.

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[836] Indicated TOs Initial Brief at 25-26 (emphasis added).

[837] Indicated TOs Response Brief at 13, 16, 19.

[838] Indicated TOs Initial Brief at 6, 8-9.

376. Indicated TOs propose that NFCD transmission service pay a charge for the reserved contract demand amount multiplied by a zonal NFCD transmission service rate determined based on the specific term of service.[839] Indicated TOs propose to use the same FCD transmission service rate for purposes of establishing the maximum rate for NFCD transmission service. Indicated TOs argue that it is just and reasonable to use the same maximum rate for FCD and NFCD transmission services, because the Commission has permitted pricing Non-Firm PTPS at the rate used for Firm PTPS and because the Commission provides flexibility to arrange and schedule NFCD transmission service. Indicated TOs allege that NFCD transmission service is superior to Non-Firm PTPS because PJM will re-dispatch generation prior to curtailing NFCD transmission service. Indicated TOs propose to consider on a going-forward basis whether a discount is appropriate for NFCD transmission service based on system conditions and use patterns.

377. In addition to these charges, PJM proposes to assess, for FCD transmission service: (1) administrative service charges, (2) ancillary service charges, (3) black start service charges based on gross demand, (4) regulation charges based on gross demand, and (5) any redispatch costs. PJM contends that these are standard charges associated with use of the transmission system above transmission service rates.[840] For NFCD transmission service, PJM also proposes to assess certain charges within its authority: (1) administrative charges, (2) ancillary services charges, (3) any redispatch costs, (4) regulation charges based on gross demand, and (5) black start service charges based on gross demand.[841]

b. <u>Response Briefs</u>

378. Several parties argue that it is just and reasonable to charge the same rate for FCD transmission service and NITS.[842] NOVEC explains that Eligible Customers are receiving a service commensurate with NITS and should therefore pay a cost commensurate with NITS in recognition of the Commission's cost causation principles. Market Monitor asserts that if customers have the option to convert from FCD transmission service to NITS in the future, and given the long timelines in transmission planning and the extreme lumpiness of transmission investments, PJM must plan as if all

[839] *Id.* at 10, 11-13.

[840] PJM Initial Brief at 27.

[841] *Id.* at 36-37.

[842] ODEC Response Brief at 8; NOVEC Response Brief at 6-7; Market Monitor Response Brief at 3-4.

Eligible Customers taking the new contract demand transmission services are Network Customers.

379. Some parties also agree that it is just and reasonable to use the FCD transmission service rate as the maximum rate for NFCD transmission service.[843] NOVEC argues that NFCD transmission service is a network-type service that bears a resemblance to NITS. NOVEC notes that because an Eligible Customer only purchases NFCD transmission service when reserved, transmission costs for an Eligible Customer are lower than firm rates.

380. Other parties disagree that the proposed rate for NFCD transmission service is just and reasonable.[844] Vistra alleges that Indicated TOs fail to justify not offering a discounted rate for NFCD transmission service when such a discount exists for Non-Firm PTPS. Vistra contends that the benefit of re-dispatching generation prior to curtailment does not justify charging a substantially higher rate for a service that is otherwise inferior. Vistra also argues that Indicated TOs' proposal is unjust and unreasonable and unduly discriminatory because it would create cost shifts between classes of transmission customers, where Eligible Customers taking NFCD transmission service on behalf of Co-Located Load shoulder the cost of firm transmission service, despite taking non-firm transmission service.

381. Joint Co-Location Developers argue that pricing NFCD transmission service at the same rate as FCD transmission service is not consistent with cost causation principles or the Commission's purpose in establishing the NFCD transmission service to avoid inefficient system buildout. Joint Co-Location Developers maintain that, as compared to FCD transmission service, the rate for NFCD transmission service should reflect the lesser costs caused by and lesser benefits received by customers taking this service.[845] Joint Co-Location Developers claim that, in Order No. 888-A, the Commission explained that, while in some circumstances non-firm transmission rates may be set at the firm transmission rate level, the Commission expects that non-firm transmission rates would, in most instances, be priced below the price cap.[846]

382. Geronimo Power states that, combined with PJM's proposed requirement that an Eligible Customer take NFCD transmission service for the portion of its load served by a

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[843] ODEC Response Brief at 8; NOVEC Response Brief at 7.

[844] Vistra Response Brief at 16-17, 23-24; Joint Co-Location Developers Response Brief at 20; Geronimo Power Response Brief at 4.

[845] Joint Co-Location Developers Response Brief at 20-21.

[846] *Id.* at 22 (citing Order No. 888-A, FERC Stats. & Regs. ¶ 31,048 at 30,272).

Co-Located Generator, the implication of the Indicated Transmission Owners' proposal appears to be that an Eligible Customer taking NFCD transmission service would be required to pay a transmission charge equivalent to the rate paid by transmission customers taking firm transmission service.[847] Geronimo Power argues that charging transmission customers taking NFCD transmission service the same amount as a transmission customer taking FCD transmission service is unjust and unreasonable and inconsistent with cost causation principles because these loads will be required to pay a rate equivalent to customers receiving a higher level of service. Geronimo Power asserts that non-firm transmission service should be, and often is, priced lower than firm transmission service, such as in PJM where Non-Firm PTPS customers receive a discount as compared to Firm PTPS customers. Geronimo Power adds that the proposed rate would undermine the incentive for large load customers to reduce their reliance on the grid and therefore would fail to offer a rate that would encourage the efficient use of the transmission system, contrary to the December Order. Further, Geronimo Power states that Indicated TOs should not set an unjust and unreasonable rate based on superior services while they wait until they gather more data to determine the extent to which such unjust and unreasonable rate should be reduced when charging for an inferior service.

383. ODEC agrees that it is reasonable for PJM to charge FCD and NFCD transmission service customers for applicable PJM administrative charges consistent with PJM's charges to existing transmission customers.[848]

384. ODEC urges the Commission to direct further compliance filings in order to ensure that rates for the new FCD transmission service are just and reasonable by requiring the individual transmission owners to either confirm that their formula or stated rates and metrics reporting enable direct crediting by PJM, or provide whatever revisions are necessary in order to do so.[849] ODEC states that this is important so that ODEC and other Network Customers are not subject to paying duplicative charges for the same revenue requirement amount. ODEC adds that it is also important because Indicated TOs state that load-serving entities will submit metrics to PJM used to calculate transmission, capacity, and energy charges, but such metrics may not be consistent among Indicated TOs. ODEC explains that, while it is a load-serving entity, as a transmission customer the metrics are provided to PJM by the transmission owners for the zones where ODEC takes transmission service.

385. Constellation seeks clarification that Indicated TOs' proposed rate for FCD transmission service is equal to the applicable transmission owners' NITS rate calculated

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[847] Geronimo Power Response Brief at 4, 6, 7-9.

[848] ODEC Response Brief at 8; *see also* NOVEC Response Brief at 8.

[849] ODEC Response Brief at 8-9.

using that transmission owners' coincident peak methodology, given that different transmission owners use different methods.[850]

386. Industrials/Amtrak argue that the Commission must ensure that transmission owners' calculation of individual customer and zonal transmission cost allocation is transparent, whether through an Attachment M-2 filing or another publicly transparent and accountable method.[851] Industrials/Amtrak also contend that the Commission must provide direction on how the revenue and the billing determinants for FCD and NFCD transmission services and Interim NITS would be incorporated into existing transmission formula rates. Similarly, Geronimo Power states that the Commission should at a minimum require the Indicated Transmission Owners to clarify the nature of the rates and billing determinants that they are proposing, including whether they intend to charge the NFCD transmission service charge on a MWh basis, which would be inconsistent both with how transmission reservation charges are historically structured and the Tariff.[852]

387. Industrials/Amtrak argue that neither FCD nor NFCD transmission service provide a cost-based back-up service for cogeneration QFs and similarly-situated retail customers.[853] Industrials/Amtrak contend that, because it would require payment for service based on the contracted amount, FCD transmission service inherently assumes that forced outages or other reductions in electric output by all QFs will occur simultaneously, or during the system peak, or both, without any factual data to support that assumption.[854] Industrials/Amtrak aver that this is not a realistic assumption for cogeneration QFs. Industrials/Amtrak further argue that it would not comport with cost causation principles to require a FCD transmission service reservation for occasional back-up power needs, particularly where the history and risk of the individual unit is well-established or has met outside standards. Industrials/Amtrak further argue that NFCD transmission service also falls short because it requires pre-scheduling with and approval by PJM, which is inconsistent with back-up power's use in the event of forced outages, and because it is an as-available product that is subject to interruption.[855] Industrials/Amtrak argue that, if the existing netting construct is no longer available, then a firm transmission service must be available for QFs to meet the requirements of

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[850] Constellation Response Brief at 31.

[851] Industrials/Amtrak Response Brief at 25-26.

[852] Geronimo Power Response Brief at 5 n.13.

[853] Industrials/Amtrak Response Brief at 16-19.

[854] *Id.* at 17 (citing Dauphinais Aff. ¶ 44).

[855] *Id.* at 18.

PURPA based on actual use. Industrials/Amtrak contend that there must be a transmission service that applies cost causation standards to occasional, unplanned use of the transmission system.

388. Industrials/Amtrak argue that cost causation principles dictate that the Commission should authorize cost-based back-up service for all transmission customers, not only QFs.[856] Industrials/Amtrak explain that there are a number of facilities that operate on similar principles to QFs but do not maintain QF status for a variety of reasons. Industrials/Amtrak argue that these facilities, too, must occasionally draw from the grid, including for occasional unscheduled outages. Industrials/Amtrak argue that it cannot be just and reasonable or comport with cost causation principles to require facilities requiring only occasional back-up service to pay rates that are the same as FCD transmission service or gross-based NITS. Industrials/Amtrak argue that transmission customers should be charged based on actual use on an hourly basis and should not be charged a standby fee.

389. Industrials/Amtrak explain that QFs are entitled to supplementary power, back-up power, maintenance power, and interruptible power pursuant to Commission regulations[857] and that the rates for back-up power "[s]hall not be based upon an assumption (unless supported by factual data) that forced outages or other reductions in electric output by all [QFs] on an electric utility's system will occur simultaneously, or during the system peak, or both."[858] Industrials/Amtrak argue the NITS BTMG netting construct meets the requirements of PURPA's enacting regulations.

c. Reply Briefs

390. In response to Constellation's request for clarification, Indicated TOs clarify that the zonal FCD transmission service rate will be calculated using that transmission owner's specific methodology applicable to Network Customers.[859]

391. NOVEC explains that because under PJM's proposal a transmission customer would only take and pay for NFCD transmission service when the generator was experiencing an outage, the same rate does not equate to the same cost to the customer.[860]

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[856] *Id.* at 20-22, 24.

[857] Industrials/Amtrak Response Brief at 14-16 (citing 18 C.F.R. § 292.305(b)).

[858] *Id.* at 15 (citing 18 C.F.R. § 292.305(c)(1)).

[859] Indicated TOs Reply Brief at 18 (citing Constellation Response Brief at 31).

[860] NOVEC Reply Brief at 10-13.

NOVEC argues that NFCD transmission service does not impose fewer costs on the transmission system than NITS, just "imposes costs differently" and contends that the Commission needs to be cautious to avoid providing "co-located generators a subsidized low cost option to use the system whenever they need backup."[861] NOVEC argues that Co-Located Load in areas where PJM can accommodate a large amount of NFCD transmission service could end up with the best of both worlds, where they are very rarely curtailed but pay a subsidized rate for transmission service, with the option to switch from FCD transmission service or NITS if PJM can no longer accommodate the required level of NFCD transmission service.

392. In response to arguments from Joint Co-Location Developers and Geronimo Power about whether it is appropriate to establish NFCD transmission service rates based on FCD transmission service rates, Indicated TOs argue that transmission owners need to gather data on how NFCD transmission service customers are using the service and the effect of that utilization on the transmission system.[862] Indicated TOs argue that it is not clear whether NFCD transmission service customers will cause the need for fewer Network Upgrades, and that further analysis is needed to determine whether discounts are appropriate. Finally, Indicated TOs contend that Joint Co-Location Developers' concerns that the proposed NFCD transmission service rate will discourage industrial development are exaggerated and misplaced. NOVEC similarly argues that it is not the Commission's place to subsidize certain industries at the expense of customers.[863]

393. In response to Vistra's arguments about applying the rate for zonal Non-Firm PTPS to NFCD transmission service, Indicated TOs argue that doing so would be unreasonable because transmission customers have used Non-Firm PTPS exclusively to facilitate the delivery of specific generation to the PJM border—not for internal use.[864] NOVEC also rejects Vistra's argument that NFCD transmission service should receive the same rate as Non-Firm PTPS, arguing that it would not be appropriate to allow NFCD transmission service the same discount as Non-Firm PTPS because the two products fundamentally differ. Indicated TOs further argue that the discounted Non-Firm PTPS rate reflects historical use and was neither intended nor appropriate for NFCD transmission service because NFCD transmission service is intended to be a limited, supplemental service within PJM and does not facilitate the delivery of specific generation to specific load over a contract path. Indicated TOs also contend that NFCD

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[861] *Id.* at 12 (citing Market Monitor Response Brief at 6).

[862] Indicated TOs Reply Brief at 19-21.

[863] NOVEC Reply Brief at 14.

[864] Indicated TOs Reply Brief at 13, 18-19.

transmission service is superior to Non-Firm PTPS because it has a superior curtailment priority.

394. Indicated TOs reject Vistra's argument that Indicated TOs' proposal to credit the revenues associated with NFCD transmission service to customers taking NITS and FCD transmission service will create unjustified cost shifts among customer classes.[865] Indicated TOs argue that these revenue credits are not subsidies but offsets that reduce the amount paid by firm transmission service customers, which is appropriate because transmission rates are designed to recover the fixed costs of building and maintaining the transmission system to provide service to such customers. In the absence of such credits, Indicated TOs argue that the transmission owners would over-recover their revenue requirements. Indicated TOs further argue that the revenue crediting mechanism is fully consistent with previously approved mechanisms such as section 27A, which credits Non-Firm PTPS revenue to Network and Firm PTPS customers.

395. Industrials/Amtrak argue that NFCD transmission service cannot provide back-up power because it cannot be accessed during a BTMG generation facility outage until a request for it is submitted to and approved by PJM.[866] Industrials/Amtrak further argue that NFCD transmission service is also only available on an as-available basis and is subject to both operational and automated interruption.[867] Industrials/Amtrak explain that, during a forced outage, a retail customer would be required to automatically curtail load until it submits a NFCD transmission service request and PJM approves that request.

396. Industrials/Amtrak also argue that FCD transmission service can provide maintenance power on a firm basis, but like back-up power, cannot do so at a cost lower than gross load NITS because it implicitly assumes BTMG maintenance outages cannot be scheduled to avoid peak periods.[868]

d. <u>Answer</u>

397. Geronimo Power argues that Indicated TOs' proposed rate for NFCD transmission service is unjust and unreasonable, will disincentivize Co-Located Loads from relying on NFCD transmission service, and lead to less efficient use of the transmission system.[869]

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[865] *Id.* at 31-32 (citing Vistra Response Brief at 23-25).

[866] Industrials/Amtrak Reply Brief at 8.

[867] *Id.* at 8 n.13.

[868] *Id.* at 9 n.16.

[869] Geronimo Power May 21 Answer at 8.

Geronimo Power asserts that Indicated TOs offer no meaningful response to the question of what is a just and reasonable rate for NFCD transmission service. Geronimo Power argues that the mere fact that Commission policy allows PJM transmission owners to charge up to the firm rate in some cases does not mean that doing so here is just and reasonable.[870] Geronimo Power avers that there should be little doubt that some form of discount must be applied as to NFCD transmission service.

e. Determination

398. We agree with Indicated TOs that it is just and reasonable to base the rate for FCD transmission service on the zonal NITS rates and underlying NITS revenue requirements[871] and direct the PJM transmission owners, as the replacement rate, to submit a compliance filing within 60 days of the date of issuance of this order that includes Tariff revisions to effectuate this proposal. Both FCD transmission service and NITS will provide a similar level of firm transmission service, and PJM will plan the transmission system to ensure that it is able to provide both transmission services on a firm basis.[872]

399. We find unjust and unreasonable PJM's proposal to charge Eligible Customers taking FCD or NFCD transmission services on behalf of Co-Located Loads for all ancillary services other than regulation and black start based on total quantity of MWhs of energy delivered to the Co-Located Load.[873] In the December Order, the Commission found that Eligible Customers taking the new FCD transmission service on behalf of Co-Located Loads must be charged for ancillary services based on the contract demand, with the exception of regulation and black start services.[874] Similarly, the Commission found that Eligible Customers taking the NFCD transmission service on behalf of Co-Located Loads must be charged for ancillary services on an as-reserved contract demand basis, based on the reserved contract demand amount of transmission service, with the exception of regulation and black start services.[875]

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[870] *Id.* at 9.

[871] Indicated TOs Initial Brief at 6.

[872] *Id.* at 8-9; December Order, 193 FERC ¶ 61,217 at PP 195, 208.

[873] PJM, Initial Brief, attach. A, Subpart B, §§ 714.5 & 715.4.

[874] December Order, 193 FERC ¶ 61,217 at P 209.

[875] *Id.* P 216.

400. However, we find just and reasonable PJM's proposal to charge Eligible Customers taking FCD and NFCD transmission services on behalf of Co-Located Loads for regulation and black start services based on gross demand, which is consistent with the Commission's findings in the December Order. The Commission found in the December Order that "Eligible Customers that take the Firm Contract Demand transmission service on behalf of Co-Located Loads must be charged for regulation and black start services based on a gross demand basis, rather than the contract demand" because all Co-Located Loads rely on regulation and black start services to be served regardless of whether they are withdrawing energy from the transmission system.[876] Likewise, the Commission found in the December Order that "Eligible Customers that take the Non-Firm Contract Demand transmission service on behalf of Co-Located Loads use and therefore should be charged for regulation and black start services based on a gross demand basis, rather than the reserved amount of transmission service."[877] Therefore, and consistent with our determination above to extend the three new transmission services set forth in the December Order to Eligible Customers taking service on behalf of load with BTMG that are willing and able to limit their energy withdrawals from the transmission system under certain conditions, we direct PJM to submit a compliance filing within 60 days of the date of issuance of this order that revises its Tariff to: (1) charge Eligible Customers taking FCD and/or NFCD transmission services on behalf of Eligible Loads for all ancillary services other than regulation and black start services based on their contract demand; and (2) charge Eligible Customers taking FCD and/or NFCD transmission services on behalf of Eligible Loads for regulation and black start services based on their gross load.

401. We also find just and reasonable PJM's proposal to charge Eligible Customers taking FCD and/or NFCD transmission services certain administrative charges. As PJM explains, these are standard charges associated with use of the transmission system above transmission service rates.[878] For the same reason, we find just and reasonable PJM's proposal to charge Eligible Customers taking FCD and/or NFCD transmission services redispatch costs to cover congestion-related costs, given that both of these services will be pool-scheduled and can be served by generators redispatched to mitigate congested transmission paths. We thus direct PJM to submit a compliance filing, within 60 days of the date of issuance of this order, that revises its Tariff to implement these charges. Consistent with our determination above to extend the three new transmission services set forth in the December Order to Eligible Customers taking service on behalf of load with BTMG that are willing and able to limit their energy withdrawals from the transmission

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[876] *Id.* P 209.

[877] *Id.* P 216.

[878] PJM Initial Brief at 27.

system under certain conditions, we further direct PJM to reflect this change in its compliance filing.

402. However, we are not persuaded that Indicated TOs' proposal to set the maximum rate for NFCD transmission service equal to the rate for FCD transmission service is just and reasonable. In the December Order, the Commission was clear that NFCD transmission service would "provide an option for Eligible Customers seeking to use the transmission system on behalf of a Co-Located Load in this *more limited manner*."[879] Further, NFCD transmission service is non-firm and curtailed prior to FCD transmission service and NITS.[880] NFCD transmission service is therefore an inferior service to FCD transmission service and NITS, and we find that the just and reasonable replacement rate here should not charge the same maximum rate for these transmission services. We acknowledge NOVEC's argument that under PJM's proposal, an Eligible Customer would only take and pay for NFCD transmission service when the generator serving it is experiencing an outage, so the same rate does not equate to the same cost to the Eligible Customer.[881] However, the same rate could apply to Eligible Customers taking the same amount of FCD and NFCD transmission services.

403. We also find that charging the same maximum rate for both FCD and NFCD transmission services can undermine the benefits of the new NFCD transmission service for other transmission customers. Specifically, discounting non-firm transmission services encourages transmission customers to use such services, which benefits all transmission customers by maximizing use of the existing transmission system. These benefits accrue to other transmission customers in two ways. First, the revenues related to NFCD transmission service will become a credit to, and thus offset, the transmission revenue requirement, which is the basis for the rates that firm transmission customers are charged. Moreover, utilizing NFCD transmission service can avoid unnecessary Network Upgrades, the costs of which would likely be allocated to all firm transmission service customers.

404. Further, pricing NFCD transmission service at the same rate as FCD transmission service is not consistent with cost causation principles or the December Order's findings. Specifically, the Commission found that requiring an Eligible Customer taking transmission service on behalf of Co-Located Load to take NITS on a gross demand basis would be inefficient, and could necessitate costly transmission buildout and costs paid by transmission customers that may not be necessary if Eligible Customers taking transmission service on behalf of Co-Located Loads are willing and able to limit their

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[879] December Order, 193 FERC ¶ 61,217 at P 214 (emphasis added).

[880] *See infra* Part VI.G.

[881] NOVEC Reply Brief at 10.

energy withdrawals from the transmission system under certain conditions and take a transmission service that requires fewer or less costly Network Upgrades to provide.[882] As noted above, the Commission directed the creation of NFCD transmission service, finding that it would provide an option for Eligible Customers taking service on behalf of Co-Located Loads that seek to use the transmission system in a more limited manner.[883] The December Order further found that Eligible Customers taking service on behalf of Co-Located Loads should be allowed to choose the transmission service that aligns with their use of the transmission system and therefore aligns the charges for service with the benefits received.[884] Indicated TOs' proposal fails to comply with the directive in the December Order by charging the same rate for FCD and NFCD transmission services; the proposal does not align the charges for transmission service with the benefits received.

405. Our finding here is also consistent with Commission precedent. In Order No. 888, the Commission determined that the rate for Non-Firm PTPS "is capped at the firm rate."[885] In response to Order No. 888, Duquesne sought clarification that the phrase "the non-firm rate is capped at the firm rate" does not mean the Commission is deviating from its principles that non-firm transmission service must be priced in a manner that reflects the interruptibility of the service and is economically efficient.[886] The Commission clarified that the Firm PTPS transmission rate represents a maximum price for non-firm transmission service and emphasized that "non-firm transmission prices should reflect the interruptibility of the service and should promote efficient use of the transmission system, subject to this price cap."[887] The Commission concluded that, "while in some circumstances non-firm transmission rates may be set at a firm transmission rate level, the Commission expects that non-firm transmission rates would, in most instances, be priced below the cap."[888]

406. Thus, while the Commission recognized that the Firm PTPS transmission rate could be a ceiling for the Non-Firm PTPS rate, the Commission also recognized that the rates should vary based on the quality of the transmission service. Our finding here is

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[882] December Order, 193 FERC ¶ 61,217 at P 199.

[883] *Id.* P 214.

[884] *Id.* P 199.

[885] Order No. 888, FERC Stats. & Regs. ¶ 31,036 at 31,743.

[886] Order No. 888-A, FERC Stats. & Regs. ¶ 31,048 at 30,272.

[887] *Id.*

[888] *Id.*

consistent with Order No. 888 (i.e., that non-firm transmission service rates should generally be priced below firm transmission service rates). Indicated TOs propose making the exception the rule and thus fail to justify that deviation. Indicated TOs argue that NFCD transmission service is a superior level of service compared to Non-Firm PTPS. But, even assuming that statement is correct, it does not follow that NFCD transmission service is therefore a similar level of service as FCD transmission service or NITS.

407. We recognize that Indicated TOs state that they will consider offering discounts for NFCD transmission service after an initial assessment period to determine whether a discount would encourage efficient use of the transmission system. However, Indicated TOs miss the point of not only aligning the rate with the quality of the service provided, but also designing a rate that incentivizes efficient non-firm uses of the transmission system. It is counterintuitive to expect charging the full rate to inform an analysis of what discounts may be appropriate. Therefore, we find that the possibility of offering discounts at some undefined time in the future is not sufficient to remedy our concerns with their proposal. Under that proposal, Indicated TOs would have no obligation to lower rates in the future and offer no transparency as to how or when that decision would be made; moreover, they provide no compelling explanation as to why it would be just and reasonable to charge for NFCD transmission service at the FCD transmission service rate in the interim.

408. We further disagree with NOVEC's characterization of a lower rate for NFCD transmission service as subsidized; as discussed in the body of this order, we find that a lower rate for NFCD transmission service is just and reasonable and consistent with cost causation. A lower rate for NFCD, as compared to FCD, transmission service will also, as NOVEC points out, incentivize transmission customers to use the service in areas where PJM can accommodate a large amount of NFCD transmission service. This is exactly the point–Eligible Customers taking transmission service on behalf of Eligible Loads will be incentivized to take NFCD transmission service in areas where there is excess transmission capacity, and the charges recouped from those customers will offset the rates paid by firm transmission customers that funded the excess transmission capacity. Otherwise, this transmission capacity would remain unused and firm transmission customers would pay more.

409. NOVEC also argues that in areas where PJM can accommodate a large amount of NFCD transmission service, Co-Located Load could end up with the best of both worlds, where they are rarely curtailed but Eligible Customers taking transmission service on their behalf pay a subsidized rate for transmission service, with the option to switch to FCD transmission service or NITS if PJM can no longer accommodate the required level

of NFCD transmission service.[889] We disagree that Eligible Customers could "simply switch" to FCD transmission service or NITS if PJM can no longer accommodate the requested level of NFCD transmission service.[890] The process to request NITS remains unchanged, and we address the process to request FCD transmission service above. But in either case, provision of firm transmission service will be studied, granted to the extent it can be done so reliably, and only available following construction of any required Network Upgrades.

410. With respect to Industrials/Amtrak's argument that neither FCD nor NFCD transmission services provide a cost-based back-up service for cogeneration QFs and similarly-situated retail customers,[891] this argument is substantively similar to the argument the same parties raised on compliance, which is addressed supra.[892] Industrials/Amtrak contend that, because it would require payment for service based on the contracted amount, FCD transmission service inherently assumes that forced outages or other reductions in electric output by all QFs will occur simultaneously, or during the system peak, or both, without any factual data to support that assumption.[893] However, as noted above, this argument appears to conflate rates for sales of back-up power and rates for transmission service, rendering Industrials'/Amtrak's concerns misplaced.

411. Industrials/Amtrak further argue that it would not comport with cost causation principles to require a FCD transmission service reservation for occasional back-up power needs and that NFCD transmission service will not be useful for back-up power because it must be requested in advance.[894] Again, Industrials/Amtrak appear to conflate back-up power for QFs under PURPA with the subject of this proceeding, which is transmission service taken by Eligible Customers serving Eligible Loads. Further, Industrials/Amtrak state that their concerns are for "whether *retail customers* can access cost-based . . . back-up service"[895] but, with the exception of Eligible Customers that are retail customers taking unbundled transmission service, service available to retail customers is neither the subject of this proceeding nor within the Commission's

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[889] NOVEC Reply Brief at 12-13.

[890] *Id.*

[891] Industrials/Amtrak Response Brief at 16-17.

[892] *See supra* Part V.A.3.

[893] Industrials/Amtrak Response Brief at 17 (citing Dauphinais Aff. ¶ 44).

[894] *Id.* at 18.

[895] *Id.* at 11 (emphasis added).

jurisdiction. However, to the extent Industrials/Amtrak refer to jurisdictional wholesale transmission service when arguing that "examples exist of bespoke arrangements for industrial and institutional customers that may require firm back-up needs,"[896] we continue to find it just and reasonable that Eligible Customers taking NITS be charged on a gross demand basis as explained in the December Order, with limited exceptions.[897] Network Load has the right to be served from the transmission system at any time, and PJM and the transmission owners incorporate Network Load into their transmission planning to ensure that they can fulfill their obligation to provide such service. Thus, regardless of whether certain transmission customers that elect NITS to be able to take transmission service on demand choose to only take such service occasionally, the system will be planned to accommodate them at all times. We therefore continue to find that the benefits of NITS align with charging for NITS based on gross demand. We further reiterate that, as discussed in this order, we have set aside, in part, the December Order to extend the three new transmission services set forth in the December Order to Eligible Customers taking service on behalf of load with BTMG that are willing and able to limit their energy withdrawals from the transmission system under certain conditions.[898]

412. Therefore, we direct the PJM transmission owners to submit, within 60 days of the date of issuance of this order, a compliance filing with the Tariff charges for NFCD transmission service in accordance with this order. Specifically, the PJM transmission owners must propose a lower maximum rate or non-discriminatory discounts for the NFCD transmission service rate. Moreover, the PJM transmission owners must ensure that their proposed Tariff revisions are transparent as to how charges will be calculated for an individual transmission customer. Consistent with our determination above to extend the three new transmission services set forth in the December Order to Eligible Customers taking service on behalf of load with BTMG that are willing and able to limit their energy withdrawals from the transmission system under certain conditions, we further direct the PJM transmission owners to reflect this change in their compliance filing.

5. Other

a. Initial Briefs

413. PJM states that any request for FCD and/or NFCD transmission service must comply with Commission regulations for new service requests, and include several items specific to these transmission services, such as a description of the supply characteristics

[896] *Id.* at 12.

[897] December Order, 193 FERC ¶ 61,217 at PP 186, 195.

[898] *See supra* Part IV.C.1.b.i.

of the Co-Located Generator and the demand characteristics of the Co-Located Load.[899] Upon receiving an application, PJM will evaluate whether the requested level of Contract Demand transmission service can be reliably provided. PJM then explains that the Eligible Customer must meet several conditions precedent, such as certifying that it is willing and able to limit withdrawals from the transmission system when requested by PJM and providing PJM with an authorization or certification from its Relevant Electric Retail Regulatory Authority (RERRA) affirming that the Eligible Customer is authorized to provide energy to the Co-Located Load. PJM also proposes to require that certain facilities and necessary technical arrangements must be completed prior to commencement of requested service.

414. PJM next explains that, under the Service Agreement for Contract Demand transmission service, service is presumed to continue without expiration, and that there are several bases for termination.[900] For example, PJM explains that service can terminate on 42 months' notice prior to the commencement of a delivery year, and PJM argues that this is appropriate because the contract demand level under FCD transmission service will be accounted for in PJM's capacity market. PJM proposes circumstances whereby PJM may terminate service for cause: (1) the Eligible Customer breaches its obligations, such as materially changing the Co-Location Arrangement without PJM studying it; or (2) the Eligible Customer is disqualified by failing to follow an operating instruction to curtail or shed load, or after the misoperation, on more than one occasion, of any necessary control technologies or required protection systems (described further below).

415. PJM next proposes that the Eligible Customer designate the Co-Located Load and the Co-Located Generator and provide the MW level of energy from the Co-Located Generator dedicated to serving the Co-Located Load.[901] For reliability purposes, PJM states, the Eligible Customer must provide PJM with timely written or electronic notice of material changes in the demand characteristics of the Co-Located Load or the supply characteristics of the Co-Located Generator. PJM maintains that necessary control technologies and protection systems for NFCD transmission service will be designed based on the specific circumstances of each Co-Location Arrangement, and PJM's ability to reliably operate the system could be impaired by any material changes to the control technologies or protection systems. PJM proposes to prohibit an Eligible Customer from using FCD transmission service for the sale of either capacity or energy to loads other

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[899] PJM Initial Brief at 17-19.

[900] *Id.* at 20-22.

[901] *Id.* at 22-24.

than the Co-Located Load designated in its Service Agreement or the transmission service to third parties.

b. **Response Briefs**

416. ODEC requests clarification regarding how PJM's requirement that an Eligible Customer taking transmission service on behalf of a Co-Located Load provide PJM with an authorization or certification from its RERRA which affirms that the Eligible Customer is authorized to provide energy to the Co-Located Load would apply to a generation and transmission electric cooperative like ODEC.[902] ODEC states that it is unclear whether PJM intends that ODEC, as an Eligible Customer, would need to provide certification that ODEC's member distribution cooperatives (which are the RERRA in Maryland and Delaware) have authorized ODEC to provide energy to the Co-Located Load. ODEC adds that, where the state regulatory agency is the RERRA, ODEC is unaware of a procedure whereby it would obtain authorization from the Virginia State Corporation Commission to provide energy to Co-Located Loads.

417. Constellation opposes PJM's proposal that the Eligible Customer must submit an authorization or certification from the RERRA affirming that the Eligible Customer is authorized to provide energy to the Co-Located Load.[903] Constellation argues that, if the generator is the Eligible Customer, it is unreasonable to require that generator to go to the state commission for a special approval if the load is in a retail competition state. Constellation maintains that the Eligible Customer need only show that the load will be served by a transmission owner or licensed competitive retail supplier.

418. Industrials/Amtrak argue that Co-Located Load on whose behalf an Eligible Customer takes NFCD transmission service should have firm natural gas capacity or other adequate alternatives to be able to utilize the service. Industrials/Amtrak argue this requirement will prevent "misuse" of NFCD transmission service "by generators who have the ability to operate but may want to rely on the grid when it appears to be more economical for that generator."[904] Industrials/Amtrak explain that, from a resource adequacy perspective, policies surrounding NFCD transmission service should encourage loads to bring their own generation.

419. Indicated TOs request that PJM add to section 710.1 of PJM's illustrative tariff provisions, as a condition precedent for receiving FCD or NFCD transmission service, a requirement that the Eligible Customer satisfy any load-connection related requirements

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[902] ODEC Response Brief at 6-7.

[903] Constellation Response Brief at 29.

[904] Industrials/Amtrak Response Brief at 24.

imposed by the applicable PJM transmission owner.[905] Indicated TOs argue that PJM should add language to the list of information in section 710.2 of PJM's illustrative tariff provisions to be provided in an application for FCD and/or NFCD transmission service to the effect that the customer has met applicable load interconnection study obligations. Indicated TOs request that PJM add a placeholder section for listing required control technologies or protection systems to section 5.0 of PJM's proposed Attachment F-4.[906]

420. Indicated TOs request that PJM clarify whether the use of "Delivery Point" in section 710.2 subsection (iii) and subclause (i) of section 710.5 is appropriate in light of PJM's proposed definition of Co-Located Load, which is based on facilities located on the same side of the Point of Change in Ownership.[907]

421. Indicated TOs contend that PJM should clarify in section 711.3 of PJM's illustrative tariff provisions or in PJM's manuals what constitutes "material changes" for purposes of the annual information updates to be provided by Eligible Customers.[908] Indicated TOs argue that PJM should revise section 712.2 of PJM's illustrative tariff provisions to require PJM to notify the affected PJM transmission owner(s) of any request for NFCD transmission service. Indicated TOs argue that PJM should revise section 713 of PJM's illustrative tariff provisions to require that notice of any curtailment be provided not only to the Eligible Customer but also to the affected PJM transmission owner or Electric Distribution Company.

422. Constellation recommends that, for Eligible Customers requesting transmission service on behalf of Co-Located Load, if the customer facilities include an existing generator, a certification be required that the existing generator supports the transmission service request.[909] Constellation argues that this requirement would ensure the Co-Located Load is physically connected to the facilities of the existing or planned Customer Facility. Alliance promotes their framework for looking at how to responsibly enable large-load integration while preserving reliability, cost causation, and affordability.[910]

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[905] Indicated TOs Response Brief at 18.

[906] *Id.* at 19, 24.

[907] *Id.* at 18-19 n.41.

[908] *Id.* at 20-22.

[909] Constellation Response Brief at 30.

[910] Alliance Response Brief at 2.

c. Reply Briefs

423. In response to parties' comments, particularly those of Indicated TOs, PJM proposes certain revisions to its illustrative tariff language for FCD and NFCD transmission services.[911] Specifically, PJM notes that it proposes revisions to section 711.3 to provide that the applicable transmission owner will be notified of material changes to Co-Located Arrangements, as well as a reference to the PJM manuals for further description of what would constitute a material change. PJM further proposes changes to section 713.1 to provide that PJM will notify the applicable transmission owners of any instruction to curtail Co-Located Load.

424. Constellation urges the Commission to deny Indicated TOs' proposal to replace "Delivery Point" with "Point of Change in Ownership" in PJM's requirements for applications for FCD and NFCD transmission services because it would risk uncertainty or delays for parties in Co-Location Arrangements.[912] Constellation asserts that the Tariff should use "Point of Interconnection," consistent with the definition of Co-Located Load.

425. Since filing its initial brief, PJM states that it has determined that changes to Auction Revenue Rights rules must be modified to recognize that FCD transmission service customers will contribute towards enhancing and maintaining the transmission system and should have the right to request Auction Revenue Rights.[913] To effectuate this modification, PJM proposes a revision to Operating Agreement, Schedule 1, section 7.4.2(d) and includes a new Operating Agreement, Schedule 1, section 7.4.2(*l*) to detail the Auction Revenue Rights rules specific to Eligible Customers taking FCD transmission service.[914]

d. Determination

426. We disagree with PJM that it is just and reasonable for the replacement rate to require Eligible Customers requesting FCD or NFCD transmission service to provide an authorization or certification from its RERRA affirming that the Eligible Customer is authorized to provide energy to the Co-Located Load.[915] PJM does not provide any

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[911] PJM Reply Brief at 62-63.

[912] Constellation Reply Brief at 9 (citing Indicated TOs Response Brief at 19).

[913] PJM Reply Brief at 65.

[914] *Id.* at 65-66.

[915] PJM Initial Brief at 18-19.

explanation or context for proposing this requirement, and it is not clear why an Eligible Customer would need to go through this extra step under the Tariff to prove it is authorized to serve load. If an Eligible Customer that is not authorized to provide energy to load attempts to do so, that would be a matter for the RERRA's enforcement mechanisms.

427. We similarly disagree with Constellation that it is necessary to require Eligible Customers requesting FCD or NFCD transmission service on behalf of Co-Located Load to include a certification from the Co-Located Generator, if it is an existing generator, to ensure that the Co-Located Load is physically connected to the generator's facilities. The Commission already made clear that Co-Located Load must be "physically connected to the facilities of an existing or planned Customer Facility on the Interconnection Customer's side of the Point of Interconnection to the PJM Transmission System."[916] If an Eligible Customer attempts to request FCD or NFCD transmission service on behalf of a load that did not meet the definition of Co-Located Load, that should be referred to the Commission's Office of Enforcement and Regulatory Accounting.

428. Industrials/Amtrak argue that Co-Located Load on whose behalf an Eligible Customer takes NFCD transmission service should have firm natural gas capacity or other adequate alternatives to be able to utilize the service.[917] Industrials/Amtrak explain that such a requirement would "avoid misuse of the [NFCD transmission] service by generators who have the ability to operate but may want to rely on the grid when it appears to be more economical for that generator." The December Order contained no such limitation and Industrials/Amtrak have failed to justify adding it here. Specifically, the December Order stated that NFCD transmission service would reflect Eligible Customers taking service on behalf of Co-Located Loads that may not "necessarily plan to withdraw energy from the transmission system on a regular basis" but "still seek to withdraw energy from the transmission system from time to time when transmission capacity is available and not needed by firm customers."[918] The December Order thus contemplates that NFCD transmission service would be an option for Eligible Customers taking transmission service on behalf of Co-Located Load, not a mandate.

429. Indicated TOs request that the Commission direct as part of the replacement rate requirements related to Eligible Customers satisfying requirements related to load

[916] December Order, 193 FERC ¶ 61,217 at P 1 & n.3; February Order, 190 FERC ¶ 61,115 at P 3 & n.4.

[917] Industrials/Amtrak Response Brief at 24.

[918] December Order, 193 FERC ¶ 61,217 at P 214.

interconnections.[919] Indicated TOs have not explained why these requirements are necessary, and so we decline to make them a part of the replacement rate at this time. However, we agree with Indicated TOs' request that PJM add a placeholder section for listing necessary control technologies and/or protection systems to section 5.0 of PJM's proposed Attachment F-4.

430. We also find PJM's proposal to allow FCD transmission service customers to request Auction Revenue Rights in stage 2 of the allocation process to be just and reasonable. Given the underlying design of the FCD transmission service, we find the presumption that FCD transmission service customers contribute towards enhancing and maintaining the transmission system on par with other Firm PTPS transmission customers to be reasonable. PJM's proposal provides FCD transmission service customers an equivalent opportunity to request Auction Revenue Rights. We direct PJM to submit a compliance filing within 60 days of the date of issuance of this order to revise its Tariff consistent with this replacement rate. Consistent with our determination above to extend the three new transmission services set forth in the December Order to Eligible Customers taking service on behalf of load with BTMG that are willing and able to limit their energy withdrawals from the transmission system under certain conditions, we further direct PJM to reflect this change in its compliance filing.

B. Additional Charge for Eligible Customers Taking FCD and/or NFCD Transmission Service

1. December Order

431. As part of the paper hearing, the Commission asked the parties:

> Should the rate paid by an Eligible Customer on behalf of a Co-Located Load taking only the new Non-Firm Contract Demand transmission service that elects to not reserve any amount of that service for a period of time (e.g., one month) reflect not only charges for regulation and black start services, but also an additional charge given that regulation and black start services could not be provided without the transmission system? If so, how should that additional charge be determined?

432. In addition, the Commission asked:

> Should the rate paid by an Eligible Customer on behalf of a Co-Located Load taking only a *de minimis* amount of the new

[919] Indicated TOs Response Brief at 18-19.

> Firm or Non-Firm Contract Demand transmission services reflect not only (i) charges for regulation and black start service and (ii) the transmission service charges for that *de minimis* amount of service, but also an additional charge reflecting that the Co-Location Arrangement is physically connected and synchronized to the PJM transmission system? If so, how should that additional charge be determined?

2. **Initial Briefs**

433. Indicated TOs propose to charge a Grid Reliance Charge to Eligible Customers taking FCD or NFCD transmission service based on the difference between either the contract amount of FCD transmission service, or the reserved amount of NFCD transmission service, and the customer's gross on-site load.[920] Indicated TOs explain that the Grid Reliance Charge is designed to reflect the costs of using the transmission system to deliver black start and regulation services, as well as the inherent benefit that all customers receive through their synchronization to and reliance on the transmission system. Indicated TOs state that the Grid Reliance Charge also recognizes the costs associated with the operations, maintenance, and other activities that Indicated TOs will need to perform for the transmission system and to accommodate the increased number of protection schemes required for Co-Location Arrangements. Indicated TOs propose to calculate this charge for each zone based on an average fixed percentage of the portion of transmission depreciation and operations and maintenance expense associated with providing grid reliance services, and to apply that percentage to each transmission owner's annual revenue requirement.[921] Indicated TOs argue that it is appropriate to use annual depreciation and operations and maintenance expenses because these expenses best capture the portions of a transmission owner's revenue requirement relating to the ongoing reliable operation of the transmission system. Indicated TOs propose an initial percentage of 25.8%, subject to adjustment every five years.

434. In further justifying the Grid Reliance Charge, Indicated TOs assert that Co-Located Load and its associated Co-Located Generator benefit from the existence and reliable operation of the transmission system because they are electrically connected to the transmission system, and should contribute to paying the costs of continuing to reliably operate the system regardless of the amount of energy withdrawn. Indicated TOs contend that a large Co-Location Arrangement with zero MW of FCD or NFCD transmission service still depends on the grid for the delivery of various ancillary services and a suite of synchronization support services, such as stable frequency, inertia, stability

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[920] Indicated TOs Initial Brief at 14.

[921] *Id.* at 14-16.

services, fault current capability, and ride-through and protection coordination. Indicated TOs argue that the Commission has long recognized that an integrated transmission system provides broad reliability benefits to all customers of the system, and this recognition has guided Commission decisions on ratemaking and cost allocation.[922]

435. Indicated TOs maintain that their proposed methodology for the Grid Reliance Charge is a just and reasonable way to estimate with an appropriate level of precision the benefits to Co-Located Load from relying on the grid while ensuring this charge can be fairly and efficiently implemented.[923] Indicated TOs state that they have included detailed testimony on the proposed methodology, and they highlight that the allocator is based on costs included in transmission plant and transmission operations and maintenance FERC accounts.[924] Indicated TOs contend that their proposal is conservative in a number of respects, for example, they exclude amortization and general plant depreciation, as well as administrative and general expenses. Indicated TOs explain that the allocator will be multiplied by each transmission owner's rate for NITS and FCD transmission service, resulting in an "unadjusted" Grid Reliance Charge rate. Indicated TOs further explain that they propose to multiply this unadjusted rate by a ratio that accounts for the difference between the demand used to account for the NITS and FCD transmission service rate and the gross load for Eligible Customers on behalf of Co-Located Load, resulting in the final Grid Reliance Charge for each zone. Indicated TOs propose to update the allocation percentage every five years to ensure rate stability and avoid the allocators becoming stale. Indicated TOs propose to apply the revenues from the Grid Reliance Charge as credits to NITS and FCD transmission service customers in the relevant zone to avoid double recovery or inappropriate cost shifts.

3. <u>Response Briefs</u>

a. <u>Basis for an Additional Charge</u>

436. ODEC and NOVEC support Indicated TOs' proposal for a Grid Reliance Charge to be applied to customers taking FCD and NFCD transmission service.[925] ODEC argues such a charge ensures that Co-Located Loads pay their "fair share" of costs that are commensurate with the benefits Co-Located Loads receive from the transmission system, including the costs associated with delivery of black start and regulation services.

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[922] *Id.* at 15-16 (citing *W. Mass. Elec. Co. v. FERC*, 165 F.3d 922, 927 (D.C. Cir. 1999)).

[923] *Id.* at 16.

[924] *Id.* at 16-18.

[925] ODEC Response Brief at 10; NOVEC Response Brief at 9.

NOVEC similarly asserts that Co-Located Load depends on the transmission system to deliver black start and regulation services, the charges for which a delivery component is not included. NOVEC argues that without the Grid Reliance Charge, a Co-Located Load that reserved no FCD or NFCD transmission service would be a free rider, as it would benefit from the payments of existing transmission customers to maintain the transmission system without making any contribution towards it.

437. Geronimo Power argues that Indicated TOs have not demonstrated that their proposed Grid Reliance Charge reflects Co-Located Loads' actual impact on or benefits from interconnection with the transmission system and is consistent with cost causation principles.[926] Further, Geronimo Power states that Indicated TOs have failed to demonstrate that there is a separate delivery component to black start and regulation services and that, if there were such a component, Indicated TOs have not explained why it would not be unduly discriminatory to apply it only to Co-Located Loads.

438. Vistra argues that Indicated TOs fail to address the nuances in the Commission's paper hearing questions on additional charges or the actual ways that NFCD transmission service customers might rely on the grid.[927] Vistra asserts that the Commission's questions illustrate that customers could use NFCD transmission service in different ways but transmission owners would impose the same charge regardless. Vistra maintains that, while Indicated TOs argue that Co-Located Loads are all synchronized to the grid, synchronization is not, itself, a service. Vistra alleges that, in contrast to the Commission's long-standing policy that transmission providers offer and price ancillary services separately, Indicated TOs create a new service for what appears to be an undefined ancillary service (i.e., grid reliance) to cover a suite of synchronization support services. Vistra argues that it is not consistent with cost causation principles to impose the same grid reliance charge for very different types of grid reliance. Vistra contends that the Commission did not prejudge whether or when a grid reliance charge is necessary and that the Commission could conclude no such charge is necessary for customers taking zero MWs or a de minimis amount of the new transmission services.

439. Industrials/Amtrak argue that, as an as-available service, there should be no standby fee charging NFCD transmission service customers for access to the transmission system that is not guaranteed. Instead, Industrials/Amtrak contend that customers should be charged based on actual use on an hourly basis.[928]

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[926] Geronimo Power Response Brief at 10-11, 13-14.

[927] Vistra Response Brief at 19-21.

[928] Industrials/Amtrak Response Brief at 24.

b. Methodology for Determining Additional Charge

440. NOVEC states that the proposed Grid Reliance Charge is just and reasonable because it is limited to depreciation and operations and maintenance, and conservatively excludes a return on rate base and associated income taxes.[929] NOVEC also notes that because revenues earned from the Grid Reliance Charge are returned to NITS and FCD transmission service customers as a revenue credit, the structure avoids any risk of double recovery.

441. Alliance argues that the additional charge question is important and should be resolved in a way that protects other customers from unjustified cost shifts.[930] Alliance takes no position on a specific dollar figure; instead, it recommends that any additional charge reflect the contributions of load that have efficient operations or verified load flexibility through reductions in their cost obligations.

442. Regarding Indicated TOs' argument that the Grid Reliance Charge will also cover costs associated with the protection schemes for Co-Located Load, Geronimo Power argues there is no reason to believe transmission owners will bear any such costs that could not be addressed in interconnection agreements.[931]

443. Vistra argues that, even if some charge is appropriate, Indicated TOs have not justified their proposed rate.[932] Vistra contends that it is unreasonable to propose that a customer that never takes transmission service receives benefits approximating 25.8% of the transmission owners' revenue requirement. Vistra highlights that only 0.5% of PJM's monthly total billings are related to black start and regulation charges and that, to the extent an NFCD transmission service customer never reserves transmission service relies on the transmission system, that reliance is for the sole purpose of receiving black start and regulation service. As such, Vistra argues, the percentage of PJM's total monthly billings that relates to black start and regulation charges is a reasonable proxy for the amount of transmission system costs that are associated with use of the grid to deliver black start and regulation service.

444. Vistra also contends that Indicated TOs' proposal conflicts with the Commission's transmission pricing policy because it disincentivizes efficiency and focuses on reallocating a large share of sunk costs. Moreover, Vistra contends, Indicated TOs'

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[929] NOVEC Response Brief at 10.

[930] Alliance Response Brief at 4.

[931] Geronimo Power Response Brief at 14.

[932] Vistra Response Brief at 21-23.

proposal would create significant and unjustified cost shifts between NFCD transmission service customers and Network Customers.[933] Vistra suggests it is not clear what transmission owners, which are major Network Customers, will do with the bill credits and that it is not a foregone conclusion that they will pass savings onto retail customers.

445. Constellation contends that Indicated TOs' proposed Grid Reliance Charge rests on an unsound methodology that violates cost causation principles.[934] Constellation requests that the charge be recalculated based on the "minimum system" method. Constellation asserts that Indicated TOs both exclude reasonable costs and include unreasonable costs in the grid reliance capability operations and maintenance and provide very little justification for their proposal. Moreover, Constellation argues that Indicated TOs inappropriately include full depreciation costs for a variety of transmission components that are sized to meet actual peak demand requirements of the PJM system, even though customers paying the Grid Reliance Charge do not withdraw energy from the PJM system. In support of the minimum system method, Constellation argues it is designed to calculate the set of costs that a Co-Located Load that benefits from the existence of wires but imposes no demand on the grid should share. Constellation explains that its method involves determining the minimum size of all electricity system components that could be used by the utility to recreate its system and connect each customer to the grid, and then applying this fraction to each transmission owners' NITS rate.

4. **Reply Briefs**

a. **Basis for an Additional Charge**

446. Indicated TOs contend that being connected to the grid provides obvious benefits in terms of the ability to access resources that are not co-located with load.[935] Indicated TOs further argue that being connected to the grid includes benefits like delivering ancillary services and essential reliability services, such as frequency support, inertia, voltage stability, fault current capability, ride-through and protections coordination, and providing sufficient short-circuit capability. Indicated TOs state that they are unaware of any existing or proposed Co-Located Load customers that are choosing to island their load and on-site generation, and they infer from that fact that Co-Located Loads should

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[933] *Id.* at 23-25.

[934] Constellation Response Brief at 25-28.

[935] Indicated TOs Reply Brief at 22 (citing Joint Blazunas/Schafer/Hammer Rebuttal Test. at 16); *see also* Joint Blazunas/Schafer/Hammer Rebuttal Test. at 31.

share in the basic costs of operating and maintaining the grid upon which they rely.[936] Indicated TOs further argue that an additional charge is appropriate because ancillary services such as black start and regulation provide no value without the ability to access the transmission system to obtain them.[937]

b. Methodology for Determining Additional Charge

447. Indicated TOs defend their proposed methodology, arguing that it produces a more conservative result focused on recovery of the costs necessary to support the ongoing reliable operation of the transmission system, rather than a return on investment.[938] Indicated TOs criticize Constellation's proposal to use the "minimum system" method, arguing that it is not used at the transmission level and lacks any correlation between the benefits Co-Located Load receives and the electrical connection of customers. Indicated TOs also reject Vistra's proposed methodology, arguing that Vistra draws no connection between the percentage of billed revenue for regulation and black start and the costs of the transmission system to deliver those services and the benefits associated with grid connection.

448. NOVEC argues that Constellation's minimum system proposal is not cost-aligned with the use of black start service or regulation service because black start service relies on the existence and durability of the transmission system in a way that Constellation's minimum system methodology does not capture.[939] NOVEC further argues that the ratio method advanced by Vistra arbitrarily confuses the cost of black start and regulation services with the cost of the transmission infrastructure necessary for customers to receive them.

449. Joint Co-Location Developers argue that the proposed Grid Reliance Charge is derived from an unsound methodology that violates cost causation principles.[940] Joint Co-Location Developers argue that the Commission should direct the PJM transmission

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[936] Indicated TOs Reply Brief at 22.

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

[938] *Id.* at 24, 26-27, 29.

[939] NOVEC Reply Brief at 23, 26.

[940] Joint Co-Location Developers Reply Brief at 3 (citing Constellation Response Brief at 25; Geronimo Power Response Brief at 9-15; Vistra Response Brief at 18-23).

owners to adopt the alternate cost calculation framework proposed by Constellation, which follows the Commission's cost causation principles.[941]

450. Industrials/Amtrak argue that the proposed Grid Reliance Charge fails to reflect how different customers actually rely on the transmission system and would result in customers that take little or no energy from the grid subsidizing traditional network customers, violating cost causation principles.[942] Industrials/Amtrak argue that NFCD transmission service should not be charged a standby fee such as the Grid Reliance Charge, as NFCD transmission service does not provide any guaranteed availability.

5. Answers

451. Constellation contends that Indicated TOs' proposal would force customers that do not impose demand on the transmission system to pay for transmission components sized to serve peak load, while also arbitrarily excluding costs related to rate of return and taxes.[943] Constellation defends its proposed minimum system methodology.

452. Geronimo Power asserts that, while it does not oppose the concept of a grid reliance charge, Indicated TOs continue to fail to show that it is necessary and reflects Co-Located Loads' actual grid impact or the transmission service they will receive.[944] Geronimo Power argues that Indicated TOs' proposal to assess a charge for the delivery of black start and regulation service when other customers are not required to pay a separate delivery charge is unjust, unreasonable, and unduly discriminatory or preferential.[945] Geronimo Power maintains that Indicated TOs have not demonstrated that the purported synchronization benefits will accrue to the same degree for Co-Located Load that is being primarily supplied by on-site generation.[946]

453. Indicated TOs respond to Constellation's argument that the Indicated TOs' proposed charge is based on the cost of the transmission system to serve peak demand rather than to delivery ancillary services, arguing that the purpose of the Grid Reliance

[941] *Id.* at 4 (citing Constellation Response Brief, attach. 1, (Testimony of Zachary Ming), at 14-15).

[942] Industrials/Amtrak Reply Brief at 11-12, 14.

[943] Constellation May 11 Answer at 11-12.

[944] Geronimo Power May 21 Answer at 10.

[945] *Id.* at 11.

[946] *Id.* at 12.

Charge is not only to recover costs to deliver ancillary services, but to ensure Co-Located Load customers pay their fair share of the transmission system as it exists and the associated benefits that it provides to all interconnected customers, including essential reliability services.[947] Indicated TOs maintain that their proposed charge does so by calculating the annual depreciation and operations and maintenance expenses that constitute a reasonable proxy for the costs of providing those benefits. Indicated TOs assert that Constellation's minimum system method is only appropriate for and applicable to distribution level service.

6. <u>Determination</u>

454. In the December Order, the Commission sought briefing on whether the Commission should establish an additional charge for Eligible Customers on behalf of a Co-Located Load that elects to not reserve any amount of transmission service or only a *de minimis* amount of transmission service.[948] In response, parties submitted briefs addressing a range of issues, including, among others: (1) what potential benefits Eligible Customers that are synchronized to the transmission system might receive when not drawing energy from the transmission system; (2) whether those potential benefits warrant an additional charge or are adequately addressed through any transmission service charges that the Eligible Customer is already responsible for; and (3) proposed rates for such a charge and whether those proposed rates are consistent with cost causation principles.

455. We have considered that record and conclude that it does not adequately substantiate the need for an additional charge at this time or how such a charge should be calculated and assessed. In particular, the record contains insufficient description of the potential nature or magnitude of the cited benefits or the potential costs that transmission providers or owners may incur when providing these benefits to Eligible Customers on behalf of Co-Located Loads. For example, Indicated TOs state that, even where an Eligible Customer has requested FCD or NFCD transmission service for 0 MW, a large Co-Location Arrangement will still depend on the transmission system for a suite of synchronization support services, such as stable frequency, inertia, stability services (damping, angle stability), fault current capability, and ride-through and protection coordination.[949] However, beyond briefly listing such benefits, the record lacks specificity regarding what these services are, what costs they involve, and how they

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[947] Indicated TOs May 28 Answer at 11.

[948] December Order, 193 FERC ¶ 61,217 at P 219, questions 3 and 4.

[949] Indicated TOs Initial Brief at 15.

benefit Eligible Customers on behalf of Co-Located Loads. Accordingly, we decline to establish an additional charge at this time.

456. Nonetheless, we recognize that the new transmission services created in this proceeding could raise novel questions regarding application of cost causation principles, particularly if, in practice, many Eligible Customers taking the new transmission services on behalf of Eligible Load elect to take a *de minimis* or not reserve any amount of transmission service. We believe that experience with the actual use of these new transmission services will improve our understanding of any potential issues and inform whether future action is needed. To the extent parties identify such issues resulting from how Eligible Customers on behalf of Eligible Load use the new transmission services, they may submit filings under FPA section 205 or complaints under FPA section 206, as appropriate, and the Commission will consider the records before us at that time.

C. Interconnection Requirements and Operational Practices for Necessary Control Technologies and/or Protection Systems

1. Initial Briefs

457. PJM states that NERC has established reliability standard requirements for the various forms of control technologies that may be relied upon for grid stability to which Eligible Customers are expected to adhere.[950] PJM explains that the PJM manuals and, as applicable, NERC reliability standards will contain the interconnection requirements and operational practices needed for necessary control technologies and protection systems to maintain system reliability if a Co-Located Load or Co-Located Generator trips offline. PJM asserts that the NERC reliability standards form baseline interconnection requirements and operational practices, and the PJM manuals provide additional details and, at times, more stringent standards for remedial action schemes. PJM describes an illustrative list of interconnection requirements and operational practices in its brief, including NERC Reliability Standards PRC-012-2 and PRC-017-1, PJM Manual 3, section 1.8, and PJM Manual 7, section 17.2.[951]

458. Indicated TOs do not offer a specific proposal at this time, but they highlight concerns and key elements relating to interconnection, planning, and operational practices for the new transmission services.[952] Indicated TOs assert that it is novel to use multiple special protection schemes/remedial action schemes to protect the grid from large amounts of on-site load exceeding their contractual withdrawal limitations.

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[950] PJM Initial Brief at 56-57.

[951] *Id.* at 57-58.

[952] Indicated TOs Initial Brief at 22-26.

Indicated TOs recommend that all special protection schemes and remedial action schemes be fully redundant to protect against the failures of protection schemes. Indicated TOs recommend that the Eligible Customer taking FCD transmission service, NFCD transmission service, or Interim NITS on behalf of Co-Located Load pay for PJM- and transmission owner-administered studies to ensure any special protection schemes or remedial action schemes can mitigate the risks of potential failure modes. Indicated TOs request the option to review and agree to curtailment procedures and operational control mechanisms. Indicated TOs argue that all special protection schemes and remedial action schemes must meet PJM and transmission owner technical criteria.

459. Indicated TOs state that the Commission should consider requiring more frequent testing of special protection schemes and remedial action schemes than is currently required by NERC reliability standards. Indicated TOs argue that they and PJM should receive test results of protection schemes and that any inadequate special protection schemes or remedial action schemes should be updated accordingly. Indicated TOs argue that they and PJM should be permitted to implement and enforce reasonable limits on the total amount of load that can be covered by special protection schemes or remedial action schemes. Indicated TOs request that the Commission direct NERC to establish requirements so that Eligible Customers taking FCD transmission service, NFCD transmission service, or Interim NITS on behalf of Co-Located Loads would be responsible for meeting relevant NERC reliability standards. Indicated TOs contend that the Commission must strictly enforce compliance with NERC Reliability Standard PRC-012-2 (Remedial Action Schemes), which includes nine requirements to address all aspects of remedial action schemes. Indicated TOs also emphasize that they will need to perform load integration studies for any Co-Located Load, as they currently do for large load customers, which could involve analysis of whether upgrades are needed to accommodate the physical gross load behind the Point of Interconnection.

2. <u>Response Briefs</u>

460. Vistra opposes Indicated TOs' request to implement and enforce limits on the amount of load that can be covered by special protection schemes, including in certain areas.[953] Vistra expresses concern that this limit could lead to undue discrimination, and argues that if the Commission permits such limits, the Commission must ensure standardized and transparent guidelines are in place. Vistra contends that Indicated TOs' proposal would violate the comparability requirement because PJM's existing procedures do not include location-based restrictions for remedial action schemes. Vistra also opposes Indicated TOs' proposal to own special protection schemes, arguing that it would needlessly raise the cost of transmission service.

[953] Vistra Response Brief at 27-28, 31.

461. NOVEC states that at a minimum, PJM's proposal to incorporate NERC reliability standards is just and reasonable.[954] NOVEC also states that the Commission should direct NERC to establish registration requirements for Co-Located Loads so that they can be responsible for meeting NERC reliability standards.

462. NOVEC states that special protection schemes should be fully redundant and that the applicable transmission owner should be able to establish technical criteria for the interconnection of Co-Located Load.[955] NOVEC argues that transmission owners are familiar with the operating characteristics of their own systems, and any criteria should be flexible enough to include reasonable requirements the transmission owners believe are necessary to protect the transmission system.

463. Industrials/Amtrak argue that, to the extent that special protective schemes are required by the Commission for access to NFCD transmission service, the requirements should account for realistic on-site constraints, such as certain load/generation configurations that allow only a limited amount of draw from the transmission system.[956]

464. In response to PJM's Initial Brief, Indicated TOs argue that any Eligible Customer taking any of the new transmission services (including FCD transmission service) ought to comply with requirements to implement necessary control technologies and protection systems to ensure that a Co-Located Load does not exceed its specified level of service.[957] Indicated TOs therefore request that PJM add language to section 708(c) of PJM's illustrative tariff provisions making clear that Interim NITS, FCD transmission service, and NFCD transmission service are contingent on the implementation of necessary control technologies and protection systems, where applicable. Relatedly, Indicated TOs propose to strike the phrase "only in the case of Non-Firm Contract Demand Transmission Service" from subclause (ii) of section 710.5 of PJM's illustrative tariff provisions.[958] Similarly, Indicated TOs contend that PJM should revise section 713.6 of PJM's illustrative tariff provisions so as to not limit the requirement to establish necessary control technologies and protection systems to NFCD transmission service.

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[954] NOVEC Response Brief at 16-17.

[955] *Id.* at 17.

[956] Industrials/Amtrak Response Brief at 25.

[957] Indicated TOs Response Brief at 7-8, 17-18.

[958] *Id.* at 19-20, 22.

465. Indicated TOs argue that PJM should include language in the Tariff making clear that necessary control technologies and protection systems may be required on both the customer's and the transmission owner's side of the Point of Interconnection, including in section 710.5 of PJM's illustrative tariff provisions.[959]

466. Indicated TOs argue that it is important for PJM to work with the PJM transmission owners and other stakeholders to develop details on the requirements associated with control technologies and protection systems necessary to ensure that Co-Located Loads do not exceed their relevant withdrawal limitations.[960]

467. Constellation seeks clarification that PJM only intends to apply existing requirements in Manual 3 to Co-Location Arrangements, not to establish new requirements solely for such arrangements.[961] Constellation also seeks clarification that PJM does not intend to restrict the use of permanent system protection schemes.

468. Constellation supports Indicated TOs' first four recommendations, subject to clarification to avoid delay and discrimination.[962] For example, while Constellation supports requiring full redundancy for special protection schemes and remedial action schemes, Constellation argues that it is not clear what full redundancy means. Constellation opposes the Indicated TOs' remaining recommendations as unsupported and discriminatory.

3. **Reply Briefs**

469. Indicated TOs state that they agree that the transmission owner and customer each may own the circuit breaker(s) and protection systems at their respective facilities and, in response to Constellation, state that the number of breakers will be determined by the transmission owner's and customer's design practices and budgets, as well as the

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[959] *Id.* at 8-9, 20.

[960] *Id.* at 9.

[961] Constellation Response Brief at 21.

[962] *Id.* at 22-25. More specifically, Constellation supports, subject to clarification, Indicated TOs' recommendations that: (1) all special protection schemes and remedial action schemes be fully redundant; (2) customers should pay for PJM and transmission owner-administered studies to ensure any special protection schemes and remedial action schemes can effectively mitigate the risks of potential failure modes; (3) transmission owners have the option to review and agree to any customer load curtailment procedures or operational control mechanisms; and (4) all special protection schemes and remedial action schemes must fully meet PJM and transmission owner technical criteria. *Id.*

transmission owner's technical criteria. Indicated TOs disagree with Constellation's assertion that new technical criteria specific to Co-Located Load need not be added to PJM Manual 3. Indicated TOs argue that such revisions or additions may be unavoidable due to the technical characteristics of Co-Located Load and contend that PJM and the PJM transmission owners should not be restricted from developing and implementing criteria applicable to Co-Located Load as a class if warranted by reasonable technical differences.[963]

470. Indicated TOs argue that Constellation's request for the Commission to reject certain recommendations made by Indicated TOs is without merit. Indicated TOs reject Constellation's claim that these recommendations treat Co-Located Loads differently without legitimate basis and explain that certain transmission owners already require protection on their facilities in certain circumstances.[964]

471. Indicated TOs argue that Vistra provides no convincing reason for the Commission to reject Indicated TOs' recommendation for reasonable limits on the amount of load covered by special protection schemes/remedial action schemes in specific geographic areas. Indicated TOs acknowledge, however, that implementing such limitations would require the development of further details and guidelines.[965]

472. Joint Co-Location Developers argue that PJM and Market Monitor ignore the distinction between simple withdrawal-limiting protection systems that are required by PJM for sites taking non-firm transmission service and standard remedial action schemes.[966] Joint Co-Location Developers explain that unlike standard remedial action schemes, which monitor and control components across the grid, simple withdrawal-limiting protection systems monitor and control only facility-internal components, monitoring flows, adjusting consumption or generation at the site level, and disconnecting from the grid if necessary. Joint Co-Location Developers argue that simple withdrawal-limiting protection systems can be relied upon much more extensively than standard remedial action schemes without creating the same complexities and interdependencies.

[963] Indicated TOs Reply Brief at 11-13.

[964] *Id.* at 13-14.

[965] *Id.* at 14.

[966] Joint Co-Location Developers Reply Brief at 6-7.

473. Joint Co-Location Developers agree with Indicated TOs that all special protection schemes and remedial action schemes should be fully redundant.[967]

474. Constellation argues that Indicated TOs' recommendation that PJM impose necessary control technologies and protection systems on both the customer's side and the transmission owner's side of the Point of Interconnection for Co-Located Loads as a default requirement is unsupported and unduly discriminatory.[968] Constellation asserts that always requiring double special protection schemes is not good utility practice and would likely be appropriate only in rare situations.[969]

475. Constellation contends that system studies of unauthorized use should be standardized, transparent, and based on reasonable assumptions set ahead of time to avoid disparate treatment.[970] Constellation states that PJM can use the standardized study processes and established reliability tests in its existing generator interconnection process and RTEP process to determine whether a special protection scheme is needed.

476. Constellation argues that criteria for special protection schemes should leverage current RTEP planning criteria to develop specific criteria for Co-Located Load risks that are reasonable and transparent.[971]

477. Constellation asserts that the special protection scheme that PJM requires an Eligible Customer to implement should be commensurate with the risks identified in the studies. Constellation argues that special protection schemes are not appropriate for every situation, and PJM only requires them when studies identify actual overloads and conditions that could cause cascading failures that PJM cannot mitigate through normal operations.[972] Constellation contends that double special protection schemes should not be employed when other measures can maintain system reliability and real-time monitoring can address any unexpected reliability issue.[973]

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[967] *Id.* at 7 n.23 (citing Indicated TOs Initial Brief at 23).

[968] Constellation Reply Brief at 13-14 (citing Indicated TOs Response Brief at 8).

[969] *Id.* at 14 (citing Kormos Aff. ¶¶ 7, 11).

[970] *Id.* at 15.

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

[972] *Id.* at 16 (citing Kormos Aff. ¶¶ 5-6).

[973] *Id.* at 18.

4. Answer

478. In response to Constellation, Indicated TOs argue that, in order for an Eligible Customer to take one of the new transmission services, it is necessary and just and reasonable to require an Eligible Customer to include appropriate protection systems.[974] Indicated TOs further assert that special protection schemes on the Co-Located Load customer's and the transmission owner's side of the point of interconnection should not be limited to what Constellation claims are higher-risk situations.[975] Indicated TOs claim that, without protection system redundancy, the transmission system is at risk.[976] Indicated TOs reject Constellation's assertion that PJM should use a PJM-driven study process to evaluate special protection schemes, arguing that special protection schemes and remedial action schemes are within the purview of the transmission owners, and PJM is not equipped to perform these studies. Indicated TOs also allege that the cost to implement protection systems is extremely low compared to other costs to develop and interconnect Co-Located Load and would not be a deterrent.[977]

5. Determination

479. We decline to direct PJM's proposal as part of the replacement rate because it does not require Eligible Customers taking FCD transmission service to have necessary control technologies and/or protection systems to limit their energy withdrawals from the transmission system to their contract demand level. We find that PJM's proposal is inconsistent with the directives in the December Order. In the December Order, the Commission found that an Eligible Customer that is willing and able to limit its energy withdrawals from the transmission system under certain conditions should be able to take transmission services on behalf of Co-Located Load that reflect their ability to limit withdrawals.[978] The Commission stated that where a Co-Location Arrangement includes special protection schemes that limit its energy withdrawals, it is a just and reasonable replacement rate to allow an Eligible Customer taking transmission service on behalf of such load to take these transmission services.[979] We clarify, however, that the December

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[974] Indicated TOs May 28 Answer at 4.

[975] *Id.* at 5.

[976] *Id.* at 6.

[977] *Id.* at 7.

[978] December Order, 193 FERC ¶ 61,217 at PP 159-160.

[979] *Id.* PP 204-205.

Order did not limit eligibility to take the new transmission services only to Co-Location Arrangements that include a special protection scheme.[980]

480. Based on the record here, we find it just and reasonable that, in order for an Eligible Customer to take Interim NITS, FCD, and/or NFCD transmission services on behalf of any Eligible Load, an Eligible Customer must have necessary control technologies and/or protection systems, which may include a special protection scheme, to limit its energy withdrawals to its contract demand level.[981] This replacement rate is consistent with prior Commission precedent for interconnection service, which recognizes that these necessary control technologies and/or protection systems are essential to enforce physical limits and ensure system reliability where an Interconnection Customer has requested a level of service below its maximum capacity.[982] Further, consistent with the Commission's determination in Order No. 845, nothing prevents an Eligible Customer taking Interim NITS, FCD, and/or NFCD transmission service on behalf of Eligible Load from proposing its own necessary control technologies and/or protection systems for consideration, which may include a special protection scheme.[983]

481. PJM's proposal falls short because it does not require Eligible Customers taking FCD transmission service to have necessary control technologies and/or protection systems to limit their energy withdrawals from the transmission system to their contract demand level. As such, PJM would have to rely on penalties that disqualify an Eligible Customer from taking FCD transmission service if the Eligible Customer fails to follow established load shedding and curtailment procedures, and financial penalties for unreserved use of the PJM transmission system, to discourage excess energy withdrawals. However, load shedding and curtailment events for a transmission service that will be treated as the equivalent of NITS for purposes of curtailment will be rare; and PJM itself has stated concerns that financial penalties alone are insufficient to deter

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[980] *Id.* P 205 ("For these reasons, in these instances where the Co-Location Arrangement includes special protection schemes that limit its energy withdrawals, we find that it is a just and reasonable replacement rate to allow an Eligible Customer taking transmission service on behalf of such load to take and be charged for new types of transmission service that are alternatives, and not equivalent, to NITS.").

[981] While we will continue to use the term "special protection scheme" in this proceeding, we reiterate that this term is equivalent to "remedial action scheme." *Id.* P 204.

[982] *Reform of Generator Interconnection Procs. & Agreements*, Order No. 845, 163 FERC ¶ 61,043, at P 367 (2018), *order on reh'g*, Order No. 845-A, 166 FERC ¶ 61,137, *order on reh'g*, Order No. 845-B, 168 FERC ¶ 61,092 (2019).

[983] *Id.* P 372.

unreserved use.[984] Accordingly, and consistent with our determination above to extend the three new transmission services set forth in the December Order to Eligible Customers taking service on behalf of load with BTMG that are willing and able to limit their energy withdrawals from the transmission system under certain conditions, we direct PJM to file, within 60 days of the date of issuance of this order, a compliance filing with Tariff revisions that require Eligible Customers taking Interim NITS, FCD, and/or NFCD transmission service on behalf of Eligible Loads, to have necessary control technologies and/or protection systems.

482. We find it just and reasonable for PJM to include the interconnection requirements and operational practices needed for necessary control technologies and/or protection systems in the PJM manuals and, as applicable, to rely on relevant NERC reliability standards, consistent with PJM's current practices. Further, we find it appropriate for PJM to develop new interconnection requirements and operational practices that recognize the unique nature of Co-Location Arrangements and the new transmission services. However, PJM has not, to date, actually proposed any interconnection requirements and operational practices specific to Co-Location Arrangements, nor does PJM indicate which of its existing interconnection requirements and operational practices it will apply to Co-Location Arrangements. Consistent with our determination above to extend the three new transmission services set forth in the December Order to Eligible Customers taking service on behalf of load with BTMG that are willing and able to limit their energy withdrawals from the transmission system under certain conditions, we direct PJM to submit, as part of its compliance filing due within 60 days of the date of issuance of this order, an explanation of what new and existing interconnection requirements and operational practices it will apply to Eligible Customers taking Interim NITS, FCD, and/or NFCD transmission services on behalf of Eligible Load. We agree with Indicated TOs that it is important for PJM to work with the transmission owners to develop specificity regarding the requirements associated with necessary control technologies and/or protection systems necessary to ensure that Eligible Customers do not withdraw energy from the transmission system in excess of their contract demand.

483. We do not agree that all parties' recommendations to clarify PJM's proposal are just and reasonable, or even within the scope of this proceeding. However, we agree that some guidance on the study and implementation of necessary control technologies and/or protection systems would be of value. Therefore, and consistent with our determination above to extend the three new transmission services set forth in the December Order to Eligible Customers taking service on behalf of load with BTMG that are willing and able to limit their energy withdrawals from the transmission system under certain conditions, we explain several principles that PJM's compliance filing should consider.

[984] PJM Initial Brief at 50.

484. First, Eligible Customers shall pay for PJM and transmission owner-administered studies to evaluate and design necessary control technologies and/or protection systems, consistent with their responsibilities for the costs of other studies performed as part of the evaluation of their transmission service request. However, the scope of these studies should be defined in the Tariff, consistent with the level of detail for other transmission services, as discussed in Part VI.A.3.[985] Furthermore, we reiterate our finding above that an Eligible Customer taking transmission service on behalf of an Eligible Load may propose its own necessary control technologies and/or protection systems for consideration as part of this study, which may include a special protection scheme, although PJM and the transmission owners retain their existing discretion regarding the determination of what is necessary to ensure the reliability of the transmission system.

485. Second, if a special protection scheme is employed as necessary control technologies and/or protection systems, then such special protection schemes implemented must be, at minimum, fully redundant. Given questions by commenters regarding what "redundant" specifically means, we clarify that such special protection schemes must be able to withstand removal of part or all of one scheme due to a failure, or to allow for maintenance on a scheme, while providing full scheme capability with a functionally equivalent and separate scheme.[986]

486. Third, all necessary control technologies and/or protection systems, which may include a special protection scheme, must fully meet PJM and transmission owner technical criteria, as well as any applicable NERC reliability standards.

487. Fourth and finally, both PJM and the transmission owners shall have the option to review and agree to the implementation of the Eligible Customer's necessary control technologies and/or protection systems as defined in the service agreement, to ensure that it meets both PJM and transmission owner technical criteria, and is capable of limiting withdrawals from the transmission system.

488. We disagree with Indicated TOs that PJM should include language in the Tariff making clear that necessary control technologies and/or protection systems may be required on both the Interconnection Customer's and the transmission owner's side of the Point of Interconnection. PJM and the transmission owners will, as noted in the principles above, be responsible for evaluating and designing necessary control technologies and/or protection systems for each Co-Location Arrangement. The location or number of devices required should be based on the engineering judgment of PJM and

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[985] *See supra* Part VI.A.3.

[986] *See, e.g.*, WECC, Remedial Action Scheme Design Guide, § 4.10 (July 2022), https://www.wecc.org/sites/default/files/documents/meeting/2024/WECC%20RAS%20Design%20Guide%202022.pdf.

the transmission owners.[987] Similarly, we find that questions of ownership of these facilities, or the potential to earn a rate of return on said facilities, are outside the scope of this proceeding.

489. In response to Indicated TOs, we find that there is insufficient information in this record to justify allowing them or PJM to implement and enforce limits on the total amount of load that can be covered by a special protection scheme. If PJM or its transmission owners wish to impose a specific limit, they may submit a new filing under FPA section 205 with a sufficient showing, based on experience gained once Eligible Customers begin taking Interim NITS, FCD, and/or NFCD transmission service on behalf of Eligible Load. However, implementation of a special protection scheme should not be universally required as a condition of taking these transmission services; rather, only necessary control technologies and/or protection systems are required. If PJM or its transmission owners wish to limit the use of special protection schemes on their system, they can also design necessary control technologies and/or protection systems for Eligible Customers that do not have a special protection scheme.

490. We decline to address NOVEC's request that the Commission direct NERC to establish registration requirements for Co-Located Loads. Whereas NOVEC's request may be availing in the context of a FPA section 215 proceeding, the instant case arises under FPA section 206. In addition, NERC is already considering registration requirements for large loads, including potentially Co-Located Loads, as part of its Large Load Action Plan.[988]

D. <u>**Penalty Charge or Other Remedial Action for New Transmission Services**</u>

1. <u>**Initial Briefs**</u>

491. PJM proposes different penalties where an Eligible Customer: (1) fails to follow established load shedding and curtailment procedures; (2) relies on necessary control

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[987] *Cf. RWE Clean Energy, LLC v. PJM Interconnection, L.L.C.*, 194 FERC ¶ 61,212, at P 42 (2026) ("The Commission generally allows transmission providers to exercise their engineering judgment when conducting interconnection studies, including deferring to transmission providers' discretion regarding how to maintain a reliable transmission system."); Order No. 1920-A, 189 FERC ¶ 61,126 at P 450 ("Finally, we clarify that the Commission generally provides transmission providers with the discretion to use engineering judgment in designing and conducting transmission planning studies, and we therefore decline to address Dominion's hypothetical in the abstract.").

[988] *See* NERC, *Large Loads Action Plan*, https://www.nerc.com/initiatives/large-loads-action-plan (last visited May 15, 2026).

technologies or protection systems that fail more than once; and (3) makes unreserved use of the transmission system.[989] PJM argues that, where an Eligible Customer fails once to respond to established load shedding and curtailment procedures, the customer is disqualified automatically because of the significant reliability risk. PJM asserts that its proposal is just and reasonable and consistent with the key principles that (1) Eligible Customers are willing and able to control their withdrawals from the transmission system and (2) the services are designed to allow PJM to maintain system reliability. PJM proposes that, if the Eligible Customer is taking FCD or NFCD transmission service and is disqualified, such customer may still take NITS or Interim NITS. PJM proposes that, if the Eligible Customer is taking Interim NITS and is disqualified, such customer may take NITS.[990]

492. PJM argues that when a control technology or protection scheme misoperates there can be serious consequences.[991] PJM proposes that, after one instance of misoperation, the Eligible Customer will be prohibited from taking transmission service or otherwise withdrawing energy from the transmission system for a period of up to 120 days from misoperation to allow for an analysis of the necessary control technology or protection system scheme's operational performance. PJM asserts that this proposed pause is consistent with NERC requirements for an investigation into the operation of a remedial action scheme[992] and will allow PJM time to investigate, identify, and implement fixes to better protect the transmission system.[993] PJM proposes that, after two instances of misoperation, the Eligible Customer will be automatically disqualified from taking the relevant new transmission service because of the significant reliability risks. PJM asserts that this rule properly balances the need to protect reliability against the desire of an Eligible Customer taking service on behalf of a Co-Located Loads to take a transmission service lesser than NITS because the Co-Located Loads are willing and able to limit their energy withdrawals. PJM maintains that a second instance of a misoperation makes it evident that the necessary control technology or protection system cannot adequately protect the system from the Co-Located Load's unreserved energy withdrawals. PJM explains that an Eligible Customer disqualified from taking FCD or

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[989] PJM Initial Brief at 40.

[990] *Id.* at 41-43.

[991] *Id.* at 43-44. Misoperation, as contemplated by PJM, relies on and incorporates the term as defined by NERC (e.g., PRC-004-6). *See, e.g.*, NERC, *PRC-004-6 – Protection System Misoperation Identification & Correction* (June 12, 2025), https://www.nerc.com/globalassets/standards/reliability-standards/prc/prc-004-6.pdf.

[992] Reliability Standard PRC-004-6.

[993] PJM Initial Brief at 45.

NFCD transmission service on this ground may either take NITS or Interim NITS, and that an Eligible Customer disqualified from taking Interim NITS on this ground may take NITS. PJM supports its proposal to permit an Eligible Customer disqualified from taking the new transmission services to take NITS by reasoning that NITS, in and of itself, addresses curtailment, load shed, and control technology or protection scheme misoperation risk.[994]

493. PJM states that it supports a penalty for unreserved use in addition to the operational penalties and intends to work with the transmission owners to explore a financial penalty.[995] PJM argues that financial penalties alone are insufficient to incentivize Eligible Customers to comply with load shed, curtailment, and control technology and protection system obligations. PJM asserts that many, if not most, Eligible Customers taking service on behalf of a Co-Located Load could elect to absorb financial penalties for unreserved use rather than follow curtailment or load shed procedures or avoid misoperation of the protective technology or system.

494. Indicated TOs assert that any penalty regime should rely on both operational consequences and complementary financial penalties.[996] Indicated TOs allege that it is of the utmost importance that Co-Located Loads respect contractual limits because Co-Location Arrangements involve substantial amounts of load connected to the grid and failure to respect these limits could pose severe reliability consequences for the system.

495. Indicated TOs support PJM's proposal but argue that additional details must be developed as to how operational consequences would be applied.[997] Indicated TOs also state that financial penalties could be valuable where the Eligible Customer exceeds its contract demand, even if such deviations are mitigated by a special protection scheme.

2. <u>Response Briefs</u>

496. ODEC supports PJM's proposed penalty structure, including operational penalties.[998] NOVEC states that disqualification for failure to follow load shedding or

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[994] *Id.* at 45-50.

[995] *Id.* at 50.

[996] Indicated TOs Initial Brief at 19.

[997] *Id.* at 20.

[998] ODEC Response Brief at 11.

curtailment procedures is necessary to protect the integrity of the transmission system.[999] Indicated TOs request that Tariff language be included requiring that the relevant transmission owner's approval be obtained before service to an Eligible Customer is reinstated following a control technology/protection system misoperation.

497. Constellation opposes the proposal to suspend or disqualify an Eligible Customer, arguing it is excessive and applies regardless of fault and does not apply to Non-Firm PTPS customers.[1000] Constellation urges the Commission to follow SPP's proposal for Conditional High Impact Large Load Service (CHILLS) and align treatment of unreserved use for the new services with its treatment of Non-Firm PTPS. DCC expresses concern about PJM's operational penalties in light of the lack of clarity around PJM's curtailment procedures for the new transmission services.[1001] Vistra similarly argues that PJM's proposed operational penalties diverge from the Commission's directives and violate the comparability principle because the December Order does not contemplate disqualification and, more generally, such a penalty structure exceeds what the Commission has allowed for unreserved use of the transmission system.[1002] Vistra contends that PJM's proposal is excessively punitive and may be unduly discriminatory in comparison to customers that take PTPS. Vistra also alleges that PJM's proposal also violates the comparability requirement because it treats Co-Location Arrangements using special protection schemes differently from any other entities using such schemes. Vistra also points out that, if the Commission accepts transmission owners' proposal to own special protection schemes, then misoperation of such schemes must attach to the transmission owner, not the Eligible Customer.

498. Joint Co-Location Developers argue that PJM's proposed penalty provisions are unjust and unreasonable because they are not "narrowly designed to balance the need to deter conduct that is harmful to the system with the need to limit excessive and unnecessary costs."[1003] Joint Co-Location Developers express concern that PJM's proposed disqualification rules will dissuade Eligible Customers from taking the new transmission services because of the risk of stranding or undermining investments in the

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[999] NOVEC Response Brief at 11-12.

[1000] Constellation Response Brief at 19-20. *See also* Joint Co-Location Developers Response Brief at 25.

[1001] DCC Response Brief at 7.

[1002] Vistra Response Brief at 29-31.

[1003] Joint Co-Location Developers Response Brief at 23 (quoting *Mirant Kendall, LLC*, 110 FERC ¶ 61,272, at P 17 (2005)).

new services.[1004] Joint Co-Location Developers propose that PJM adopt financial penalties sufficient to deter gaming of transmission service subscription. Joint Co-Location Developers contend that a disqualification-based penalty is not necessary because transmission owners can manually disconnect a facility in case of potential severe reliability risk. Joint Co-Location Developers assert that failure to respond to curtailment would have a similar impact from a resource adequacy perspective to a capacity resource failing to perform during emergency events, in which case only a non-performance charge is assessed. Joint Co-Location Developers urge that, if the Commission adopts disqualification as a penalty, the Commission should adopt intent (or at least fault), materiality, and repetition elements prior to disqualification to ensure disqualification sends an actionable signal.[1005] Joint Co-Location Developers suggest that that an operational penalty is excessive for misoperation of control technologies or protection systems because misoperation without withdrawal does not risk system harm.[1006]

499. Indicated TOs propose a financial penalty charge structure with two components: (1) a base penalty charge; and (2) a penalty ratchet.[1007] The base penalty charge would be assessed for any hour in which at least one five-minute interval occurs during which a customer's metered load at the Point of Interconnection exceeds its reserved transmission service. The penalty ratchet would apply additional daily penalties if exceedances occurred in more than one hour during a day, additional weekly penalties if exceedances occurred on more than one day during a week, and additional monthly penalties if exceedances occurred in more than one week during a month. Further, each of these penalties would entail escalating financial liabilities for repeated penalties, which Indicated TOs argue would reinforce the expectation that Co-Located Load customers manage their load in a manner consistent with their reserved transmission service.

500. NOVEC states that a penalty for unreserved use in addition to disqualification and pause-in-service rules is appropriate, as this penalty would be an additional deterrent that would help make the market or other ratepayer whole if a Co-Located Load customer exceeds its contract demand.[1008] NOVEC suggests that any financial penalty should compensate other customers for any harm caused by the Eligible Customer's departure

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[1004] *Id.* at 24-25.

[1005] *Id.* at 26 (citing *PJM Interconnection, L.L.C.*, 178 FERC ¶ 61,104, at PP 60-61 (2022)).

[1006] *Id.* at 26.

[1007] Indicated TOs Response Brief at 12-13.

[1008] NOVEC Response Brief at 13 (citing Indicated TOs Initial Brief at 20).

from Co-Location requirements or, if there is no harm, be set at a level sufficient to encourage compliance with the Tariff's scheduling requirements.

501. ODEC suggests that the Commission also consider whether any protections are needed for local utilities or transmission owners should they need to take the extraordinary measure of disconnecting an Eligible Customer taking service on behalf of Co-Located Loads, if the Eligible Customer's use of the transmission system exceeds contract demand or is called upon for load shedding and curtailment.[1009] ODEC states that, in such instance, the local utility or transmission owner should not be liable for legal, financial, or other damages that might be experienced by an Eligible Customer. NOVEC asserts that PJM's penalty language should be revised to specify that when an Eligible Customer serves multiple Co-Located Loads, only the culpable Co-Located Load is disqualified rather than the Eligible Customer as a whole.[1010]

3. Reply Briefs

502. PJM argues that monetary penalties, in place of non-monetary penalties, would undermine the value of reliability and hand it to a single site or a class of load that may decide to pay the penalty in place of operating as agreed to ensuring overall system reliability.[1011] PJM alleges that non-monetary operational penalties are essential to the responsible integration of large loads. PJM maintains that its non-monetary operational penalties represent a measured approach that balances significant reliability concerns with the interest in integrating large loads quickly. However, PJM notes that, in response to protesters' concerns, PJM proposes revisions to its illustrative tariff language to add discretion to the strict application of non-monetary operational penalties.

503. PJM argues that the Commission did not foreclose non-monetary penalties because the December Order "also direct[s] parties to brief . . . *any other remedial* action that PJM should take to address withdrawals in excess of the contract demand."[1012] PJM also claims that financial penalties alone are insufficient to support reliability in light of the volume of load that is anticipated to come online in short order and the nature of how these new loads will seek to connect through co-location with potentially critical generators. PJM rejects Vistra's contention that non-monetary penalties are a departure from Commission precedent, and responds that the Commission has long held that where monetary penalties do not incentivize actions consistent with reliability, it may be

[1009] ODEC Response Brief at 11-12.

[1010] NOVEC Response Brief at 14-15.

[1011] PJM Reply Brief at 40-43.

[1012] *Id.* at 49-50 (quoting December Order, 193 FERC ¶ 61,217 at P 212).

necessary to implement "a range of non-monetary and monetary penalties" to promote behavior that supports and improves the reliability of the bulk power system.[1013] PJM rejects Joint Co-Location Developers' suggestion that PJM adopt financial penalties sufficient to deter gaming, and responds that PJM's proposed penalty structure is not intended to address gaming but to support reliability. In response to Joint Co-Location Developers' suggestion that disqualification is unnecessary because transmission owners can manually disconnect a facility, PJM argues that it is inconsistent with reliable operation of the transmission system to shift responsibility away from the Eligible Customer. PJM also alleges that it and the transmission owner will become aware of an improperly set-up protection scheme only after the misoperation incident, which will expose the PJM system to risk. PJM adds that when a transmission owner manually cuts load suddenly, without proper coordination, it can have disastrous and dangerous cascading system effects.[1014]

504. Nevertheless, PJM proposes revisions to its illustrative tariff language to permit, where appropriate, PJM to exercise discretion in determining when disqualification penalties are appropriate based on PJM's assessment of factors including the reliability impact of the failure to curtail or shed load or the misoperation of control technologies or protection system schemes. PJM adds that, with these revisions, the Eligible Customer taking transmission service on behalf of Co-Located Load will not be held liable for the actions of others.[1015]

505. Several parties agree that financial penalties are insufficient to ensure reliability.[1016] ODEC asserts that it does not agree that PJM's proposed suspension and disqualification measures are unfairly imposed regardless of fault and will make the services unduly risky for many loads. Earthjustice argues that PJM's operational penalties are proportionate to the prospective harm associated with a customer's failure to follow curtailment orders. Earthjustice argues that, while opposing commenters note that PJM's proposed penalties are stricter than the penalties it has levied in other circumstances, those comments fail to acknowledge that the stakes here are higher.

[1013] *Id.* at 51 (quoting *Rules Concerning Certification of the Elec. Reliability Org.; and Procs. for the Establishment, Approval, and Enf't of Elec. Reliability Standards*, Order No. 672, 114 FERC ¶ 61,104, at PP 49, 455, *order on reh'g*, Order No. 672-A, 114 FERC ¶ 61,328 (2006)).

[1014] *Id.* at 52-53.

[1015] *Id.* at 54.

[1016] ODEC Reply Brief at 4-5; Earthjustice Reply Brief at 2-3, 5, 8; Indicated TOs Reply Brief at 14-15 (citing Joint Blazunas/Schafer/Hammer Rebuttal Test. at 4).

Earthjustice argues that PJM's penalty proposal is appropriately designed to protect system reliability, rather than assign fault.

506. Industrials/Amtrak urge the Commission to exercise caution in overly harsh operational penalties, especially for existing retail customers who may be forced to move from retail BTMG arrangements to Co-Location Arrangements. Industrials/Amtrak argue that it is reasonable to pay financial penalties, but a retail customer should not be banned from NFCD transmission service for a lone violation.[1017]

507. PJM rejects Vistra's contention that its non-monetary penalties for misoperation of necessary control technologies or protection systems are unduly discriminatory. PJM alleges that NERC, Market Monitor, and PJM's 2026 load forecast each demonstrate that the new large loads integrating into PJM's transmission system are not similarly situated to traditional loads. PJM adds that disqualification penalties do not foreclose Eligible Customers from taking transmission service entirely, and that, where Eligible Customers demonstrate that they cannot (or are unwilling to) limit withdrawals, it is appropriate for those Eligible Customers to take NITS.[1018]

508. Indicated TOs reject Constellation's argument that PJM should simply adopt financial penalties as is the case with SPP's High Impact Large Load (HILL) process.[1019] Indicated TOs argue that SPP's HILL process is different in that, under PJM's proposal, Co-Located Load customers may be in the position of installing and operating their own control technologies and protection systems. Indicated TOs further argue that PJM and SPP are different regions with different characteristics, including topology and proliferation of large loads. Indicated TOs also dismiss DCC's and Vistra's concerns regarding Co-Located Load's liability for penalties associated with control technologies and protection systems operated by other parties, including transmission owners. Indicated TOs argue that installation of redundant protection facilities by transmission owners should not serve as an excuse for the failure of customers to properly maintain and operate their own equipment.

509. NOVEC states that it generally supports Indicated TOs' proposed financial penalty charge structure, subject to Indicated TOs providing further information.[1020] ODEC supports financial penalties but states that PJM's implementation of its penalties must not subject ODEC or its member distribution cooperatives to service interruptions or

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[1017] Industrials/Amtrak Reply Brief at 17-18.

[1018] PJM Reply Brief at 43, 45, 47.

[1019] Indicated TOs Reply Brief at 15-16.

[1020] NOVEC Reply Brief at 26-27.

disqualification, or financial penalties, as a result of requiring ODEC to serve as the Eligible Customer.[1021]

510. Indicated TOs further explain their financial penalty proposal, explaining that when a Co-Located Load exceeds its reserved transmission service limit, which includes any reductions based on curtailments directed by PJM, the base penalty charge will be assessed for any hour (Exceedance Hour) in which at least one five-minute interval (Exceedance Interval) occurs during which a customer's metered load at the point of delivery exceeds its reserved transmission service. Indicated TOs state that the base penalty charge will apply to each Exceedance Hour.[1022]

511. Indicated TOs state that the base penalty charge will be calculated as the product of the Hourly Exceedance MW, the Equivalent Hourly FCD transmission service rate, and the number of Exceedance Intervals within the hour, where the Hourly Exceedance MW is equal to the maximum telemetered load during the hour less the reserved transmission service limit for the hour and where the Equivalent Hourly FCD transmission service rate is equal to the FCD transmission service rate divided by 8,760 hours.[1023] Indicated TOs explain that the FCD transmission service rate is used as the basis for assessing the penalty because, when a customer exceeds its reserved transmission service limit without authorization, the excess usage effectively imposes firm-level demand on the system.

512. Indicated TOs state that the penalty ratchet applies escalating FCD-equivalent transmission service rates as the frequency of unreserved transmission use increases. Indicated TOs explain that the penalty ratchet applies daily, weekly, monthly, or annual penalty charges depending on whether exceedances occur within the same calendar day, week, month, or year, and that these penalty charges are equal to the Daily FCD-Equivalent Rate, Weekly FCD-Equivalent Rate, Monthly FCD-Equivalent Rate, and FCD Annual Rate, respectively.[1024] Indicated TOs further explain that, where a daily penalty charge is assessed, it is in addition to the base penalty charge applicable to each individual Exceedance Hour; where a weekly penalty charge is assessed, it is in addition to the base penalty charges and daily penalty charges; and so on.

[1021] ODEC Reply Brief at 4.

[1022] Indicated TOs Reply Brief at 16-17.

[1023] Indicated TOs Reply Brief, Joint Blazunas/Schafer/Hammer Rebuttal Test. at 8-9.

[1024] *Id.* at 10-14.

513. Indicated TOs propose to distribute daily, weekly, and monthly penalty revenues on a monthly basis to Eligible Customers taking NITS or FCD transmission service that have not been penalized during the month, as pro rata bill credits. Indicated TOs further propose to distribute annual penalty charges on an annual basis to Eligible Customers taking NITS and FCD transmission service that have not been penalized during the year as pro rata bill credits.[1025]

4. Answer

514. Constellation alleges that PJM's reliability arguments are not persuasive, because PJM's example involves grid-connected load, not Co-Located Load.[1026] Constellation argues that PJM fails to explain how resource adequacy concerns justify its proposed penalty scheme, and points out that PJM has proposed no such penalties for Connect and Manage.[1027] Constellation next argues that a four-month suspension is not consistent with NERC requirements, as PJM claims.[1028]

5. Determination

515. We find that it is just and reasonable to impose operational and financial penalties on Eligible Customers taking the three new transmission services as part of the replacement rate, given that these services are designed for Eligible Customers taking transmission service on behalf of Eligible Loads that are willing and able to limit their withdrawals from the transmission system under certain conditions, and there are significant reliability risks if Eligible Customers fail to do so. However, we decline to adopt PJM's proposed replacement rate. First, we disagree that it is just and reasonable to disqualify an Eligible Customer from taking any of the new transmission services after the first instance of failing to follow a curtailment or load shedding directive, as discussed below. We instead find that it is just and reasonable to establish an operational penalty whereby, after the second instance of failing to follow a curtailment or load shedding directive, PJM will terminate the transmission service agreement with the Eligible Customer taking Interim NITS, FCD, or NFCD transmission service on behalf of the Eligible Load. We agree with PJM that there are significant reliability risks associated with failing to follow a curtailment or load shedding directive, but we find that PJM's one strike proposal is unnecessarily strict. We direct PJM to file, within 60 days

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[1025] *Id.* at 15-16.

[1026] Constellation May 11 Answer at 8-9.

[1027] *Id.* at 9.

[1028] *Id.* at 9-10.

of the date of issuance of this order, a compliance filing to revise its Tariff consistent with these findings.

516. Second, we find that it is just and reasonable to establish an operational penalty of suspension in service for a period of up to 120 days for an Eligible Customer taking Interim NITS, FCD, and/or NFCD transmission service after the first misoperation of necessary control technologies and/or protection systems given the reliability risks associated with such misoperation. However, as above, we disagree with PJM's proposal regarding disqualification, and we instead find that it is just and reasonable to establish an operational penalty whereby, after the second misoperation of necessary control technologies and/or protection systems, PJM will terminate the transmission service agreement with the Eligible Customer taking Interim NITS, FCD, and/or NFCD transmission service on behalf of Eligible Load. We direct PJM to file, within 60 days of the date of issuance of this order, a compliance filing to revise its Tariff consistent with these findings.

517. Third, we find that it is just and reasonable to subject an Eligible Customer taking any of the three new transmission services on behalf of Eligible Load to financial penalties in any circumstance where the transmission customer uses transmission service that it has not reserved. We thus direct the PJM transmission owners to file, within 60 days of the date of issuance of this order, a compliance filing that effectuates Indicated TOs' proposed framework for financial penalties for Eligible Customers taking one of the three new transmission services that withdraw from the transmission system in excess of their contract demand level (i.e., for unreserved use).

518. Before addressing each topic in turn, as an initial matter, we disagree with protesters that operational penalties, either for failure to follow a curtailment or load shedding directive, or for misoperation of necessary control technologies and/or protection systems, "diverg[e] from" or were "not contemplated" in the December Order.[1029] The financial penalties that the Commission required only apply to Eligible Customers' unreserved use of the transmission system and are consistent with the Commission's directives in the December Order.[1030] The Commission has previously found that transmission customers should be subject to unreserved use penalties in circumstances where a transmission customer uses transmission service in excess of its

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[1029] Constellation Response Brief at 19; Vistra Response Brief at 29.

[1030] December Order, 193 FERC ¶ 61,217 at P 212 (directing a penalty rate for excess withdrawals of energy from the transmission system by an Eligible Customer taking FCD transmission service on behalf of a Co-Located Load); *id.* P 217 (directing same as to excess withdrawals by an Eligible Customer taking NFCD transmission service on behalf of a Co-Located Load).

reserved capacity or if it uses transmission service where it does not have a reservation, and as discussed further below, we find it just and reasonable that an Eligible Customer taking any of the three new transmission services on behalf of Eligible Load incur a financial penalty for unreserved use of the transmission system.[1031] But the Commission also directed briefing broadly on the rates, terms, and conditions of the new transmission services, including "other remedial action[s]" in addition to financial penalties, as pertinent to this question.[1032] We find that an operational penalty for Eligible Customers taking Interim NITS, FCD transmission service, and/or NFCD transmission service on behalf of Eligible Load for misoperation of necessary control technologies and/or protection systems is consistent with the December Order's finding that Eligible Customers may take Interim NITS, FCD transmission service, and/or NFCD transmission service because it is the use of necessary control technologies and/or protection systems that effectively limits their energy withdrawals from the transmission system.[1033] The Commission in the December Order also broadly sought briefing on the appropriate procedures to govern circumstances under which PJM curtails an Eligible Customer taking any of the three new transmission services, and we find that an operational penalty for an Eligible Customer taking the new transmission services on behalf of Eligible Load failing to follow a curtailment or load shedding directive is within the scope of provisions that we can consider as part of establishing curtailment procedures for the three new transmission services.

a. <u>Failure to Follow Curtailment or Load Shedding Directive</u>

519. We find that it is just and reasonable to establish an operational penalty for an Eligible Customer taking any of the new transmission services on behalf of Eligible Load after the second instance of failing to follow a curtailment or load shedding directive. Specifically, we find that it is just and reasonable for PJM to terminate the transmission service agreement with the Eligible Customer taking Interim NITS, FCD transmission service, or NFCD transmission service on behalf of Eligible Load after the second instance of failing to follow a curtailment or load shedding directive. We direct PJM to file, within 60 days of the date of issuance of this order, a compliance filing to revise its Tariff consistent with this finding. PJM persuasively argues that there are significant reliability risks associated with failure to curtail, and "financial penalties, alone, are not sufficient to incentivize Eligible Customers to comply with Load Shed and Curtailment."[1034] However, we agree with concerns raised in the record that PJM's

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[1031] Order No. 890, 118 FERC ¶ 61,119 at P 834.

[1032] December Order, 193 FERC ¶ 61,217 at P 219.

[1033] *Id.* P 205; *see supra* Part VI.C.

[1034] PJM Initial Brief at 41-42, 45, 50.

proposal to disqualify an Eligible Customer taking one of the three new transmission services on behalf of Eligible Load from continuing to take any of those services is unnecessarily strict. When considering the need to ensure reliability is preserved, as well as to allow Eligible Customers taking transmission service on behalf of Eligible Load to adapt to a new transmission service paradigm, we find that, on balance, complete disqualification is excessive because it would impose penalties on the Eligible Customer that apply to all of its transmission service agreements, even those for which it has followed all curtailment or load shedding directives. However, we agree with PJM that a strict operational penalty will deter conduct contrary to the fundamental principle upon which the new transmission services required by the December Order were based, which is that Eligible Customers taking service on behalf of Co-Located Loads are willing and able to limit their energy withdrawals from the transmission system under certain conditions.[1035] We therefore find, as part of the just and reasonable replacement rate, that the transmission service agreement with the Eligible Customer taking Interim NITS, FCD transmission service, or NFCD transmission service on behalf of Eligible Load should be terminated on the second instance of failing to follow a curtailment or load shedding directive. The Eligible Customer will remain eligible to take the three new transmission services on behalf of other Eligible Loads through its other transmission service agreements. NITS remains an option for an Eligible Customer disqualified from taking one of the new transmission services; however, such Eligible Customer may not begin taking NITS until all necessary Network Upgrades are completed.[1036]

520. Recognizing that we are not adopting the exact penalty framework for failing to follow a curtailment or load shedding directive that PJM proposes, we nevertheless disagree with many of protesters' arguments on this matter. Joint Co-Location Developers, for example, argue that disqualification is not necessary because transmission owners can manually disconnect a facility. This argument supports PJM's premise that a financial penalty alone cannot deter the Eligible Customer taking one of the three new transmission services on behalf of Co-Located Load from failing to control unauthorized withdrawals; instead, it unreasonably and unnecessarily shifts the responsibility to manage complying with the Tariff and the terms of the transmission service from the Eligible Customer to the transmission owners. Joint Co-Location

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[1035] December Order, 193 FERC ¶ 61,217 at P 177 ("we also find that PJM's Tariff is unjust and unreasonable because it does not include transmission services that reflect Eligible Customers taking service on behalf of Co-Located Loads that are willing and able to limit their energy withdrawals from the transmission system under certain conditions.").

[1036] *See* PJM Initial Brief at 43 ("Importantly, however, such an Eligible Customer may take NITS, which would begin after all necessary upgrades are placed into service.").

Developers also claim that disqualification is disproportionate and may not send an actionable signal without "fault or materiality elements." This argument is misplaced, as PJM's requirements for the new transmission services make the Eligible Customer's responsibilities clear and actionable: prior to commencement of service, the Eligible Customer must demonstrate to PJM's satisfaction that it can fully comply with load shedding and curtailment procedures. Lastly, Joint Co-Location Developers suggest that the Commission's approval of a non-performance charge rate for capacity resources that fail to perform in emergency events means that an Eligible Customer that fails to follow a curtailment or load shedding directive can be sufficiently penalized through a similar charge. Joint Co-Location Developers allege that failure to respond or perform in both these circumstances is similar from a resource adequacy perspective. We disagree that the two are comparable. Capacity resources are purchased to meet the needs of transmission customers taking existing firm service, such as NITS. As PJM explains in its initial brief, the choice to take NITS decreases the likelihood of significant issues arising from failure to curtail.[1037] By contrast, the Commission created the three new transmission services to reflect that Eligible Customers taking transmission service on behalf of Co-Located Load are willing and able to limit their energy withdrawals from the transmission system under certain conditions that are different than those under which Network Customers take NITS.[1038] For these reasons, we find that it is just and reasonable to subject Eligible Customers on behalf of such loads to a stricter penalty regime.

521. We also disagree with Constellation's suggestion that the Commission should adopt SPP's approach for CHILLS, which contains only penalties for exceeding the transmission customer's reserved capacity.[1039] The Commission has permitted regional

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[1037] *Id.* at 48-49.

[1038] December Order, 193 FERC ¶ 61,217 at P 2; *see, e.g.*, *id.* P 208 (distinguishing an Eligible Customer's rights under FCD transmission service in contrast to NITS).

[1039] *Sw. Power Pool, Inc.*, 195 FERC ¶ 61,196, at 98 (2026).

variation among RTOs/ISOs[1040] and need only explain its choice and how it has chosen a just and reasonable rate.[1041]

522. We also find that ODEC has not demonstrated a need, nor does the record developed in this paper hearing otherwise reflect a need, to establish protections for transmission owners if the Eligible Customer may experience damages as a result of the transmission owner disconnecting the Eligible Customer. Lastly, with respect to Joint Co-Location Developers' concern that PJM's proposed disqualification rules will dissuade Eligible Customers from taking the new transmission services because of the risk of stranding or undermining investments in the new transmission services, we note that an Eligible Customer is not required to take the new transmission services and may elect to take NITS if that transmission service option better reflects the Eligible Customer's use of the transmission system and risk profile.[1042]

[1040] *See, e.g.*, *Reg'l Transmission Orgs.*, Order No. 2000, FERC Stats. & Regs. ¶ 31,089, at 31,073 (1999) (cross-referenced at 89 FERC ¶ 61,285), *order on reh'g*, Order No. 2000-A, FERC Stats. & Regs. ¶ 31,092 (2000) (cross-referenced at 90 FERC ¶ 61,201), *aff'd sub nom. Pub. Util. Dist. No. 1 of Snohomish Cnty. v. FERC*, 272 F.3d 607 (D.C. Cir. 2001) (stating there is no "one size fits all" approach to RTO governance); *Offer Caps in Mkts. Operated by Reg'l Transmission Orgs. & Indep. Sys. Operators*, Order No. 831, 157 FERC ¶ 61,115, at P 147 (2016), *order on reh'g & clarification*, Order No. 831-A, 161 FERC ¶ 61,156 (2017) (permitting regional variation for treatment of incremental energy offers above $1,000/MWh that the RTO/ISO or Marketing Monitoring Unit cannot verify prior to the start of the market clearing process); *Wholesale Competition in Regions with Organized Elec. Mkts.*, Order No. 719, 125 FERC ¶ 61,071, at P 62 (2008), *order on reh'g*, Order No. 719-A, 128 FERC ¶ 61,059, *order on reh'g*, Order No. 719-B, 129 FERC ¶ 61,252 (2009) (permitting regional variation for RTOs/ISOs developing requirements for demand response resources participating in ancillary service markets).

[1041] *See ExxonMobil Oil Corp. v. FERC*, 487 F.3d 945, 955 (D.C. Cir. 2007) ("We need not decide whether the Commission has adopted the best possible policy as long as the agency has acted within the scope of its discretion and reasonably explained its actions."); *Cities of Batavia v. FERC*, 672 F.2d 64, 84 (D.C. Cir. 1982) ("[T]he billing design need only be reasonable, not theoretically perfect.").

[1042] *See* PJM Reply Brief at 47 (arguing that disqualification penalties reflect that Eligible Customers take the level of transmission service that aligns with their demonstrated use of the transmission system).

b. Misoperation of Necessary Control Technologies and/or Protection Systems

523. We find that it is just and reasonable to establish an operational penalty of suspension in service for a period of up to 120 days for an Eligible Customer taking Interim NITS, FCD, and/or NFCD transmission service on behalf of Eligible Load after the first misoperation of necessary control technologies and/or protection systems. However, as noted above, we disagree with PJM's proposal regarding disqualification, and we instead find that it is just and reasonable to establish an operational penalty whereby, after the second misoperation of necessary control technologies and/or protection systems, PJM will terminate the transmission service agreement with the Eligible Customer taking Interim NITS, FCD transmission service, or NFCD transmission service on behalf of Eligible Load. We direct PJM to file, within 60 days of the date of issuance of this order, a compliance filing to revise its Tariff consistent with these findings.

524. We agree with PJM that there are significant reliability risks associated with misoperation of special protection schemes, and that "financial penalties, alone, are not sufficient to incentivize Eligible Customers to comply with . . . control technology and protection system obligations."[1043] We find that this replacement rate serves to deter conduct contrary to the fundamental principle around which the new transmission services created by the Commission were based, i.e., that Eligible Customers taking service on behalf of Co-Located Loads are willing and able to limit their energy withdrawals from the transmission system under certain conditions.[1044] Moreover, we agree with PJM that, after the first misoperation of necessary control technologies and/or protection systems, suspension of service for a period of up to 120 days is reasonable to allow for an analysis by PJM, and the affected transmission owner(s) as necessary, of the operational performance of the necessary control technologies and/or protection systems.

[1043] PJM Initial Brief at 41-42, 45, 50.

[1044] December Order, 193 FERC ¶ 61,217 at P 177 ("we also find that PJM's Tariff is unjust and unreasonable because it does not include transmission services that reflect Eligible Customers taking service on behalf of Co-Located Loads that are willing and able to limit their energy withdrawals from the transmission system under certain conditions."); *see id.* P 205 ("We note that, in general, special protection schemes allow Eligible Customers on behalf of Co-Located Load to effectively limit their withdrawals from the transmission system. For these reasons, in these instances where the Co-Location Arrangement includes special protection schemes that limit its energy withdrawals, we find that it is a just and reasonable replacement rate to allow an Eligible Customer taking transmission service on behalf of such load to take and be charged for new types of transmission service that are alternatives, and not equivalent, to NITS.").

In response to the Indicated TOs, we find that it is reasonable that the Tariff provide that service may resume following PJM's approval, as well as the relevant transmission owner's approval of the necessary control technologies and/or protection systems for consistency with the transmission owner's technical standards.

525. However, we reject PJM's proposal not to apply such a penalty to Eligible Customers taking FCD transmission service on behalf of Co-Located Load, consistent with our findings above that Eligible Customers taking FCD transmission service on behalf of Co-Located Load must also have necessary control technologies and/or protection systems to limit their energy withdrawals from the transmission system to their contract demand level.[1045] We also disagree with protesters' arguments opposing PJM's proposal to establish an operational penalty for misoperation of necessary control technologies and/or protection systems. Vistra suggests that PJM's proposal unduly discriminates against Co-Location Arrangements as compared to other entities using special protection schemes, but this penalty proposal (which Vistra mistakenly alleges applies only to special protection schemes) is not relevant to existing transmission services in PJM.[1046] By contrast, as discussed above, correct operation of necessary control technologies and/or protection systems is foundational to the new transmission services. Vistra's separate claim that PJM's proposal is unduly discriminatory "insofar as it treats unreserved use of the transmission system by point-to-point customers differently from unreserved use by customers taking these new transmission services" is misplaced. In contrast to Eligible Customers taking Interim NITS, FCD transmission service, and/or NFCD transmission service on behalf of Eligible Load, PTPS customers are not required to establish necessary control technologies and/or protection systems in order to take PTPS.[1047] We also find unpersuasive Joint Co-Location Developers' allegation that this operational penalty is even more excessive, as compared to a penalty for failure to follow curtailment or load shedding directives, because misoperation without withdrawal does not risk system harm.[1048] We agree with PJM that "[w]hen a control technology or protection scheme misoperates, there can be serious consequences."[1049] Where PJM

[1045] *See supra* Part VI.C.

[1046] *See* PJM Initial Brief at 47 (justifying its proposal to allow that an Eligible Customer disqualified from the new transmission services may take NITS because "NITS, in and of itself, addresses Curtailment, Load Shed, and control technology or protection scheme misoperation risk").

[1047] *Id.* at 50 ("PJM supports a penalty for unreserved use in addition to the disqualification and pause-in-rules discussed above."); *see id.* at 41 (Table 1 (Penalties)).

[1048] Joint Co-Location Developers Response Brief at 26.

[1049] PJM Initial Brief at 43, 45; PJM Reply Brief at 52-53.

plans and operates the system around an assumption that necessary control technologies and/or protection systems will work, unexpected system behavior due to misoperation risks system reliability regardless of whether withdrawals occur, and we find that it is reasonable not to rely only on financial penalties to mitigate these risks.

526. We disagree with Constellation's suggestion that the Commission should adopt SPP's approach from CHILLS, which contains only penalties for exceeding the transmission customer's reserved capacity,[1050] but not suspension or disqualification, for the same reasons discussed above.

527. We agree with NOVEC that PJM's proposed penalty language to disqualify the Eligible Customer as a whole from taking the relevant transmission service is not just and reasonable. Instead, we direct PJM to propose on compliance Tariff provisions providing that, after the second misoperation of necessary control technologies and/or protection systems pertaining to a transmission service agreement governing an Eligible Customer taking Interim NITS, FCD transmission service, and/or NFCD transmission service on behalf of Eligible Load, PJM will terminate the transmission service agreement. The Eligible Customer could still take transmission service, including Interim NITS, FCD transmission service, and NFCD transmission service, on behalf of other loads through other transmission service agreements.

528. ODEC asserts that PJM's implementation of its penalties must not subject ODEC or its member distribution cooperatives to service interruptions or disqualification, or financial penalties, as a result of requiring ODEC to serve as the Eligible Customer. The Commission set a replacement rate in the December Order applicable to Eligible Customers taking transmission service on behalf of Co-Located Load. The operational (and financial) penalties we establish in this order apply to Eligible Customers who elect to take the new transmission services on behalf of Eligible Load and who do not comply with the terms and conditions of the new transmission services, including misoperation of necessary control technologies and/or protection systems. The December Order does not require that Eligible Customers on behalf of Co-Located Load take one of the new transmission services and they may choose to take NITS instead. The Co-Located Load cannot force an Eligible Customer to take a type of transmission service it does not wish to take. As the Commission explained in the December Order, NITS remains a just and reasonable transmission service option that an Eligible Customer on behalf of a Co-Located Load may choose.[1051]

[1050] *Sw. Power Pool, Inc.*, 195 FERC ¶ 61,196 at 98.

[1051] December Order, 193 FERC ¶ 61,217 at P 195.

c. Unreserved Use of the Transmission System

529. We find that it is just and reasonable to impose a financial penalty on an Eligible Customer taking any of the new transmission services on behalf of Eligible Load for unreserved use of the transmission system. We find that it is just and reasonable to use Indicated TOs' two-part penalty framework and to apply, within that framework, a penalty rate that is twice the rate we establish in this order for FCD transmission service.[1052] Indicated TOs propose a base penalty charge for each hour in which the Eligible Customer's reserved service limit is exceeded at the Point of Interconnection during at least one five-minute interval (Exceedance Hour) and a penalty ratchet when exceedances occur repeatedly.[1053] Specifically, Indicated TOs propose that, if more than one Exceedance Hour occurs on the same day, then an additional daily penalty applies; if exceedances occur on multiple days within the same week, an additional weekly penalty applies; if exceedances occur in multiple weeks within the same month, then an additional monthly penalty applies; and if exceedances occur in multiple months within the same year, then an additional annual penalty applies.[1054] We agree with Indicated TOs that progressively increasing the consequences of repeated penalties encourages Eligible Customers to manage their usage consistent with their reserved transmission service limit.[1055] We note that Indicated TOs submit testimony indicating that they propose to distribute revenues collected from financial penalty charges on a monthly basis to Eligible Customers taking NITS and FCD transmission service. However, we find that unreserved use penalties should be distributed to all non-offending transmission

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[1052] *See* Order No. 890, 118 FERC ¶ 61,119 at P 848 ("As a result, we establish a rebuttable presumption that unreserved use penalties no greater than twice the firm point-to-point rate for the penalty period defined above are just and reasonable."); *id.* P 846 (basing penalty charges on the period of unreserved use and determining that, as a general rule, more than one assessment for a given duration will increase the penalty period to the next longest duration).

[1053] Indicated TOs Response Brief at 12 ("When a Co-Located Load exceeds its reserved transmission service limit, the base penalty charge will be assessed for any hour in which at least one five-minute interval occurs during which a customer's metered load at the point of interconnection exceeds its reserved transmission service."); Indicated TOs Reply Brief at 16.

[1054] Indicated TOs Reply Brief at 16; Indicated TOs Reply Brief, Ex. No. PTO-0005 at 7.

[1055] Indicated TOs Response Brief at 12-13; Indicated TOs Reply Brief at 17.

customers consistent with Order No. 890.[1056] We direct the PJM transmission owners to file, within 60 days of the date of issuance of this order, a compliance filing consistent with these findings.

E. Anti-Toggling Mechanisms for Firm Contract Demand Transmission Service

530. In the December Order, the Commission found that FCD transmission service should have a minimum term of one year, but that PJM should propose an anti-toggling mechanism for Eligible Customers switching between FCD and NFCD transmission service.[1057]

1. Initial Briefs

531. PJM proposes an anti-toggling mechanism to prevent transmission customers from switching between FCD and NFCD transmission services by providing that the portion of the Co-Located Load served by FCD transmission service is not eligible to be served by NFCD transmission service for five years following the effective date of the Service Agreement. Conversely, PJM explains, it does not bar Co-Located Load served by NFCD transmission service from being served by FCD transmission service in future years. However, PJM proposes an exception if there is a physical change to the Co-Located Generator that would materially alter the MW level dedicated to the load or to the Co-Located Load that would materially alter the MW level of its gross demand.[1058] PJM argues this exception is necessary to ensure that, if an Eligible Customer materially changes either the generation capacity or the load on a gross demand basis, the Tariff provides flexibility to determine whether FCD or NFCD transmission service should be taken for the new incremental portion.

532. PJM also maintains that its proposed 42-month notice of termination acts as an anti-toggling device in a manner similar to the five-year commitment period applicable to the Fixed Resource Requirement alternative in the PJM capacity market. PJM explains that its notice period recognizes that PJM incorporates these loads in the capacity market,

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[1056] *See* Order No. 890, 118 FERC ¶ 61,119 at P 860 ("Unreserved use penalties are assessed against transmission customers and should, therefore, be distributed to all non-offending transmission customers, whether affiliated with the transmission provider or not.").

[1057] December Order, 193 FERC ¶ 61,217 at P 213.

[1058] PJM Initial Brief at 53-54.

and it would unreasonably shift costs to other loads if Co-Located Loads could avoid capacity charges incurred on their behalf by terminating service prematurely.[1059]

533. Indicated TOs propose a five-year minimum commitment period for FCD transmission service, arguing that doing so is necessary to ensure that FCD transmission service customers cannot trigger Network Upgrades and then cease taking service, thereby potentially shifting costs to other transmission customers, and because it mirrors the commitment period for loads seeking to procure their own capacity.[1060] Indicated TOs argue that, where Network Upgrades are attributable to FCD transmission service customers, separate payment guarantees may be required to prevent Network Customers from being left "holding the bag" if an FCD transmission service customer exits the system before the costs of the Network Upgrades are fully paid.[1061] Finally, Indicated TOs recommend that the Commission adopt the same requirements for FCD transmission service that apply to notices of termination for NITS, including the 42-month notice period.[1062]

2. **Response Briefs**

534. NOVEC states that it supports PJM's five-year minimum service commitment and 42-month notice requirement. NOVEC asserts that the minimum service commitment sends timely price signals to the capacity market, enhances market stability, and minimizes upgrade-related risks if a Co-Located Load withdraws. NOVEC notes that the notice-of-termination period is identical to the requirements for termination of NITS and prevents Co-Located Loads from avoiding capacity charges by prematurely terminating their agreement.[1063]

3. **Determination**

535. Except as noted below, we find PJM's proposed anti-toggling mechanism to be a just and reasonable replacement rate. In particular, we find that PJM's proposal to prohibit, for a period of five years, Eligible Customers taking transmission service on behalf of a Co-Located Load from taking NFCD transmission service for any portion of

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[1059] *Id.* at 54-55.

[1060] Indicated TOs Initial Brief at 21 (citing December Order, 193 FERC ¶ 61,217 at P 213).

[1061] *Id.* at 21 n.50.

[1062] *Id.* at 21 & n.52.

[1063] NOVEC Response Brief at 15-16.

Co-Located Load served by FCD transmission service will ensure that such Eligible Customers do not attempt such a switch based on expected capacity market conditions, consistent with the December Order.[1064] We further find that PJM's proposed 42-month notice of termination provision applicable to FCD transmission service customers mirrors that applicable to Network Customers and recognizes that PJM has procured capacity on their behalf. We direct PJM to file, within 60 days of the date of issuance of this order, a compliance filing to revise its Tariff consistent with these findings.

536. However, we find PJM's proposed exceptions regarding changes to the Co-Located Generator or Co-Located Load are not just and reasonable to the extent they would permit Eligible Customers to decrease the level of contract demand for FCD transmission service they take on behalf of an Eligible Load, and increase the level of contract demand for NFCD transmission service, without being subject to the anti-toggling provision. The Commission found that the anti-toggling mechanism should ensure Eligible Customers taking transmission service on behalf of Co-Located Loads cannot switch from FCD to NFCD transmission service based on expected capacity market conditions.[1065] As such, PJM's proposal is not consistent with the December Order, and we direct PJM to propose an anti-toggling mechanism without an exception for Eligible Customers taking FCD transmission service on behalf of Eligible Load in a compliance filing within 60 days of the date of issuance of this order.

537. We also reject Indicated TOs' proposal for a five-year minimum commitment period. As Indicated TOs acknowledge, the Commission required in the December Order that the minimum term for FCD transmission service should be one year.[1066] As such, we find that Indicated TOs' arguments in support of its proposal are an untimely request for rehearing of the December Order.[1067]

[1064] December Order, 193 FERC ¶ 61,217 at P 213.

[1065] *Id.*

[1066] *Id.*

[1067] *See, e.g.*, *ISO New Eng. Inc.*, 132 FERC ¶ 61,098 at P 12 ("The Commission has held that requests to alter a compliance filing in a manner that differs from the order requiring the compliance filing constitute a collateral attack on the order requiring the compliance filing.").

F. Communications, Alarm, SCADA, or Other Requirements

1. Initial Briefs

538. PJM proposes to develop telemetry requirements for Co-Located Load so that PJM can monitor the status of demand placed on PJM's transmission system, including unreserved use, to ensure reliability.[1068] PJM states that it still determining the scope of the tools and requirements necessary to limit withdrawals that exceed reserved use. PJM also proposes to develop data exchange and metering requirements for Co-Located Load that may be similar to those applicable to generation. PJM proposes to develop the capability to differentiate more granularly between the transmission services available to Eligible Customers on behalf of Co-Located Load because they are prioritized differently. PJM maintains that Eligible Customers would need to take these different forms of transmission service on different feeders, or cables leaving substations, to ultimately serve the Co-Located Load.

539. PJM next proposes to develop requirements and identify any relevant NERC rules to ensure that relay settings are consistent with the design of the necessary control technologies and/or protection systems, as set forth in each Service Agreement.[1069] PJM asserts that transmission owners must be heavily involved in ensuring that necessary control technology and/or protection systems are properly designed. PJM explains that it proposes technical requirements that must be in place prior to commencement of service because there are significant risks introduced by the necessary control technology and protection systems. PJM also proposes to make changes to core Markets and Operations systems to incorporate the information provided by Eligible Customers and Co-Located Load to ensure reliability of the PJM transmission system.

2. Response Briefs

540. Indicated TOs support PJM's proposal in its initial brief to develop telemetry requirements and require Co-Located Load to meet such requirements in order to monitor Co-Located Loads' use of the transmission system.[1070]

3. Determination

541. We decline to direct PJM's proposed telemetry, data exchange, metering, and relay setting requirements as the replacement rate because PJM has not provided

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[1068] PJM Initial Brief at 59-61.

[1069] *Id.* at 60-61.

[1070] Indicated TOs Response Brief at 10-11.

sufficient detail to find they are just and reasonable. PJM by its own admission has not finished determining the scope of what might be necessary to limit energy withdrawals from the transmission system. Accordingly, and consistent with our determination above to extend the three new transmission services set forth in the December Order to Eligible Customers taking service on behalf of load with BTMG that are willing and able to limit their energy withdrawals from the transmission system under certain conditions, we direct PJM to file, within 60 days of the date of issuance of this order, a compliance filing with Tariff revisions it deems necessary for PJM to be able to ensure that an Eligible Customer has adequate telemetry, data exchange, and metering requirements such that PJM may monitor the Eligible Load's use of the transmission system, limit withdrawals, and ensure relay settings are consistent with necessary control technologies and/or protection systems.

G. Curtailment Procedures for Interim NITS and Non-Firm Contract Demand Transmission Service

1. Initial Briefs

542. PJM proposes that Interim NITS and NFCD transmission service will be curtailed before FCD transmission service and NITS.[1071] PJM also proposes that it may curtail Interim NITS or NFCD transmission service prior to dispatching the Pre-Emergency Load Response Program or in response to a transfer capability shortage as a result of system reliability conditions. PJM proposes that FCD transmission service be treated equal to NITS for purposes of curtailment.[1072] PJM states that it reserves the right to curtail the three new transmission services on a non-discriminatory basis for the purpose of making necessary adjustments to, changes in, or repairs on its lines, substations, and facilities, and in cases where continuation of service would endanger persons or property. PJM proposes that the Eligible Customer must shed load in accordance with previously established procedures under the relevant Service Agreement.

543. PJM acknowledges that its system does not differentiate between different types of transmission service because all load within PJM is currently served by NITS.[1073] Thus, PJM explains, core systems would need to be implemented to enable sufficient granularity when shedding an Eligible Customer's Co-Located Load being served by two different levels of transmission service, i.e., both FCD and NFCD transmission services. PJM clarifies that, assuming these core system design changes can be implemented, Eligible Customers taking transmission service on behalf of Co-Located Load would

[1071] PJM Initial Brief at 63.

[1072] *Id.* at 64.

[1073] *Id.* at 65-66.

need to take different forms of transmission service on different feeders, or cables leaving substations, to ultimately serve Co-Located Load.

2. Response Briefs

544. Joint Co-Location Developers argue that PJM fails to adequately clarify when and how NFCD transmission service and Interim NITS shall be curtailed, in particular the curtailment trigger.[1074] Joint Co-Location Developers maintain that the curtailment trigger significantly affects rates and service and is realistically susceptible of specification and should be included in the tariff. Joint Co-Location Developers assert that PJM does not clarify whether and how it will determine curtailment priority among its different classes of non-firm service, including Non-Firm PTPS, NFCD transmission service, and Interim NITS.

545. Constellation argues that it is discriminatory to require different feeders and would unnecessarily delay Co-Location Arrangements.[1075] At minimum, Constellation asserts that such a requirement should not apply in the case of Interim NITS since the Co-Located Load is not taking both firm and non-firm service.

546. AEU/SEIA explain that the December Order established a curtailment hierarchy in accordance with which Interim NITS and NFCD transmission service will be curtailed before NITS and FCD transmission service and before pre-emergency demand response resources are dispatched.[1076] AEU/SEIA claim that PJM's implementation of this hierarchy is contradictory because PJM states that it "may" curtail Interim NITS and NFCD transmission service prior to dispatching the Pre-Emergency Load Response Program and that it "will" curtail Interim NITS and NFCD transmission service before demand response resources are called upon to reduce load.[1077] AEU/SEIA argue that this inconsistency must be resolved because a customer considering whether to take Interim NITS or NFCD transmission service needs to know whether curtailment before pre-emergency demand response is a certainty or a possibility.

547. AEU/SEIA contend that PJM has provided no information about the conditions that would actually trigger curtailment of Interim NITS or NFCD transmission service in practice and that, because these are novel services, no historical curtailment data

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[1074] Joint Co-Location Developers Response Brief at 17.

[1075] Constellation Response Brief at 29-30.

[1076] AEU/SEIA Response Brief at 11.

[1077] *Id.* (citing PJM Initial Brief at 63-64).

exists.[1078] AEU/SEIA further argue that modeling of expected curtailment frequency and duration or examples of how curtailment would operate for a hypothetical Co-Location Arrangement must be provided in order for customers to make informed business decisions on the transmission service that best serves their needs. If it is not, AEU/SEIA argue that prospective customers will default to taking NITS. AEU/SEIA request that the Commission require PJM to develop and publish historical analysis and forward-looking modeling of curtailment frequency and duration for Interim NITS and NFCD transmission service, as informed by historical system conditions in PJM and broken down by zone. AEU/SEIA also argue that PJM should set out in its reply brief how it intends to operationalize curtailment for NFCD transmission service, including the sequence in which Co-Located Loads will be curtailed relative to other non-firm services and the mechanism by which curtailment instructions will be communicated and enforced. Without this sequence, AEU/SEIA claim that neither the Commission nor affected parties can evaluate whether PJM's proposed curtailment framework is consistent with the December Order's requirement that NFCD transmission service be available "as needed during normal, non-emergency system operating conditions."[1079]

3. Reply Briefs

548. Earthjustice argues that the Commission should require PJM to clarify how and when PJM will enforce its curtailment procedures, including: (1) how PJM will communicate its curtailment directives; (2) how and when transmission providers will determine that load shed is necessary, which loads will be curtailed first, and at what stage curtailments will occur; and (3) how a data center will be disqualified and the timeline for that disqualification.[1080]

549. Industrials/Amtrak argue that many traditional large loads cannot shut off immediately if their on-site generation trips.[1081]

[1078] *Id.* at 12-14.

[1079] *Id.* at 14 (quoting December Order, 193 FERC ¶ 61,217 at P 215).

[1080] Earthjustice Reply Brief at 14, 16.

[1081] Industrials/Amtrak Reply Brief at 6.

4. Answers

550. Constellation argues that PJM inappropriately attempts in its reply brief to reinstate a curtailment criterion of a capacity/reserve shortage and that the Commission rejected this element of PJM's proposed Option 7 in the December Order.[1082]

5. Determination

551. We find PJM's proposed curtailment hierarchy for Interim NITS, FCD transmission service, and NFCD transmission service to be just and reasonable. PJM's proposal to treat FCD transmission service as comparable to NITS is consistent with the December Order,[1083] as is PJM's proposal to curtail Interim NITS and NFCD transmission service prior to firm transmission services.[1084] In addition, we find PJM's proposal to curtail Interim NITS and NFCD transmission service prior to deployment of its Pre-Emergency Load Response Program, or in response to a transfer capability shortage as a result of system reliability conditions, to be just and reasonable because it is consistent with how Non-Firm PTPS is curtailed.[1085] We disagree with Constellation that PJM's proposal to curtail Interim NITS during capacity or reserve shortages is inconsistent with the Commission's findings in the December Order that PJM's proposed construct for an interim transmission service was too broad and not sufficiently detailed to direct as a replacement rate.[1086] Constellation misunderstands the December Order, which found it was not reasonable to allow the transitional period for Interim NITS to continue until any resource adequacy challenges associated with the addition of the Co-Located Load were addressed, and instead limited the transitional period to the time

[1082] Constellation May 11 Answer at 13 (citing December Order, 193 FERC ¶ 61,217 at P 202).

[1083] *See, e.g.*, December Order, 193 FERC ¶ 61,217 at P 208 (stating that FCD transmission service will have the same curtailment priority as existing firm transmission services).

[1084] *See, e.g.*, *id.* P 201 (stating that Interim NITS "will be curtailed before existing firm transmission services and the new Firm Contract Demand Transmission Service"); *id.* P 215 (stating same with respect to NCFD transmission service).

[1085] *See* PJM, Intra-PJM Tariffs, OATT, § II, § 14.7 (Curtailment or Interruption of Service) (0.0.0) (describing PJM's curtailment procedures for Non-Firm PTPS); PJM Manual 13: Emergency Operations, Rev. 97 (eff. November 20, 2025), § 2.3.2.

[1086] Constellation May 11 Answer at 13 (citing December Order, 193 FERC ¶ 61,217 at P 202).

needed to complete any Network Upgrades identified in the study process.[1087] The Commission did not find, as Constellation alleges, that Interim NITS could not be curtailed as a result of capacity or reserve shortages. Here, we find that PJM's proposal to curtail Interim NITS during capacity or reserve shortages is just and reasonable and consistent with both the nature of the transmission service as a non-firm transmission service for which Eligible Customers do not pay generation capacity charges, and the need to maintain reliability.

552. We disagree with commenters that PJM must provide specific details in its Tariff, such as the trigger and procedures for curtailment of Interim NITS and FCD or NFCD transmission services, or how PJM will enforce its curtailment procedures. We find that requiring PJM to specify the curtailment priority of these new transmission services in its Tariff, while leaving specific implementation details in its manuals and individual service agreements, provides transmission customers sufficient certainty as to their priority relative to other transmission services and ensures that PJM has sufficient flexibility to preserve system reliability in varying operating conditions.[1088] We find that it is just and reasonable and important to protect transmission system reliability to provide PJM with sufficient operational flexibility during emergency procedures to curtail transmission customers as needed to preserve reliability.[1089]

553. However, we find that PJM does not adequately explain its curtailment hierarchy amongst non-firm transmission services. For example, while PJM states that it will curtail Interim NITS and NFCD transmission service prior to deployment of its Pre-Emergency Load Response Program, it does not detail if these transmission services will be curtailed before or after Non-Firm PTPS, or if curtailment priority within NFCD transmission service will be based on duration, as are curtailments for Non-Firm PTPS.[1090]

[1087] December Order, 193 FERC ¶ 61,217 at P 202.

[1088] *See* PJM, Intra-PJM Tariffs, OATT, § II.14.7 Curtailment or Interruption of Service (0.0.0) (describing PJM's curtailment procedures for Non-Firm PTPS).

[1089] *See* Order No. 890-A, 121 FERC ¶ 61,297 at P 566 ("If the [conditional firm transmission] customer selects the annual hourly cap option, the transmission provider will have the flexibility to conditionally curtail the customer for any reliability reason during those hours, including but not limited to, the system condition(s) identified in the system impact study.").

[1090] PJM, Intra-PJM Tariffs, OATT, § II.14.7 Curtailment or Interruption of Service (0.0.0).

554. We also find that PJM has not justified its assertion that an Eligible Customer taking different forms of transmission service on behalf of Co-Located Load would need to take those services on different feeders. PJM states that this requirement is based on the need for core systems to be implemented to enable sufficient granularity when shedding an Eligible Customer's Co-Located Load being served by two different levels of transmission service.[1091] While we recognize that core systems will need to be implemented, PJM provides no explanation as to why these systems could not be sufficiently flexible as to accommodate a single feeder with two different levels of transmission service on it. [1092]

555. Accordingly, we direct PJM to submit, within 60 days of the date of issuance of this order, a compliance filing to revise the Tariff to include the curtailment priorities for Interim NITS, FCD transmission service, and NFCD transmission service consistent with our findings above. This language must specify that FCD transmission service shall be treated the same as NITS for the purposes of curtailment, and that Interim NITS and NFCD transmission service will be curtailed prior to deployment of PJM's Pre-Emergency Load Response Program, or in response to a transfer capability shortage as a result of system reliability conditions. PJM's submittal must also detail the curtailment priorities between Non-Firm PTPS, Interim NITS, and NFCD transmission service, including how or if PJM will prioritize transmission customers for curtailment based on duration of service. Consistent with our determination above to extend the three new transmission services set forth in the December Order to Eligible Customers taking service on behalf of load with BTMG that are willing and able to limit their energy withdrawals from the transmission system under certain conditions, we further direct PJM to reflect this change in its compliance filing.

H. Rates, Terms, and Conditions for Interim NITS

1. Initial Briefs

556. PJM proposes to model the non-rate terms and conditions for Interim NITS on NITS.[1093] PJM proposes that an Eligible Customer may take Interim NITS on behalf of Co-Located Load until Network Upgrades are complete, and then the customer will automatically convert to a Network Customer. PJM states that an Eligible Customer receiving Interim NITS on behalf of Co-Located Load will receive non-firm transmission

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[1091] PJM Initial Brief at 66.

[1092] For example, this system could assume that load on a feeder is firm up until the Eligible Customer's Firm Contract Demand withdrawal limit, and non-firm above that contract demand amount.

[1093] PJM Initial Brief at 67-70.

service for the delivery of energy to Co-Located Load. PJM proposes that, upon receipt of request, PJM will determine the amount of Interim NITS that can be reliably provided based on the results of appropriate studies and in consultation with the affected transmission owner. PJM proposes that, for Interim NITS, the Eligible Customer must meet certain conditions and appropriate technical requirements. PJM proposes that the Eligible Customer have an ongoing obligation to notify PJM of material changes in the demand characteristics of the Co-Located Load and the supply characteristics of the Co-Located Generator. PJM explains that the Co-Location Arrangement cannot change during the term of the Interim NITS without discussion and possible further studies by PJM.

557. PJM proposes load shedding and curtailment provisions applicable to Interim NITS, including that prior to commencement of service, the Eligible Customer must demonstrate its ability to comply with PJM's load shedding and curtailment procedures.[1094] PJM proposes to require Eligible Customers taking Interim NITS to work with PJM and the affected transmission owners to establish necessary control technologies and/or protection systems. PJM proposes that Eligible Customers will be assessed certain non-transmission-related rates, including: (1) administrative service charges, (2) ancillary services charges except for regulation, (3) black start service charges based on gross demand, and (4) any redispatch costs. PJM proposes a single Service Agreement specific to Eligible Customers serving Co-Located Load via Interim NITS or NITS. Indicated TOs propose to apply the NITS rate to Eligible Customers taking Interim NITS.[1095]

2. <u>Response Briefs</u>

558. Indicated TOs propose several clarifications to PJM's illustrative Tariff provisions.[1096] First, Indicated TOs propose revisions to section 702.4 to require an Eligible Customer to satisfy any applicable technical requirements imposed by the relevant transmission owner. Second, Indicated TOs propose revisions to section 703.2 to clarify that both new and increased Co-Located Loads will be studied pursuant to a new application for transmission service. Third, Indicated TOs contend that PJM should provide additional information as to what would constitute a "material change" in the demand characteristics of a Co-Located Load for purposes of an Eligible Customer's notice obligations under section 703.3. Fourth, Indicated TOs recommend that PJM establish load shedding practice guidelines applicable to Co-Location Arrangements for purposes of load shedding conducted under section 705.3 of PJM's illustrative tariff

[1094] *Id.* at 71-75.

[1095] Indicated TOs Initial Brief at 5 n.13.

[1096] Indicated TOs Response Brief at 13-17, 23.

provisions. Indicated TOs explain that they are particularly concerned with automatic load shedding schemes because of the possibility that unintentional activation of these schemes may result in unwanted shedding of nearby customer loads in addition to the Co-Located Load. Fifth, Indicated TOs propose revisions to section 705.5 to require that the necessary control technologies and/or protection systems that must be approved by PJM are also approved by and developed in accordance with the transmission owners' interconnection standards, guidelines, and practices. Sixth, Indicated TOs assert that the reference to the transmission owner's cost responsibility for redispatch costs in section 706.2 of PJM's illustrative tariff provisions is incorrect and request that PJM remove such reference from the filed Tariff records. Seventh, Indicated TOs propose to correct a typo to the conditions of Part XI of the Tariff in section 2.0 of PJM's proposed Attachment F-3A. Last, Indicated TOs request that PJM add a placeholder section for listing required control technologies and/or protection systems to section 4.0 of PJM's proposed Attachment F-3A.

559. Vistra argues that PJM's study process is flawed because it provides too much discretion to PJM and transmission owners to determine whether studies are required, which studies to conduct, the timeline for doing so, and how to prioritize different requests.[1097] Also, Vistra contends that PJM's proposal is unclear on what it means to ensure that non-firm transmission service can be provided reliably, and that it is critical customers seeking non-firm service not be held to some higher standard. Constellation similarly argues that PJM's proposed study procedures lack sufficient detail to prevent delay and discrimination by transmission owners.[1098] Constellation argues that PJM must spell out the studies it will perform in the tariff, as well as the timetable for completing the studies.

560. Market Monitor argues that Interim NITS is not consistent with PJM's planning process and poses potentially significant reliability risks due to the complexity introduced by the necessary control technology and protection systems. Market Monitor states that these risks mean there is not an unlimited amount of Interim NITS that can be provided, which raises questions about which customers would be allowed to take Interim NITS if demand exceeds supply.[1099]

561. Several parties oppose any restriction on Co-Located Loads accessing on-site generation while using Interim NITS and being curtailed, noting that PJM's initial brief is not clear on whether such a requirement is being proposed. Parties argue that such a requirement would be in violation of the December Order and significantly degrade the

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[1097] Vistra Response Brief at 31, 39.

[1098] Constellation Response Brief at 14-15.

[1099] Market Monitor Response Brief at 6-7.

value of Interim NITS.[1100] DCC argues that allowing customers to be curtailed despite bringing their own generation does not align with the Commission's objective to enable more flexible and timely service arrangements for Co-Located Load.[1101] DCC argues that PJM's proposal does not recognize an intermediate operational state in which Co-Located Generators can operate in parallel with the grid on a limited, non-exporting or non-market-participating basis while completing interconnection requirements. Enchanted Rock argues that because this limitation during curtailment conditions is a practice that affects rates and service significantly, that is reasonably susceptible of specification, and that is not so generally understood in any contractual arrangement as to render recitation superfluous, it must be included within the Tariff in order to be effectuated.[1102]

562. AEU/SEIA request that the Commission direct PJM to revise its Interim NITS proposal to explicitly allow Eligible Customers to use on-site generation to serve load continuously, provided that the generator is new and that the Co-Located Load does not simultaneously withdraw energy from the transmission system.[1103] Joint Co-Location Developers assert that, as long as Co-Located Generators are not capacity resources, they should be free to serve Co-Located Loads during curtailment conditions.[1104]

563. Constellation asks the Commission to direct PJM to include a transitional mechanism for pending large load NITS applicants so that this new service is not unnecessarily limited to new applicants.[1105]

[1100] *See* AEU/SEIA Response Brief at 20 (citing December Order, 193 FERC ¶ 61,217 at P 201); Enchanted Rock Response Brief at 7; Joint Co-Location Developers Response Brief at 18.

[1101] DCC Response Brief at 3-4.

[1102] Enchanted Rock Response Brief at 7.

[1103] AEU/SEIA Response Brief at 21.

[1104] Joint Co-Location Developers Response Brief at 19.

[1105] Constellation Response Brief at 14.

3. Reply Briefs

564. In consideration of parties' comments, particularly those of Indicated TOs, PJM proposes certain revisions to the illustrative tariff provisions for Interim NITS and NITS, and the Service Agreement for Interim NITS.[1106]

565. PJM articulates several reasons why Interim NITS customers should not be allowed to access the Co-Located Generator when PJM curtails the Co-Located Load.[1107] First, PJM states that Interim NITS will be curtailed when the system cannot support it in real time, whether with sufficient generation or transmission capacity. Second, PJM argues that Interim NITS must be designed to allow PJM to maintain system reliability, both from a transmission and capacity perspective, and that allowing an interruptible customer to preclude PJM from accessing a generation resource during times of system stress would be contrary to that objective. PJM maintains that, if the Co-Located Generator is a capacity resource, then PJM has the first call on such resource's energy to meet the region's needs. Third, PJM explains that Interim NITS is a type of NITS and is served by the pool of resources and not any one dedicated resource. PJM asserts that allowing an Interim NITS customer to take energy from the Co-Located Generator during curtailment would effectively transform this service into something akin to FCD or NFCD transmission service, where the Co-Located Generator dedicates a MW level of output to the Co-Located Load. Lastly, PJM argues that Interim NITS is predicated on the Co-Located Load's willingness to curtail, and allowing an Interim NITS customer access to the Co-Located Generator during times of system stress is contrary to this foundational element of the December Order.[1108] PJM also asserts that providing a right to an Interim NITS customer to access the Co-Located Generator during times of system stress is illogical when such right is not available to full Network Customers. NOVEC urges the Commission to accept PJM's proposal and argues that if prospective customers find that Interim NITS is not desirable, they have the flexibility to pursue a combination of FCD and NFCD transmission services.[1109]

566. PJM defends its process for Interim NITS to determine whether "additional studies are needed" by arguing that the NITS study could provide sufficient information for PJM to determine if Interim NITS can be reliably provided.[1110] PJM maintains that it should

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[1106] PJM Reply Brief at 60-64.

[1107] *Id.* at 16-20.

[1108] *Id.* at 21 (citing December Order, 193 FERC ¶ 61,217 at P 201).

[1109] NOVEC Reply Brief at 16.

[1110] PJM Reply Brief at 27.

not be required to provide as much detail for Interim NITS determinations as for FCD and NFCD transmission services given that Interim NITS is derivative of the customer's existing NITS request and associated studies, although the illustrative tariff authorizes PJM to perform additional studies if needed.[1111]

567. Joint Co-Location Developers argues that the Interim NITS proposal undermines PJM's reliability rationale for NFCD transmission service outage restrictions because PJM has proposed to make it broadly available during normal operating conditions, and PJM has not claimed that doing so will compromise reliability.[1112]

568. Constellation avers that PJM's omission of any detail with respect to this study process does not comply with the Commission's directive to provide additional record evidence to set the appropriate replacement rates, terms, and conditions for Interim NITS and urges the Commission to direct PJM to file its study process for Interim NITS within 30 days.[1113]

4. Answers

569. Constellation asks the Commission to direct PJM to revise its illustrative tariff to clarify that large loads with pending NITS applications shall be studied for Interim NITS at the request of the load without having to submit a separate application.[1114]

570. Enchanted Rock reiterates that PJM's implementation of Interim NITS is fundamentally flawed because, while an Eligible Customer takes Interim NITS on behalf of a Co-Located Load, PJM proposes not to allow that Co-Located Load to receive any capacity or energy from a Co-Located Generator and instead to treat the Co-Located Generator as a capacity resource.[1115] Enchanted Rock disagrees with PJM that this limitation accords with the principles of the December Order that the new transmission services are designed to serve loads that are willing and able to control their withdrawals from the transmission system and to allow PJM to maintain system reliability. Enchanted Rock avers to the contrary that allowing a Co-Located Load to take capacity and energy from a Co-Located Generator enables that Co-Located Load to control its withdrawals

[1111] *Id.* at 31-32.

[1112] Joint Co-Location Developers Reply Brief at 9-10.

[1113] Constellation Reply Brief at 12.

[1114] Constellation May 11 Answer at 14.

[1115] Enchanted Rock May 7 Answer at 2-3.

from the transmission system.[1116] Enchanted Rock also contends that PJM is mistaken in its argument that the PJM region has first call on the output of a Co-Located Generator before the Co-Located Generator has completed PJM's interconnection study process and received a GIA, because until that point, the Co-Located Generator is not eligible to be a capacity resource. Enchanted Rock argues that forcing the Co-Located Generator to be dispatched under emergency conditions during this period would be unduly discriminatory by imposing on these Co-Located Generators obligations that are not imposed on similarly situated generators.[1117] Finally, Enchanted Rock argues that it would be illogical that an Interim NITS customer not be allowed to rely on its non-firm Co-Located Generator in order to remain online during emergencies when it is taking non-firm transmission service. Enchanted Rock further contends that it would be unjust and unreasonable for a Co-Located Load to bear the full capital and development risk of bringing a Co-Located Generator online only for PJM to dispatch the Co-Located Generator to serve firm Network Customers during emergencies—precisely when PJM is serving firm Network Customers but curtailing Interim NITS customers.[1118]

5. Determination

571. We find PJM's proposal for Interim NITS to be just and reasonable, subject to the clarifications directed below, and direct PJM to file, as the replacement rate, rates, terms, and conditions for Interim NITS as detailed below on compliance. We generally agree with PJM that the non-rate terms and conditions for Interim NITS reflect those applied to NITS, with necessary modifications to reflect the interim and non-firm nature of this new transmission service. We find that PJM's proposals that an Eligible Customer taking Interim NITS will receive non-firm transmission service for the delivery of energy to Co-Located Load and convert automatically to a Network Customer when Network Upgrades are complete to be consistent with the directives in the December Order.[1119] We direct PJM to file, within 60 days of the date of issuance of this order, a compliance filing revising its Tariff consistent with these findings. Consistent with our determination above to extend the three new transmission services set forth in the December Order to Eligible Customers taking service on behalf of load with BTMG that are willing and able

[1116] *Id.* at 5-6.

[1117] *Id.* at 6-8.

[1118] *Id.* at 8-9.

[1119] December Order, 193 FERC ¶ 61,217 at P 200 (stating that Interim NITS "can be interrupted until the Network Upgrades necessary to provide NITS are complete and the Co-Located Load can be designated as Network Load").

to limit their energy withdrawals from the transmission system under certain conditions, we further direct PJM to reflect this change in its compliance filing.

572. We find that Indicated TOs' proposal to apply the NITS rate to Eligible Customers taking Interim NITS on behalf of Co-Located Load is just and reasonable and consistent with the December Order.[1120] Therefore, and consistent with our determination above to extend the three new transmission services set forth in the December Order to Eligible Customers taking service on behalf of load with BTMG that are willing and able to limit their energy withdrawals from the transmission system under certain conditions, we direct the PJM transmission owners to submit, within 60 days of the date of issuance of this order, a compliance filing to apply the NITS rate to Eligible Customers taking transmission service on behalf of Eligible Loads.

573. Consistent with our findings in Part VI.A.4, we also find just and reasonable PJM's proposal to charge Eligible Customers taking Interim NITS on behalf of Co-Located Load certain administrative and ancillary services charges, and to assess charges based on gross demand for regulation and black start service. We find PJM's proposal consistent with the December Order.1121 Moreover, we find it is just and reasonable to charge Interim NITS customers redispatch costs to cover congestion-related costs, given that Interim NITS will be pool-scheduled and can be served by generators redispatched to mitigate congested transmission paths. Accordingly, and consistent with our determination above to extend the three new transmission services set forth in the December Order to Eligible Customers taking service on behalf of load with BTMG that are willing and able to limit their energy withdrawals from the transmission system under certain conditions, we direct PJM to submit, within 60 days of the date of issuance of this order, a compliance filing to incorporate in the Tariff revisions to assess to Eligible Customers taking transmission service on behalf of Eligible Loads: (1) administrative service charges, (2) ancillary service charges, (3) black start service charges, (4) regulation charges, and (5) any redispatch costs.

574. We note that only curtailment procedures were explicitly included in the paper hearing, and Tariff provisions governing other terms and conditions for Interim NITS, including the study process, should be filed on compliance.[1122] That said, we find it is just and reasonable to allow PJM greater discretion as to how it studies Interim NITS

[1120] *Id.* (stating that Interim NITS customers would pay the NITS rate).

[1121] *Id.* (stating that Interim NITS customers would pay ancillary service charges and charges for black start service).

[1122] *Id.* P 219.

requests, in comparison to requests for FCD transmission service.[1123] We disagree with Vistra that PJM's proposed study process provides too much discretion to PJM and transmission owners. We reiterate that Interim NITS is only "available to the extent PJM determines that it can provide some level of interim service reliably,"[1124] and therefore we find that it is just and reasonable to limit this service to situations in which PJM, in consultation with transmission owners, grants such service based on the results of appropriate studies. The Commission generally defers to transmission providers' discretion regarding how to maintain a reliable transmission system.[1125]

575. We further find that Interim NITS is distinguishable from FCD and NFCD transmission services, for which we direct PJM to provide additional detail in the Tariff regarding the study process as discussed Part VI.A.3, because Interim NITS is a temporary service akin to provisional interconnection service in that both services are intended to allow a customer to temporarily use an amount of a service that can be provided reliably until such customer may begin taking the full requested service. In both cases, the Commission requires the transmission provider to determine if the requested service could be provided reliably.[1126] Similar to provisional interconnection

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[1123] *See* PJM, Intra-PJM Tariffs, OATT, § VIII.L 439 Provisional Interconnection Service (0.0.0) (providing that PJM "may grant such service at its discretion based upon an evaluation that will consider the results of available studies"); Order No. 890, 118 FERC ¶ 61,119 at P 957 (in the case that a request for long-term Firm PTPS cannot be satisfied out of existing capacity, the transmission provider is required to identify options for providing service but has discretion to study and offer a mix of planning redispatch and conditional firm options for a single service request).

[1124] December Order, 193 FERC ¶ 61,217 at P 200.

[1125] *RWE Clean Energy, LLC*, 194 FERC ¶ 61,212 at P 42 ("The Commission generally allows transmission providers to exercise their engineering judgment when conducting interconnection studies, including deferring to transmission providers' discretion regarding how to maintain a reliable transmission system.").

[1126] December Order, 193 FERC ¶ 61,217 at P 200 ("Moreover, this new service would be optional for an Eligible Customer seeking NITS on behalf of a Co-Located Load and would only be available to the extent PJM determines that it can provide some level of interim service reliably."); Order No. 845, 163 FERC ¶ 61,043 at P 440 ("In response to CAISO, we clarify that 'a certain amount of capacity already studied' refers to situations where, for example, available studies or additional studies as necessary indicate that there is a certain amount of interconnection service available without the need for additional network upgrades and the transmission provider can reliably accommodate the interconnection service.").

service, we find that it is just and reasonable, in the case of this new interim transmission service, to afford PJM greater discretion as to how it decides to study Interim NITS requests, in comparison to requests for FCD and NFCD transmission services, and thus we decline to direct PJM to provide more detail in its Tariff on the process for studying requests for Interim NITS.[1127] We also disagree with Constellation that it is necessary for PJM to study requests for Interim NITS as part of the NITS process, rather than pursuant to a separate application. On compliance, we direct PJM to file Tariff provisions to effectuate a study process for Interim NITS, as discussed herein. Consistent with our determination above to extend the three new transmission services set forth in the December Order to Eligible Customers taking service on behalf of load with BTMG that are willing and able to limit their energy withdrawals from the transmission system under certain conditions, we further direct PJM to reflect this change in its compliance filing.

576. Regarding requests from parties that Interim NITS customers be allowed access to the Co-Located Generator during curtailments, we find that it is just and reasonable to prohibit the Eligible Customer taking Interim NITS on behalf of Co-Located Load from drawing energy from the Co-Located Generator when the Eligible Customer is curtailed, if the Co-Located Generator is a capacity resource. As PJM explains, capacity resources have an obligation to serve Network Load, and this obligation is particularly important during emergency or pre-emergency conditions when PJM needs all resources at its disposal to maintain reliability.[1128] However, in response to parties, we clarify that such a restriction would not be applicable to an Eligible Customer taking Interim NITS on behalf of Co-Located Load if the associated Co-Located Generator does not yet have any interconnection service or has only provisional interconnection service. Further, this restriction applicable to an Eligible Customer taking Interim NITS on behalf of Co-Located Load would not be applicable if the associated Co-Located Generator is seeking capacity resource status, but not yet obtained such status, because that Co-Located Generator would not yet have any obligation to provide capacity under the

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[1127] *See* PJM, Intra-PJM Tariffs, OATT, § VIII.L 439 Provisional Interconnection Service (0.0.0) (providing that PJM "may grant such service at its discretion based upon an evaluation that will consider the results of available studies"); *RWE Clean Energy v. PJM Interconnection, L.L.C.*, 194 FERC ¶ 61,212 at P 42 ("The Commission generally allows transmission providers to exercise their engineering judgment when conducting interconnection studies, including deferring to transmission providers' discretion regarding how to maintain a reliable transmission system."); Order No. 890, 118 FERC ¶ 61,119 at P 957 (in the case that a request for long-term Firm PTPS cannot be satisfied out of existing capacity, the transmission provider is required to identify options for providing service but has discretion to study and offer a mix of planning redispatch and conditional firm options for a single service request).

[1128] PJM Reply Brief at 18.

Tariff. We therefore direct PJM to submit, within 60 days, a compliance filing to incorporate the rates, terms, and conditions for Interim NITS that includes clarifications to specify that (1) an Eligible Customer taking Interim NITS on behalf of Co-Located Load may be served by a Co-Located Generator that is seeking capacity resource status during a curtailment condition to the extent that Co-Located Generator has yet to obtain interconnection service or has only provisional interconnection service, and (2) an Eligible Customer on behalf of Co-Located Load cannot expect to be served by a Co-Located Generator that is a capacity resource during a curtailment condition. Consistent with our determination above to extend the three new transmission services set forth in the December Order to Eligible Customers taking service on behalf of load with BTMG that are willing and able to limit their energy withdrawals from the transmission system under certain conditions, we further direct PJM to reflect this change in its compliance filing.

577. We disagree with Market Monitor's arguments that Interim NITS is not consistent with PJM's transmission planning process and poses potentially significant reliability risks. As discussed above, we adopt PJM's proposal for application and studies for Interim NITS, which limits the amount of Interim NITS available to an Eligible Customer seeking to take Interim NITS on behalf of a Co-Located Load to the amount that PJM, in consultation with the affected transmission owner(s), determines can be provided reliably to that customer while maintaining the reliability of the transmission system.

578. We decline to adopt Constellation's proposal to include a transitional mechanism for pending NITS applications. PJM's proposal does not prohibit any NITS applicant from also applying for Interim NITS, provided the applicant pays the additional study fee and is subject to the technical requirements for Interim NITS. Therefore, we find such a transitional mechanism not to be necessary.

I. Annual Report on New Transmission Services

579. Having addressed the rates, terms, and conditions for each of the new transmission services (subject to additional compliance), we now turn to our ongoing oversight of the implementation and use of these new transmission services. As discussed in the December Order and reiterated today, we expect that these new transmission services will facilitate more efficient use of the existing transmission system and limit unnecessary transmission system buildout. However, we also recognize that the new transmission services represent new developments in the provision of transmission service in the PJM region. These developments require effective oversight and monitoring to help ensure the transmission services are working as intended and do not create reliability issues or raise novel questions regarding application of cost causation principles. Transparent information on the use of the new transmission services is also important for prospective Eligible Customers on behalf of Eligible Loads to assess which transmission service to request and where on the transmission system to make such requests. We conclude that

the Commission, states, PJM market participants, and stakeholders would benefit from additional transparency about these new transmission services, and we therefore direct PJM to prepare an annual report, posted to its website, containing information about the demand for and use of these new transmission services. Accordingly, we direct PJM to submit, as part of its compliance filing within 60 days of the date of issuance of this order, proposed Tariff provisions requiring such a report and a proposal for the information to be included in that annual report.

580. As PJM considers the scope and content of that annual report, we propose that the following information could aid the Commission, states, PJM market participants, and stakeholders in assessing the impact of the new transmission services:

1) Data regarding each transmission service request seeking each of the new services by transmission zone, including:[1129]

    a. Peak gross load of the Eligible Load

    b. Category of the Eligible Load

    c. Type and MW of transmission service being requested

    d. Type and MW of transmission service granted

    e. Dates of reservation and usage (for non-firm services)

2) Total MW of each type of transmission service taken each year by transmission zone, including:

    a. Total amount of FCD transmission service taken relative to peak gross load at the meter receiving FCD transmission service

    b. Total amount of NFCD transmission service taken relative to peak gross load at the meter receiving NFCD transmission service

    c. Total amount of Interim NITS relative to peak gross load at the meter receiving Interim NITS

[1129] Some of the information we identify here is likely to be available on PJM's Open Access Same-Time Information System. PJM may account for that availability in designing its proposal and addressing the potential burden associated with preparing the annual report.

3) Information about transmission revenues paid by Eligible Customers on behalf of Eligible Loads for each transmission service by transmission zone, including:

    a. Total revenues paid by Eligible Customers taking each service per transmission zone

    b. Percentage of each transmission owner's total revenue requirement paid via revenues from each new service

    c. MWs of each new transmission service taken by Eligible Customers serving Eligible Loads as a percentage of peak gross load for each transmission owner

4) Frequency and magnitude of curtailment from the reservation of NFCD transmission service and Interim NITS by transmission zone

5) Frequency and magnitude of denials of NFCD transmission service reservation requests by transmission zone

J. Proposed Effective Date

1. Initial Briefs

581. PJM proposes an effective date of June 1, 2029, for the three new transmission services. PJM advances two rationales for its proposal: (1) integration of the new transmission services into PJM's capacity market so that PJM can procure capacity for Eligible Customers taking FCD transmission service on behalf of Co-Located Loads cannot occur until 2029; and (2) necessary modifications to the PJM core markets and operations software will take time.[1130] PJM also argues that this effective date will not be a limiting factor because Eligible Customers taking the new transmission services on behalf of Co-Located Load and their Co-Located Generators likely will not be online before June 1, 2029, given interconnection requirements, supply chain issues, procurement challenges, and capacity auction timelines.[1131]

582. As to the capacity market, PJM argues that demand associated with Co-Located Loads will significantly affect PJM's load forecast and thus have significant implications for the capacity market. PJM explains, however, that while the BRA for the 2028/2029 delivery year (beginning June 1, 2028) has not taken place, the load forecast and eligible

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[1130] PJM states this includes Real-Time Security Constrained Economic Dispatch, Day-Ahead Market, and dispatch software. PJM Initial Brief, Horger Aff. ¶ 16.

[1131] PJM Initial Brief at 79-82.

capacity have already been determined, and it is no longer possible to implement changes before the BRA is conducted. Therefore, according to PJM, the 2029/2030 delivery year (beginning June 1, 2029) is the first BRA in which the effects of the new transmission services can be considered and PJM can procure capacity for Eligible Customers taking FCD transmission service on behalf of Co-Located Loads.[1132]

583. As to the technical implementation issues, PJM argues that implementing the proposed curtailment priorities applicable to Interim NITS and NFCD transmission service will require modifying PJM's economic dispatch software and dispatch tools in order to incorporate system automation that will avoid undesirable outcomes. PJM further contends that work cannot begin until the rates, terms, and conditions of these new transmission services are finalized, and that changes to these systems will be dependent on vendor availability, the speed with which systems changes can be designed, and interaction with other software changes.[1133]

2. <u>Response Briefs</u>

584. Some parties support PJM's proposed effective date. Market Monitor argues that all load in PJM currently is served by NITS, and that PJM has demonstrated that it must significantly modify core systems to address curtailing load where an Eligible Customer takes more than one kind of transmission service on behalf of Co-Located Load.[1134] NOVEC contends that entities other than PJM must also prepare for these new transmission services by making operational adjustments and regulatory and billing changes to ensure costs reflect cost causation principles.[1135]

585. Constellation, DCC, Joint Co-Location Developers, and Vistra oppose PJM's proposed effective date, and make a variety of arguments against PJM's rationales for it or in favor of alternative proposals for faster implementation.[1136] As to arguments PJM makes about the capacity market, Vistra contends that resource adequacy considerations

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[1132] *Id.* at 79-80 (citing Horger Aff. ¶¶ 11-13). PJM also argues that inclusion of these services in Incremental Auctions would be inappropriate because they are conducted to procure replacement resources and generally result in small adjustments. *Id.* at 80-81 (citing Horger Aff. ¶ 15).

[1133] *Id.* at 81; Horger Aff. ¶ 16.

[1134] Market Monitor Response Brief at 8.

[1135] NOVEC Response Brief at 17-18.

[1136] Constellation Response Brief at 7; Joint Co-Location Developers Response Brief at 28; Vistra Response Brief at 8-9.

are beyond the scope of a transmission provider's obligation to serve and that the Commission requires transmission providers to make transmission service decisions based on available transfer capacity.[1137] Constellation, Joint Co-Location Developers, and Vistra each criticize PJM on the basis that Interim NITS and NFCD transmission service are not capacity-backed services such that PJM need not procure capacity on their behalf. Joint Co-Location Developers contend that PJM does not explain why a customer taking NITS would be reflected in capacity market demand forecast but a customer taking FCD transmission service would not. Similarly, Vistra argues that large loads were already included in the load forecasts for the 2027/2028 and 2028/2029 BRAs and that some of the new large loads in the forecasts may take the new transmission services. Joint Co-Location Developers argue that, if PJM's concerns stem from a planning need associated with existing capacity resources de-registering, then PJM should propose a delayed implementation limited to particular use cases.

586. As to PJM's technical implementation issues, Vistra and Joint Co-Location Developers criticize PJM for failing to offer any specificity.[1138] Vistra alleges that previous experience, such as in PJM's implementation of Order No. 841, suggests that PJM should be able to implement software changes much more quickly. Vistra further charges that the Commission should demand more support to justify delaying implementation than PJM has provided here, as it did in prior cases such as MISO's implementation of Order No. 2222. Similarly, Joint Co-Location Developers argue that curtailable products can be implemented on much faster timelines, pointing in particular to SPP's CHILLS and PJM's planned Connect and Manage proposal. Vistra also argues that PJM's systems should already be capable of curtailing because its Tariff provides Non-Firm PTPS. Joint Co-Location Developers assert that PJM does not explain why additional software must be developed for FCD transmission service, which is similar to NITS. Lastly, Joint Co-Location Developers state that their attached testimony notes that leveraging price responsive demand modifications to security constrained economic dispatch could allow PJM to implement faster any security constrained economic dispatch changes for non-firm loads.

587. Several parties disagree with PJM that Co-Located Generators will not be online before June 1, 2029.[1139] Joint Co-Location Developers argue that there are likely to be projects already in development that may opt to use these new transmission services.

[1137] Vistra Response Brief at 7 (citing, e.g., Order No. 890, 118 FERC ¶ 61,119 at P 2).

[1138] *Id.* at 10-12; Joint Co-Location Developers Response Brief at 29-30.

[1139] Joint Co-Location Developers Response Brief at 30; Vistra Response Brief at 9-10; Constellation Response Brief at 8.

Vistra adds that some generators are not capacity resources, are already in the process of de-listing, or could enter into a bilateral agreement with another generator to cover its capacity obligation. Constellation points out that load co-locating with existing generation could take Interim NITS.

588. Several parties request that the Commission make all or certain of the new transmission services available earlier.[1140] DCC argues that PJM has not demonstrated that all elements of the proposed services must be deferred for several years, nor has it identified opportunities for phased or interim implementation. DCC argues that the Commission should consider whether certain components of the framework can be implemented on an accelerated or staged basis to provide near-term benefits while longer-term systems are developed. Joint Co-Location Developers ask the Commission to require that FCD transmission service be available within six months of an order accepting PJM's filing and NFCD transmission service and Interim NITS be available at the earliest date technically feasible.

589. Constellation urges the Commission to establish a separate track to approve rates and terms for Interim NITS and make them effective no later than October 1, 2026.[1141] Constellation argues that PJM offers no legitimate reason for proposing a three-and-a-half-year delay and argues that it should not be difficult to adopt as soon as possible. Constellation maintains that, if the Commission separates and implements Interim NITS on a fast track, potential logistical challenges will not risk delay. Constellation suggests that the Commission review FCD and NFCD transmission services on a separate track and urges the Commission not to delay them until June 2029. Vistra proposes that, even if the Commission accepts PJM's software-based justifications, the Commission should require PJM to immediately accommodate Co-Location Arrangements for which software changes are irrelevant, such as where the Eligible Customer does not reserve any amount of NFCD transmission service on behalf of Co-Located Load.[1142] Vistra asserts that, whereas PJM contends that it needs software upgrades to apply appropriate curtailment priorities, a customer that reserves zero MWs of transmission service has no service to curtail. Vistra contends that it is not just and reasonable to prevent service on the basis of a software upgrade that is, at best, nominally relevant to that service. Vistra maintains that delaying service to customers that pull no energy from the grid is inconsistent with the December Order's goal to remedy PJM's

[1140] DCC Response Brief at 9; Joint Co-Location Developers Response Brief at 27-28.

[1141] Constellation Response Brief at 6-9.

[1142] Vistra Response Brief at 12-14.

failure to provide transmission service reflecting a Co-Located Load's willingness and ability to limit withdrawals.

3. Reply Briefs

590. PJM asserts that NFCD transmission service is not easy to implement from an operations perspective, particularly at scale, and in addition to exposing the system to higher reliability risks, will also require PJM to modify key systems.[1143] PJM explains that changes to Energy Management Systems are needed to ensure that PJM's systems are able to properly account for the provision of energy to Co-Located Load in the day-ahead and real-time market. PJM contends that its Energy Management System does not currently distinguish between different types of load, and that feature must be added. PJM argues that it must determine how to properly model and reflect NFCD transmission service and Co-Located Load in the different systems given that NFCD transmission service requires the transmission system to operate on reduced contingency margins. PJM maintains that significant modifications to the market clearing engines used in both the day-ahead and real-time markets will be required because PJM must be able to curtail NFCD transmission service with little to no advanced notification to respond to significant SOL/IROL exceedances.

591. Separate from systems updates, PJM argues that it will still be challenging from an operational perspective to provide NFCD transmission service.[1144] PJM explains that its systems must not only accurately reflect how this new service affects the transmission system, but PJM must also account for this service in the Operating Plans and then implement those plans manually when needed in real time. PJM argues that, because the transmission system is not designed to accommodate NFCD transmission service, it will likely trigger many more SOL/IROL exceedances for PJM to mitigate in the Operating Plan and require operations at or near operating limits, rendering the system less flexible to respond to unexpected changes during operations. PJM contends that it will be imperative that loads taking NFCD transmission service can be removed from the system as soon as possible when needed.

592. PJM claims it will need additional tariff language and manuals to operationalize requests for service.[1145] PJM asserts that it reserves the right to further supplement the record in this proceeding if and when it develops such tariff language.

[1143] PJM Reply Brief at 13-14.

[1144] *Id.* at 14-15.

[1145] *Id.* at 16.

593. PJM clarifies that June 1, 2029, is the effective date for providing the new transmission services and that, once the Commission establishes the terms and conditions for these new services, PJM is willing to start accepting service requests and processing service applications.[1146] PJM states its intent to get a headstart on establishing the details as to how it would implement the illustrative tariff by soon commencing discussions with stakeholders regarding implementation details, to be stated in PJM manuals, for these new transmission services. PJM contends that, with these clarifications, there is no need to establish a transition mechanism for pending NITS applications, as Constellation suggests. In response to concerns that PJM failed to provide a specific timeline for software development, PJM contends that it cannot determine a more exact development schedule at this time because these are new transmission services.

594. Some commenters continue to support PJM's proposed effective date.[1147] Other commenters continue to criticize PJM's proposed effective date. Joint Co-Location Developers argue that it is unclear why PJM must delay implementation until 2029, given that ERCOT has committed to implementation of controllable load as soon as 2027.[1148] Joint Co-Location Developers further argue that PJM has provided no reason why its system uniquely requires a longer implementation process compared to other RTOs, and that PJM is well placed to implement changes to its security constrained economic dispatch given the existing capability of its nodal Price Responsive Demand implementation.

595. Constellation argues that PJM's proposed effective date would impose a three- to five-year moratorium on Co-Location Arrangements and undermines the December Order by allowing rates found to be unjust and unreasonable to remain in place for years.[1149] Constellation asserts that PJM has devoted significant resources to such changes and has the tools to implement new rules quickly. Constellation urges the Commission to promptly approve the rates and terms for Interim NITS, including the study process, by no later than October 1, 2026.

[1146] *Id.* at 55-57.

[1147] NOVEC Reply Brief at 27; Earthjustice Reply Brief at 19.

[1148] Joint Co-Location Developers Reply Brief, Supp. Aff. of Andrew Levitt and Aniruddh Mohan at 10 (citing ERCOT Large Load Interconnection Batch Study Workshop #7 at 25 (April 9, 2026), ERCOT-Large-Load-Batch-Study-Workshop7-20260409_v03.pptx).

[1149] Constellation Reply Brief at 3-5.

4. Answer

596. Constellation opposes PJM's requested effective date and points out that PJM seeks to begin Connect and Manage July 1, 2027, to allow the interconnection of non-capacity-backed loads that are potentially interruptible during capacity shortages, unless the load brings its own generation.[1150] Constellation contends that it is not credible that PJM will take more than three years to implement Interim NITS, but less than one year to commence Connect and Manage.[1151] Constellation asks the Commission to make Interim NITS effective no later than October 1, 2026, so that service can begin no later than June 1, 2027.

5. Determination

597. We find that PJM has not provided sufficient information for the Commission to find that its proposed June 1, 2029, effective date is just and reasonable. We are concerned that the proposed June 1, 2029, effective date unduly delays the availability of the new transmission services, particularly those where PJM does not procure generation capacity for Eligible Customers taking the transmission service on behalf of Eligible Load, i.e., Interim NITS and NFCD transmission service. As discussed above, while PJM will procure generation capacity in forward capacity auctions to serve Eligible Customers taking FCD transmission service based on the contract demand level, PJM will not consider Interim NITS or NFCD transmission service in its resource adequacy planning. Further, we agree with Vistra and Joint Co-Location Developers that PJM's proposal lacks specificity. In particular, we find that the implementation details for the software updates necessary for PJM's economic dispatch software and dispatch tools lack specificity. Though PJM states that it cannot determine "a more exact development schedule" for software development,[1152] the Commission generally requires more support for the timeliness of a proposed effective date.[1153] We believe that the instant order provides PJM further clarity. We note that June 1, 2029, is approximately three years from now, and the issues raised by this proceeding, including those pertaining to Co-Located Load, are urgent in nature and, therefore, merit serious consideration of an earlier effective date. Therefore, we direct PJM to reconsider its proposed effective date of June 1, 2029. Moreover, we direct PJM to make a compliance filing, due within 60 days of the date of issuance of this order, in which PJM must explain whether it can

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[1150] Constellation May 11 Answer at 2.

[1151] *Id.* at 3.

[1152] PJM Reply Brief at 57.

[1153] *See, e.g.*, *Midcontinent Indep. Sys. Operator, Inc.*, 190 FERC ¶ 61,031, at P 163 & n.302 (2025).

make the new transmission services available on different effective dates. In the compliance filing, PJM should specifically discuss whether Interim NITS and NFCD transmission service can be made effective at an earlier date for Eligible Customers taking transmission service on behalf of Eligible Loads.

K. Additional Arguments

1. Behind the Meter Generation

a. Reply Briefs

598. Industrials/Amtrak argue that the Commission should take the following actions: (1) set a realistic retail BTMG threshold to focus new Co-Located Load rules on "gridbusting" growth above 200-300 MW, not on existing industrial customers (e.g., consumer goods manufacturers, steel mills, chemical manufacturers, paper mills, and pharmaceutical factories); (2) qualify all QFs for retail BTMG treatment without a date limit, consistent with PURPA regulations; (3) set clear grandfathering rules to enable existing, established users to avoid intensive PJM study queues, study deposits, and processes for operations that continue to function properly.[1154]

599. PJM argues that certain parties raise issues beyond the scope of this proceeding. PJM contends that Industrials/Amtrak improperly ask the Commission to examine BTMG.[1155]

b. Determination

600. Industrials/Amtrak raise issues with respect to PJM's retail BTMG netting rules that we address in PJM's second compliance filing above.[1156]

2. Reliability Backstop Auction

a. Reply Briefs

601. Maryland OPC asserts that PJM's proposed terms and conditions do not explain how existing capacity resources that shift to Co-Location Arrangements with new data centers would be treated relative to the PJM's proposed reliability backstop procurement (RBP). For example, Maryland OPC states that it is unclear whether capacity from existing generators that remove themselves from the capacity market and enter

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[1154] Industrials/Amtrak Reply Brief at 15.

[1155] PJM Reply Brief at 58-59.

[1156] *See supra* Part V.A.

Co-Location Arrangements with new data center load would need to be replaced with new capacity through the RBP or in the regular BRA, and whether new data center load that co-locates with an existing generator will be included in the cost allocation of the RBP.[1157] Maryland OPC states that if the capacity of existing generation that shifts to serve new co-located data center load is added to the BRA, ratepayers would be saddled with enormous costs that should be assigned to the Co-Located Load, in contravention of the White House and PJM Governors' Statement of Principles and the White House's Ratepayer Protection Pledge. Maryland OPC requests that the Commission at minimum require PJM demonstrate how its proposal meets ratepayer protection standards set forth in the Statement of Principles and Ratepayer Protection Pledge and defer action on the proposed revisions until after PJM proposes tariff revisions to implement its RBP. Maryland OPC also raises concern that PJM's initial brief suggests PJM does not intend for existing load to be eligible for the new transmission services.[1158]

b. <u>Determination</u>

602. As an initial matter, we clarify that, contrary to Maryland OPC's concern, PJM's paper hearing proposal does not restrict Eligible Customers on behalf of existing Co-Located Load from taking the new transmission services. We decline Maryland OPC's request to defer action. Maryland OPC expresses concern that PJM's paper hearing proposal does not address how existing capacity resources that seek to serve Co-Located Loads would be treated relative to a potential future filing by PJM to address its reliability backstop mechanism. We find that Maryland OPC's concerns about PJM's capacity market are beyond the scope of this paper hearing, which addresses the rates, terms, and conditions for new transmission services for Eligible Customers to take on behalf of Eligible Loads.[1159]

[1157] Maryland OPC Reply Brief at 9-11.

[1158] *Id.* at 8 (noting PJM's explanation that it is unlikely that new generation will be operational before its proposed June 1, 2029 effective date).

[1159] In recognition of the goal to prevent unfair cost shifts, we also note that as part of the President's Ratepayer Protection Pledge, a number of computational loads have committed to paying for "all new power delivery infrastructure upgrades to service their data centers." Proclamation No. 11014, 91 Fed. Reg. 11439 (Mar. 4, 2026).

3. Eligible Customer Requirements

a. Response Briefs

603. Invenergy requests that the Commission and PJM clarify how the definition of Eligible Customer applies to Co-Located Generators and Co-Located Loads.[1160] Invenergy explains that, where a state retail choice program results in unbundled retail access, customers may take transmission service as an Eligible Customer, and that therefore, Invenergy believes that a Co-Located Load could qualify as an Eligible Customer in a retail choice jurisdiction.[1161] Invenergy seeks clarity as to whether, in the context of a Co-Location Arrangement, a Co-Located Generator qualifies as an Eligible Customer on behalf of the Co-Located Load, and whether that Co-Located Generator's status as an Eligible Customer depends on whether the Co-Location Arrangement is in a retail choice jurisdiction.

b. Reply Briefs

604. NOVEC argues that the Commission should consider a more definitive delineation of who may be an Eligible Customer as well as the scope of the Eligible Customer's obligations. Specifically, NOVEC seeks confirmation that it cannot be required to serve as an Eligible Customer serving Co-Located Load unless it agrees to do so.[1162]

605. NOVEC argues that the Commission cannot require LSEs to modify their retail rates to accommodate these new services and undertake the administrative burden of being an Eligible Customer for a Co-Located Load unless the LSE chooses to do so. Further, NOVEC contends that it should not be subject to potential liability for the transmission costs, much less penalties for non-compliance with the Tariff's requirements, if a Co-Located Load for which NOVEC is serving as Eligible Customer fails to meet or comply with all applicable provisions.[1163]

606. Indicated TOs express support for PJM's decision to retain the existing definition of Eligible Customer. In response to Invenergy's request for clarification as to how that definition applies to Co-Located Generators and Co-Located Loads, Indicated TOs argue that it will depend on an individual Co-Located Generator's specific factual circumstances. Indicated TOs contend that a Co-Located Generator is unlikely to meet

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[1160] Invenergy Comments at 6.

[1161] *Id.* (citing Order No. 888, FERC Stats. & Regs. ¶ 31,036 at 31,689).

[1162] NOVEC Reply Brief at 5.

[1163] *Id.* at 7.

the definition of an Eligible Customer for purposes of obtaining FCD or NFCD transmission service because it is more likely to sell its output directly to the on-site load at retail. Indicated TOs further contend that the ability of Co-Located Load or an entity representing the load to qualify as an Eligible Customer would necessarily depend on whether its host jurisdiction has adopted retail choice.[1164]

c. Determination

607. With respect to Invenergy's request, we note the Tariff defines an Eligible Customer as (1) any electric utility or any person generating electric energy for sale for resale, but with respect to transmission service that the Commission is prohibited from ordering by section 212(h) of the FPA, such entity is eligible only if the service is provided pursuant to a state requirement that the Transmission Provider or Transmission Owner offer the unbundled transmission service, or pursuant to a voluntary offer of such service by a Transmission Owner or (2) any retail customer taking unbundled transmission service pursuant to a state requirement that the Transmission Provider or a Transmission Owner offer the transmission service, or pursuant to a voluntary offer of such service by a Transmission Owner.[1165] A Co-Located Generator may serve as an Eligible Customer if it meets the requirements of this definition of Eligible Customer.

608. We also clarify that nothing in this order or the December Order requires LSEs to modify their retail rates to accommodate the new transmission services. We require PJM, as the transmission provider, to offer these services, but we do not require LSEs to offer them to their retail customers. In other words, we do not require any LSE to become an Eligible Customer taking one of the new transmission services on behalf of an Eligible Load.

4. Demand Side Pathways

a. Response Briefs

609. Alliance supports converting Options 7 and 8 from PJM's March 2025 Answer into enforceable tariff language. Alliance supports strong measurement and verification of load reductions from demand response and energy efficiency in order to implement Options 7 and 8.[1166]

[1164] Indicated TOs Reply Brief at 6-7.

[1165] PJM, Intra-PJM Tariffs, OATT, § I.1 Definitions – E-F (41.0.0).

[1166] Alliance Response Brief at 5-6.

b. Determination

610. Alliance's comments are essentially an untimely request for rehearing of the December Order. Alliance overlooks that the December Order required PJM to create a new interim non-firm transmission service similar to PJM's Option 7. As part of our determinations with respect to the rates, terms, and conditions for Interim NITS, we are directing PJM to submit a compliance filing to revise its Tariff to implement this new transmission service. As for PJM's Option 8, wherein Co-Located Load that is Network Load may participate as a demand response resource, the Commission in the December Order did not direct any changes to PJM's demand response rules. We reiterate, as the Commission explained in the December Order, there is not sufficient evidence to conclude that the existing Tariff is not just and reasonable as it relates to the existing demand response rules.[1167] Co-Located Loads that elect to be Network Load may participate as a demand response resource under PJM's existing Tariff to the extent that they meet the requirements to participate as such.

5. Interconnection

a. Response Briefs

611. AEU/SEIA claim that PJM proposes to require all co-located generators to undergo full interconnection studies, including those that have no intention of exporting power to the transmission system.[1168] AEU/SEIA argue that PJM indisputably requires sufficient information about proposed co-located generators to reliably plan and operate the transmission system, but that subjecting non-exporting facilities to full interconnection studies will impose costs, delays, and administrative burden that are disproportionate to the reliability benefits that are achieved. AEU/SEIA further argue that this would further strain the interconnection queue to the detriment of the PJM region and its customers.

b. Reply Briefs

612. PJM argues that AEU/SEIA improperly assert that PJM should not study all interconnecting generators.[1169]

[1167] December Order, 193 FERC ¶ 61,217 at P 242.

[1168] AEU/SEIA Response Brief at 15-16 (citing PJM Initial Brief at 82).

[1169] PJM Reply Brief at 58.

c. Determination

613. We find that AEU/SEIA's concerns about interconnection studies for Co-Located Generators are beyond the scope of this paper hearing, which concerns the rates, terms, and conditions of new transmission services that Eligible Customers may take on behalf of Eligible Loads. However, we note that the Commission has approved PJM's proposal to comply with the directives of the December Order that, for Interconnection Customers seeking to use new generators to serve Co-Located Load: PJM will consider requests for interconnection service below the full generating capability of the generator, and such Interconnection Customers may use existing procedures to accelerate a new service request if they satisfy the criteria of the Tariff.[1170]

6. Co-Location Arrangement with Electric Storage Resource

a. Response Brief

614. Joint Co-Location Developers ask that PJM clarify that its transmission service requirements for electric storage charging apply to storage co-located with load, and exempt customers from the Maximum Facility Output where the customer's load shape and characteristics are inherently flexible.[1171] Joint Co-Location Developers state that PJM does not require electric storage resources to take transmission service for charging, except where the storage charges during the zonal peak hour without being dispatched. Joint Co-Location Developers claim that, in the context of PJM's proposal to limit NFCD transmission service to 100% of the Maximum Facility Output of the Co-Located Generator, PJM appears to allow the relevant Co-Located Load to take service while the co-located electric storage resource charges. Joint Co-Location Developers maintain that PJM should clarify this point in its Tariff to avoid any implication that this activity is prohibited. Joint Co-Location Developers request that PJM clarify that co-located charging loads, like standalone electric storage resources, do not require transmission service unless they charge during the zonal peak hour without being dispatched, and that any withdrawals for electric storage charging at the Point of Interconnection for which transmission service is not required do not count toward the Maximum Facility Output. Joint Co-Location Developers request, in the alternative, that PJM remove the Maximum Facility Output limit for loads co-located with electric storage resources.

[1170] *PJM Interconnection, L.L.C.*, 195 FERC ¶ 61,030 at P 25.

[1171] Joint Co-Location Developers Response Brief at 13-14.

b. Reply Brief

615. PJM argues Joint Co-Location Developers improperly ask the Commission to examine transmission service for charging electric storage resources.[1172]

c. Determination

616. To the extent Joint Co-Location Developers ask the Commission to address transmission service for electric storage resources, such request is beyond the scope of this paper hearing, which concerns the rates, terms, and conditions of new transmission services for Eligible Customers on behalf of Eligible Loads. However, insofar as Joint Co-Location Developers raise concerns about PJM's proposed requirement that an Eligible Customer electing to take NFCD transmission service "must apply for [NFCD transmission service] equivalent to the megawatt level of the Co-Located Generating Facility dedicated to serving the Co-Located Load," which Joint Co-Location Developers refer to as the Maximum Facility Output limit, we reject PJM's proposal above.[1173]

The Commission orders:

(A) In response to the requests for rehearing, the December Order is hereby modified and set aside, in part, as discussed in the body of this order.

(B) The clarification requests are hereby denied in part and granted in part, as discussed in the body of this order.

(C) PJM is hereby directed to submit, within 60 days of the date of issuance of this order, a compliance filing with revisions to its Tariff as described in Part IV.B.3.

(D) PJM is hereby directed to submit, within 60 days of the date of issuance of this order, a compliance filing with revisions to its Tariff as described in Part IV.C.1.b.i.

(E) PJM is hereby directed to submit, within 60 days of the date of issuance of this order, a compliance filing with revisions to its Tariff as described in Part IV.C.1.c.i.

(F) PJM is hereby directed to submit, within 60 days of the date of issuance of this order, a compliance filing as described in Part V.

(G) PJM is hereby directed to submit, within 60 days of the date of issuance of this order, a compliance filing as described in Part VI.

[1172] PJM Reply Brief at 59.

[1173] *See supra* Part VI.A.2.

(H) PJM transmission owners are hereby directed to submit, within 60 days of the date of issuance of this order, a compliance filing as described in Part VI.

By the Commission. Commissioner Chang is concurring with a separate statement attached.

(S E A L)

Debbie-Anne A. Reese,
Secretary.

Appendix – Tariff Record[s]

PJM Interconnection, L.L.C.
Intra-PJM Tariffs

- A-B, OATT Definitions -- A - B (24.0.0)
- L-M-N, OATT Definitions -- L -- M - N (52.0.0)
- 28.1, OATT 28.1 Scope of Service: (2.0.0)
- 29.1, OATT 29.1 Condition Precedent for Receiving Service (4.0.0)
- 29.2, OATT 29.2 Application Procedures: (4.0.0)
- 31.6, OATT 31.6 Annual Load and Resource Information Updates: (4.0.0)
- 34.2, OATT 34.2 Netting of Behind the Meter Generation. (1.0.0)
- 34.3, OATT 34.3 Netting of Non-Retail Behind The Meter Generation (2.0.0)
- 300 B, OATT 300 Definitions B (2.0.0)
- 300 N, OATT 300 Definitions N (3.0.0)
- 400 B, OATT 400 Definitions B (2.0.0)
- 400 N, OATT 400 Definitions N (4.0.0)
- 401, OATT Part VIII.A 401 Applications for Cycle Process Intro (5.0.0)
- 403, OATT Part VIII.B 403 Application Rules (4.0.0)
- IX Subpart A, OATT Part IX Subpart A FORM OF APPLICATION AND STUDIES AGRMT (4.0.0)
- IX.B GIA Appx-Sched, OATT Part IX.B GIA Appendices and Schedules (5.0.0)
- IX.B GIA Schedule O, OATT Part IX.B GIA Schedule O (0.0.0)
- IX Subpart G, OATT Part IX Subpart G FORM OF NECESSARY STUDIES AGREEMENT (3.0.0)

- XI, OATT XI. TRANSMISSION SERVICES FOR CO LOCATED LOADS (0.0.0)
- ATTACHMENT F-3A, OATT ATTACHMENT F-3A (0.0.0)
- ATTACHMENT F-4, OATT ATTACHMENT F-4 (0.0.0)

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

PJM Interconnection, L.L.C. Allegheny Electric Cooperative, Inc. American Transmission Systems, Incorporated Atlantic City Electric Company Baltimore Gas and Electric Company Delmarva Power & Light Company Duke Energy Ohio, Inc. Duke Energy Kentucky, Inc. East Kentucky Power Cooperative, Inc. Essential Power Rock Springs, LLC Hudson Transmission Partners, LLC Jersey Central Power & Light Company Mid-Atlantic Interstate Transmission, LLC Neptune Regional Transmission System, LLC Old Dominion Electric Cooperative PECO Energy Company PPL Electric Utilities Corporation Potomac Electric Power Company Public Service Electric and Gas Company Rockland Electric Company Trans-Allegheny Interstate Line Company Transource West Virginia, LLC UGI Utilities, Inc. Monongahela Power Company The Potomac Edison Company Commonwealth Edison Company Commonwealth Edison Company of Indiana, Inc. The Dayton Power and Light Company AEP Appalachian Transmission Company, Inc. AEP Indiana Michigan Transmission Company, Inc. AEP Kentucky Transmission Company, Inc. AEP Ohio Transmission Company, Inc. AEP West Virginia Transmission Company, Inc. Appalachian Power Company Indiana Michigan Power Company Kentucky Power Company Kingsport Power Company Ohio Power Company Wheeling Power Company	Docket Nos.	EL25-49-002 EL25-49-000

Duquesne Light Company
Virginia Electric and Power Company
Linden VFT, LLC
City of Cleveland, Department of Public Utilities,
Division of Cleveland Public Power
City of Hamilton, OH
Southern Maryland Electric Cooperative, Inc.
Ohio Valley Electric Corporation
AMP Transmission, LLC
Silver Run Electric, LLC
NextEra Energy Transmission MidAtlantic Indiana, Inc.
Wabash Valley Power Association, Inc.
Keystone Appalachian Transmission Company

Large Loads Co-Located at Generating Facilities	AD24-11-001
Constellation Energy Generation, LLC v. PJM Interconnection, L.L.C.	EL25-20-001 (consolidated)
PJM Interconnection, L.L.C.	ER26-1479-000

(Issued June 18, 2026)

CHANG, Commissioner, *concurring*:

1. In today's order, the Commission addresses rehearing requests and the paper hearing and compliance record regarding the rates, terms, and conditions through which Co-Located Loads may take transmission service from the PJM Interconnection, L.L.C. (PJM) system. I write separately to address the Commission's resolution of the "minimum charge" issue raised in my concurrence to the December Order,[1] which I believe provides a reasonable path forward based on the record before us.

2. In its December Order, the Commission asked two briefing questions regarding establishing an additional charge for Eligible Customers on behalf of a Co-Located Load that elects not to take any amount of transmission service or only a *de minimis* amount of

[1] *PJM Interconnection, L.L.C.*, 193 FERC ¶ 61,217 (2025) (December Order) (Comm'r Chang, *concurring*).

transmission service.[2] At that time, I wrote separately to emphasize my concern that the implementation of our rules around the new transmission services could risk cost shifting if those loads take little or no transmission service and thereby do not contribute to paying for the transmission system costs. Broadly, I remain vigilant about the impacts on consumers as the Commission continues to respond to new challenges from large and Co-Located Loads.

3. In today's order, the Commission concludes that the record does not adequately support either the need for an additional charge *at this time*, or how such a charge should be calculated and assessed. In so doing, the Commission acknowledges the complexity of (1) documenting the benefits that accrue to Co-Located Loads paying little or no transmission service from the grid, and (2) designing a charge that corresponds to those benefits.

4. As explained in my concurrence to the December Order, because the Commission does not require a Co-Located Load to take any specific amount of the new transmission services, it creates the possibility that the load could pay little or nothing towards the costs of the transmission system, notwithstanding potential benefits it receives from that system. *If this fact pattern occurs*, particularly on any significant scale, it may result in problematic cost shifts to other transmission customers. However, if Co-Located Loads *do, in fact*, take meaningful transmission service via an existing service or one or both of the new contract demand services, they would pay transmission charges that contribute to the recovery of the transmission system's capital and operations and maintenance costs. Therefore, whether underlying concerns around cost shifting actually manifest will ultimately depend on how the new transmission services will be used.

5. So, today's order reasonably concludes that insights from concrete experience with the use of these new transmission services will help inform whether further action would be needed to address cost shifting issues. Given the challenges demonstrated in the record with articulating or documenting the specific benefits associated with being synchronized to the PJM system, and designing a rate (including conditions under which and the parties to whom it will be charged) that is commensurate with those benefits, I am persuaded that continued monitoring of this issue is appropriate.

6. Furthermore, as part of a broader recognition that implementing the new transmission services represents a significant development in PJM, the Commission directs PJM to prepare an annual report that includes critical information about how these services are being requested and used, as well as how loads using the services contribute toward transmission owners' revenue requirements.[3] The annual reports will provide

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[2] December Order, 193 FERC ¶ 61,217 at P 219, questions 3 and 4.

[3] *PJM Interconnection, L.L.C.*, 195 FERC ¶ 61,209, at PP 580-81 (2026).

information that helps the Commission, the states, market participants, and stakeholders monitor the impacts of these new transmission services, including assessing whether the potential cost shift concern discussed above and in my prior concurrence actually occurs. If it does, I stand ready to consider Federal Power Act section 205 filings or section 206 complaints (including *sua sponte* action by the Commission) to address those cost shifts.

For these reasons, I respectfully concur.

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Judy W. Chang
Commissioner