

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

PJM Interconnection, L.L.C.)	Docket Nos. EL25-49-000
PJM Interconnection, L.L.C.)	EL25-49-001
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)	
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))	AD24-11-000
Constellation Energy Generation, LLC)	
)	
v.)	EL25-20-000
)	(Consolidated)
PJM Interconnection, L.L.C.)	

REPLY BRIEF OF PJM INTERCONNECTION, L.L.C.

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REPLY BRIEF OF PJM INTERCONNECTION, L.L.C.

PJM Interconnection, L.L.C.’s (“PJM”) Initial Brief¹ set forth just and reasonable terms and conditions for providing three new transmission services: Interim Network Integration Transmission Service (“NITS”), Firm Contract Demand Transmission Service, and Non-Firm Contract Demand Transmission Service. As envisioned by the Show Cause Order, these new services should allow Co-Located Loads to connect to the system and obtain transmission service faster than under the current paradigm,² while adhering to two key principles: (1) the services are designed to serve loads that are “willing and able to control their withdrawals from the transmission system;”³ and (2) the services are designed to allow PJM to maintain system reliability.⁴

PJM designed the new Interim NITS to basically be treated the same as regular, full NITS, except that the service would be curtailable prior to PJM initiating a pre-emergency

¹ *PJM Interconnection, L.L.C.*, Initial Brief of PJM Interconnection, L.L.C., Docket Nos. EL25-49-000, et al. (Feb. 23, 2026) (“Initial Brief”). PJM submitted its Initial Brief and this reply brief pursuant to paragraph 219 and ordering paragraphs (D) and (E) of the Order on Show Cause Proceeding, Directing Compliance Filings, Establishing Paper Hearing, and Granting in Part and Denying in Part Complaint issued by the Federal Energy Regulatory Commission (“FERC” or “Commission”) on December 18, 2025, in the above-captioned proceeding. *PJM Interconnection, L.L.C.*, 193 FERC ¶ 61,217 (2025) (“Show Cause Order”); *see also PJM Interconnection, L.L.C.*, Notice of Extension of Time, Docket Nos. EL25-49-000, et al., at 3 (Jan. 23, 2026) (granting a seven-day extension of the deadline in ordering paragraph (D) of the Show Cause Order for PJM to submit its initial brief).

² *See Show Cause Order*, 193 FERC ¶ 61,217, at P 205 (“Parties further argue 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 . . .”).

³ *Show Cause Order*, 193 FERC ¶ 61,217, at P 204.

⁴ *See, e.g.*, *Show Cause Order*, 193 FERC ¶ 61,217, at PP 201 (“[T]his new interim, non-firm transmission service will facilitate the timely provision of transmission service to Eligible Customers taking transmission service on behalf of Co-Located Loads, while preserving reliability for other transmission customers.”), 212 (“We also note that, as discussed in the briefing questions below, PJM will determine the technical and engineering requirements of special protection schemes to help address reliability risks associated with unreserved use of the transmission system.”), 227 (discussing requirement that would “provide additional clarity and transparency regarding the steps that PJM and Interconnection Customers are taking to maintain transmission system reliability before an existing generating facility can serve Co-Located Load”).

event,⁵ i.e., dispatching the Pre-Emergency Load Response Program⁶ as further set forth in the PJM Manuals,⁷ or in response to a transfer capability shortage.⁸ Interim NITS would only be available consistent with PJM’s studies as to the level of such service that can be reliably provided, and would naturally and automatically transition to full NITS once the necessary network upgrades go into service.⁹ This is fully consistent with the Show Cause Order,¹⁰ as discussed below and in PJM’s Initial Brief.

To best implement the Show Cause Order and adhere to the two key principles, PJM designed the two Contract Demand Transmission Services to work together to provide options beyond full NITS to Eligible Customers taking service on behalf of Co-Located Loads that are “willing and able to control their withdrawals from the transmission system.”¹¹ PJM’s terms and conditions for the two Contract Demand Transmission Services allow for the portion of the Co-Located Load for which the Co-Located Generating Facility will dedicate its output (in whole or in part) to be covered by Non-Firm Contract Demand Transmission Service, but any portion of the gross demand of the Co-Located Load not served by the Co-Located Generating Facility *must* be covered by Firm

⁵ See Initial Brief at 67 (“Generally speaking, the non-rate terms and conditions for Interim NITS are the same as for NITS . . .”).

⁶ Capitalized terms not otherwise defined herein have the meanings set forth in PJM’s Open Access Transmission Tariff (“Tariff”) or the Amended and Restated Operating Agreement of PJM Interconnection, L.L.C. (“Operating Agreement”).

⁷ The Tariff provides that the Pre-Emergency Load Response Program is “the program by which Curtailment Service Providers may be compensated by PJM for Demand Resources that will reduce load when dispatched by PJM during pre-emergency conditions, and is described in Operating Agreement, Schedule 1, section 8 and the parallel provisions of Tariff, Attachment K-Appendix, section 8.” Tariff, Definitions – O – P – Q.

⁸ See Illustrative Tariff, Part XI, Subpart B, section 713.4.

⁹ See Illustrative Tariff, Part XI, Subpart A, section 701.1; Illustrative Tariff, Attachment F-3A; Initial Brief at 68, 75.

¹⁰ See Show Cause Order, 193 FERC ¶ 61,217, at PP 200-03.

¹¹ Show Cause Order, 193 FERC ¶ 61,217, at PP 204, 206.

Contract Demand Transmission Service. This approach offers flexibility to Eligible Customers to mix and match between Firm and Non-Firm Contract Demand Transmission Service when taking service on behalf of Co-Located Load, so long as the combination of the two services covers the entire gross demand of the Co-Located Load. PJM's approach also ensures that there is the opportunity to take transmission service and withdraw energy from the grid even in the event a Co-Located Generating Facility is unable to provide energy consistent with its dedicated quantity.

PJM included Illustrative Tariff language setting forth just and reasonable non-rate terms and conditions for each of these new transmission services to facilitate the Commission's development of a replacement rate. However, as PJM explained in its Initial Brief, integration of these new transmission services requires complex revisions to PJM's transmission planning, interconnection, and operational procedures, as well as PJM's markets and settlements rules. PJM continues to examine its Governing Documents to evaluate how to best integrate these new services. This reply brief addresses comments and issues raised by other parties as to the appropriate terms and conditions for the new transmission services.

I. INTRODUCTION

As a Regional Transmission Organization ("RTO") and North American Electric Reliability Corporation ("NERC") Reliability Coordinator, PJM's core function is to deliver energy to loads at least cost while maintaining system reliability.¹² Thus, as the

¹² See, e.g., 18 C.F.R. § 35.34(j)(iv)(4) ("*Short-term reliability*). The Regional Transmission Organization must have exclusive authority for maintaining the short-term reliability of the grid that it operates. The Regional Transmission Organization must include, as part of its demonstration with respect to reliability, a demonstration that it meets the following: (i) The Regional Transmission Organization must have exclusive authority for receiving, confirming and implementing all interchange schedules. (ii) The Regional Transmission Organization must have the right to order redispatch of any generator connected to transmission facilities it operates if necessary for the reliable operation of these facilities. (iii) When the Regional

RTO and Transmission Provider for the PJM Region, PJM offers a unique perspective on the design of new transmission services.

PJM’s Initial Brief set forth just and reasonable terms and conditions that provide the multiple pathways envisioned by the Show Cause Order for Co-Located Loads to interconnect to the grid and obtain transmission service faster than under the current paradigm, all while ensuring that PJM will be able to maintain system reliability.¹³ Parties can achieve the benefits of co-location arrangements—faster interconnections to the system, reduced costs to interconnect (through fewer upgrades, or using existing and already planned infrastructure, all else equal), at transmission rates that reflect their usage of the Transmission System—under terms and conditions in the Illustrative Tariff.

PJM has provided a framework for achieving these benefits while still allowing it to fulfill its core reliability functions. PJM cannot sacrifice the reliable operation of the Transmission System overall to accommodate specific commercial interests. The system is built and maintained for the benefit of all network loads in the PJM Region. PJM must ensure that new facilities and services are added to the system in a way that does not undermine reliability. For example, PJM has processes in place for new generators to interconnect with the Transmission System in a safe and reliable manner.¹⁴ So long as

Transmission Organization operates transmission facilities owned by other entities, the Regional Transmission Organization must have authority to approve or disapprove all requests for scheduled outages of transmission facilities to ensure that the outages can be accommodated within established reliability standards. . . .”).

¹³ See generally Show Cause Order, 193 FERC ¶ 61,217.

¹⁴ See generally Interconnection Projects Department, *PJM Manual 14H: New Service Requests Cycle Process*, PJM Interconnection, L.L.C. (rev. 03, Sep. 25, 2025), <https://www.pjm.com/-/media/DotCom/documents/manuals/m14h.pdf>.

reliability is maintained, PJM is agnostic as to generation resource type, size, location, and ownership. The same is true for load.

Some parties allege that PJM’s terms and conditions would “render[] the new transmission services commercially unworkable”¹⁵ and that PJM is “resisting” co-location arrangements or “saying no to innovation.”¹⁶ These parties appear to posit uses of the Transmission System that differ from its design standards and that could require PJM to operate the Transmission System near its physical limits with a significantly reduced ability to deal with contingencies. PJM’s terms and conditions are not the product of some ill-founded resistance to change. Rather, as the RTO and Reliability Coordinator, PJM must operate the Transmission System for the benefit of *all* loads. And, PJM has identified a means to integrate these new transmission services *to accommodate the desire to sidestep existing transmission service procedures* while being able maintain reliability—albeit at a reduced margin for error. Given the critical importance of integrating the new services while maintaining reliability, PJM’s proposal fits the new services within the limitations of the Transmission System.

¹⁵ *PJM Interconnection, L.L.C.*, Reply Brief of Joint Co-Location Developers and Motion to Intervene Out-of-Time of Calibrant Energy, Convergent Energy and Power, U.S. Energy Storage Coalition, and Verrus, LLC, Docket Nos. EL25-49-000, et al., at 2 (Mar. 25, 2026) (“Joint Co-Location Developers Reply Brief”); *see also PJM Interconnection, L.L.C.*, Reply Brief and Protest of Enchanted Rock, Docket Nos. EL25-49-000, et al., at 7-9 (Mar. 25, 2026) (“Enchanted Rock Reply Brief”) (arguing that PJM’s proposal “renders Interim NITS entirely unworkable”); *PJM Interconnection, L.L.C.*, Reply Brief of Advanced Energy United and Solar Energy Industries Association, Docket Nos. EL25-49-000, et al., at 6 (Mar. 25, 2026) (“Advanced Energy/SEIA Reply Brief”) (arguing PJM’s proposal “render[] the service commercially unworkable”).

¹⁶ *PJM Interconnection, L.L.C.*, Reply Brief of Constellation Energy Generation, LLC, Docket Nos. EL25-49-000, et al., at 3 (Mar. 25, 2026) (“Constellation Reply Brief”).

II. RESPONSE TO ISSUES RAISED IN REPLY BRIEFS

A. *Contract Demand Transmission Service*

1. *Non-Firm Contract Demand Transmission Service will be available when the Co-Located Generating Facility is on outage*

A number of parties argue that Non-Firm Contract Demand Transmission Service should be generally available during normal system operations instead of limited to circumstances where the Co-Located Generating Facility is on outage.¹⁷ PJM's proposed limitation, however, is just and reasonable, consistent with the scope of services contemplated in the Show Cause Order, and appropriate given the nature of the new service level and reliability and operational issues inherent in providing this service on PJM's current Transmission System.

The Show Cause Order required PJM to develop three new transmission services: Non-Firm Contract Demand Transmission Service, Firm Contract Demand Transmission Service, and Interim NITS.¹⁸ Interim NITS is an inherently temporary service, as it is only offered as an interim measure while the system upgrades necessary for full NITS are being constructed.¹⁹ Conversely, Firm and Non-Firm Contract Demand Transmission Service are intended to provide a permanent alternative to NITS for customers that are willing and able to limit their energy withdrawals from the system.²⁰ If customers were permitted to take unlimited Non-Firm Contract Demand Transmission Service as some commenters

¹⁷ See Joint Co-Location Developers Reply Brief at 3, 6-12; Advanced Energy/SEIA Reply Brief at 5-6.

¹⁸ See Show Cause Order, 193 FERC ¶ 61,217, at P 206.

¹⁹ Show Cause Order, 193 FERC ¶ 61,217, at P 200 (“We reiterate that this interim, non-firm transmission service should be temporary—only available to Eligible Customers that have requested NITS on behalf of Co-Located Loads that cannot yet be reliably served with NITS—and available only until the necessary Network Upgrades are completed and the Co-Located Load is designated as Network Load.”).

²⁰ See Show Cause Order, 193 FERC ¶ 61,217, at P 206 (“These new transmission services will serve as *permanent* alternatives to existing transmission services, unlike the new interim, non-firm transmission service described above in Part IV.B.45.b.ii.”).

suggest, this would be tantamount to PJM offering a permanent Interim NITS, which was not contemplated by the Show Cause Order.²¹ The Show Cause Order specified that the Non-Firm Contract Demand Transmission Service would be available to customers “*as needed*”²² for customers that are able to limit their withdrawals from the system, which suggests that the Commission did not intend for this service to be a product that is used on an everyday basis up to 8,760 hours per year.²³ Accordingly, PJM reasonably limited this service to outage or temporary derate conditions consistent with the requirements of the Show Cause Order.

In addition to the requirements of the Show Cause Order, PJM appropriately limited Non-Firm Contract Demand Transmission Service to circumstances where the Co-Located Generating Facility is on temporary derate or outage given the inherent risks to the Transmission System and operational complexities associated with providing this service on a continuous basis, given the limited period the non-firm service will be required. Put simply, the Transmission System was not and will not be planned and designed to accommodate these non-firm services under the NERC reliability standards. Therefore, providing these services continuously, rather than on a limited duration and condition basis, increases system reliability risks.

²¹ See Show Cause Order, 193 FERC ¶ 61,217, at P 206.

²² Show Cause Order, 193 FERC ¶ 61,217, at P 215 (emphasis added).

²³ Show Cause Order, 193 FERC ¶ 61,217, at 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.”); *id.* concur op. (Commissioner Rosner) at P 6 (“The data center may instead elect to purchase Non-Firm Contract Demand Transmission Service if, for example, it only plans to pull energy from the grid temporarily while its co-located generator is undergoing scheduled maintenance (see Figure 3).”).

The NERC reliability standards require PJM to engage in system planning on a range of time horizons.²⁴ For long-term planning, the NERC reliability standards require PJM to model and assess the Transmission System at least annually looking at expected performance over the next several years.²⁵ As part of this evaluation, PJM must conduct a planning assessment to evaluate how the system will perform under peak conditions, including a sensitivity analysis to evaluate how the system will perform when different aspects of the analysis are changed to stress the system model (e.g., real and reactive load forecast, expected transfers, etc.).²⁶ If the results of the Planning Analysis demonstrate that the system will not meet performance requirements, PJM is then required to include a Corrective Action Plan to address how the performance requirements will be met.²⁷ This Corrective Action Plan may include the installation, modification, or removal of Transmission or generation facilities, protection schemes, or installation or modification of automatic generation runback to achieve system performance.²⁸ The Corrective Action Plan may also utilize Operating Procedures necessary to achieve system performance, provided the plan specifies how long the Operating Procedures will be needed.²⁹ This long-term planning is designed to ensure that the Transmission System can operate reliably under a range of system conditions.

²⁴ See *TPL-001-5.1, Transmission System Planning Performance Requirements*, North American Electric Reliability Corporation (June 12, 2025), <https://www.nerc.com/globalassets/standards/reliability-standards/tpl/tpl-001-5.1.pdf> (“NERC Standard TPL-001-5.1”).

²⁵ See NERC Standard TPL-001-5.1.

²⁶ See NERC Standard TPL-001-5.1 at R2.2.1.

²⁷ See NERC Standard TPL-001-5.1 at R2.2.7.

²⁸ See NERC Standard TPL-001-5.1 at R2.2.7.1.

²⁹ See NERC Standard TPL-001-5.1 at R2.2.7.1.

In the operational time frame, PJM is obligated to establish and operate the system within System Operating Limits (“SOLs”) and Interconnection Reliability Operating Limits (“IROLs”) under various NERC Standards.³⁰ For example, PJM is required to have a methodology for setting SOLs for operations that respect the various facility ratings and System Voltage Limits.³¹ As part of this, PJM is required to specify stability performance criteria, including required margins for operations.³² PJM must also assess whether planned operations for the next-day will exceed the SOLs and IROLs within its Wide Area and make Operating Plans to address these potential exceedances.³³ PJM is also required to implement its Operating Plans to mitigate system emergencies if they arise.³⁴

Given the range of requirements of the NERC reliability standards, several aspects of Non-Firm Contract Demand Transmission Service make the provision of this service challenging from a reliability perspective. First, the nature of Non-Firm Contract Demand Transmission Service dictates that PJM will not include this service in PJM’s long-term

³⁰ See, e.g., *FAC-011-04, System Operating Limits Methodology for the Operations Horizon*, North American Electric Reliability Corporation (Dec. 9, 2025), <https://www.nerc.com/globalassets/standards/reliability-standards/fac/fac-011-4.pdf> (“NERC Standard FAC-011-04”); *FAC-014-3, Establish and Communicate System Operating Limits*, North American Electric Reliability Corporation (Dec. 9, 2025), <https://www.nerc.com/globalassets/standards/reliability-standards/fac/fac-014-3.pdf>; *TOP-001-6, Transmission Operations*, North American Electric Reliability Corporation (June 12, 2025), <https://www.nerc.com/globalassets/standards/reliability-standards/top/top-001-6.pdf>; *TOP-002-5, Operations Planning*, North American Electric Reliability Corporation (June 12, 2025), <https://www.nerc.com/globalassets/standards/reliability-standards/top/top-002-5.pdf> (“NERC Standard TOP-002-5”); *IRO-006-5, Reliability Coordination — Transmission Loading Relief*, North American Electric Reliability Corporation (June 12, 2025), <https://www.nerc.com/globalassets/standards/reliability-standards/iro/iro-006-5.pdf>; *IRO-008-3, Reliability Coordinator Operational Analyses and Real-time Assessments*, North American Electric Reliability Corporation (Dec. 4, 2025), <https://www.nerc.com/globalassets/standards/reliability-standards/iro/iro-008-3.pdf> (“NERC Standard IRO-008-3”).

³¹ See NERC Standard FAC-011-04.

³² See NERC Standard FAC-011-04.

³³ See NERC Standard IRO-008-3.

³⁴ See *EOP-011-4, Emergency Operations*, North American Electric Reliability Corporation (June 12, 2025), <https://www.nerc.com/globalassets/standards/reliability-standards/eop/eop-011-4.pdf>.

transmission planning (i.e., the Regional Transmission Expansion Plan) and the system will not be evaluated for potential Corrective Action Plans nor will PJM have procured capacity to serve this load. Requests for Non-Firm Contract Demand Transmission Service will occur in the operations time horizon because an Eligible Customer is likely to request this service when the Co-Located Generating Facility faces either a planned or unplanned outage condition requiring load withdrawals from the Transmission System exceeding their contracted Firm Contract Demand Transmission Service level. The ability of the system to accommodate this service will depend on the system conditions at the time of the request and any constraints that may arise regarding energy and reliability. For energy, the Co-Located Generating Facility's outage may coincide with high demand conditions on the Transmission System or where system conditions otherwise (e.g., seasonal outages) may not allow such transmission service or energy to be offered reliably. With regard to reliability, the transmission network conditions, including any ongoing transmission outages for maintenance or construction may prevent reliable service at the level requested. PJM will need to perform an assessment for each service request to identify the level of service that can be provided for the relevant timeframe. In essence, Non-Firm Contract Demand Transmission Service is intended to provide whatever level of service the Transmission System can reliably accommodate at that snapshot in time without *any* advanced planning for transmission or capacity.

When load that has not been planned for from a capacity or transmission perspective takes service from the grid, this erodes the system safeguards that help ensure

reliable operations under N-1 conditions and more severe contingencies.³⁵ As part of its transmission planning, to ensure that the system can reliably meet *expected* operating demands while respecting system limits, PJM looks at a range of operating conditions, including summer peak, winter peak, and light load conditions.³⁶ As part of this planning process, PJM builds the system to accommodate different contingencies.³⁷

Because Non-Firm Contract Demand Transmission Service relies on not-currently used Transmission System capacity, PJM is unlikely to be in a position to provide Non-Firm Contract Demand Transmission Service during peaks or other times when the system is operating under stressed conditions (otherwise, PJM would need to expand the Transmission System, which would be contrary to the logic underlying this transmission service). During off-peak shoulder months, the Transmission System is often constrained by generators taking planned outages. And, from a generation capacity perspective, planned outages during off-peak shoulder months can lead to tight conditions. For example, during the period of April 14-16, 2026, PJM declared a Hot Weather Alert for much of the PJM Region, expecting loads from 109,000 megawatts (“MW”) to 114,000 MW. During this period, there were originally 54,000 MW of installed capacity that was scheduled to be on planned outage.³⁸ Due to the forecasted load, 12,500 MW of the planned outages were deferred. For reference the 2025/2026 Base Residual Auction cleared just

³⁵ See NERC Standard TPL-001-5.1. While this is also true for Interim NITS, the temporary nature of such transmission service, and the fact that the Transmission System *will* be built to accommodate such demands generally alleviates the concern.

³⁶ Initial Brief, Affidavit of Matthew Wharton (Attachment C) ¶ 13 (“Wharton Aff.”).

³⁷ Wharton Aff. ¶ 13.

³⁸ See *Generation Outage for Seven Days by Type*, PJM Interconnection, L.L.C., https://dataminer2.pjm.com/feed/gen_outages_by_type/definition (last visited Apr. 23, 2026).

over 135,000 MW (Unforced Capacity).³⁹ As this illustrates, even during shoulder periods, there may not be a large surplus of generation or transmission capacity sitting idle to accommodate Non-Firm Contract Demand Transmission Service. Therefore, from a transmission planning perspective, Non-Firm Contract Demand Transmission Service increases the operational risk of SOL/IROL exceedances by operating the system with a reduced margin for contingency to accommodate high-volume loads. This increases the risk of an emergency occurring if unexpected conditions occur (e.g., unusual weather patterns, loss of multiple facilities, local area oscillations, and/or voltage swings, etc.).

From an operational perspective, consistent with the NERC requirements, PJM conducts Operational Planning Analysis a day ahead to address potential SOL/IROL exceedances with an Operating Plan.⁴⁰ Consistent with Good Utility Practice and the NERC reliability standards, PJM operates the Transmission System within the SOLs/IROLs and facility ratings.⁴¹ PJM's provision of the Non-Firm Contract Demand Transmission Service, however, will almost inevitably require the 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.⁴² PJM plans the Transmission System to move electricity from where it is generated to the load that needs it. By definition, Non-Firm Contract Demand Transmission Service involves a customer drawing large quantities of power over transmission facilities that were not designed to serve that load and thus will

³⁹ *2025/2026 Base Residual Auction Report*, PJM Interconnection, L.L.C., 3 (July 30, 2024), <https://www.pjm.com/-/media/DotCom/markets-ops/rpm/rpm-auction-info/2025-2026/2025-2026-base-residual-auction-report.pdf>.

⁴⁰ NERC Standard IRO-008-3 at R1, R2, R4, R7.

⁴¹ See NERC Standard TOP-002-5.

⁴² See Wharton Aff. ¶ 22.

almost certainly necessitate flowing power over various facilities near system limits. As a result, PJM limited the availability of Non-Firm Contract Demand Transmission Service to circumstances where the Co-Located Generating Facility is on outage or temporary derate, as determined in accordance with the PJM Manuals,⁴³ to limit the risk to the Transmission System consistent with Good Utility Practice and the NERC reliability standards.

2. *Provision of Non-Firm Contract Demand Transmission Service*

Contrary to Vistra Corp.’s (“Vistra”) assertions, Non-Firm Contract Demand 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.⁴⁴ As previously explained, the provision of Non-Firm Contract Demand Transmission Service will require significant changes to PJM’s core Markets and Operations systems, including the Intermediate and Real-time Security Constrained Economic Dispatch, the Day-ahead Market software, and PJM dispatch tools.⁴⁵ This is not simply about changes for Curtailment of Non-Firm Contract Demand Transmission Service. Rather, changes to the Energy Management System are needed to

⁴³ See Operations Planning Division, *PJM Manual 14D: Generator Operational Requirements*, PJM Interconnection, L.L.C. (rev. 70, Dec. 17, 2025), <https://www.pjm.com/-/media/DotCom/documents/manuals/m14d.pdf>.

⁴⁴ Those co-location arrangements Vistra discusses that want “no service” from the grid should island. Connections to the grid—whether by generators or by load—must be studied to ensure necessary accommodations are made (e.g., transmission upgrades) in order to maintain reliability. New loads cannot simply connect, regardless of whether they *intend* to take little to no service; the grid must be planned to ensure it can handle serving those loads without jeopardizing reliability of others. *PJM Interconnection, L.L.C.*, Response Brief of Vistra Corp., Docket Nos. EL25-49-000, et al., at 12-13 (Mar. 25, 2026) (“Vistra Reply Brief”) (“If a customer elects [regulation and black start services only], the Non-Firm Contract Demand Transmission Service associated with that co-location arrangement consists of ex post invoicing of charges for regulation and black start services That should not be difficult to implement, particularly given that the black start and regulation services will be based on gross load, which customers will be required to report.”).

⁴⁵ See Initial Brief, Affidavit of Timothy Horger (Attachment D) ¶ 16 (“Horger Aff.”).

ensure that PJM's systems are able to properly account for the provision of energy to the Co-Located Load in the Day-ahead and Real-time Market and to determine when Curtailment may be necessary. Incorporating Co-Located Load into these systems is no simple task. Indeed, it is particularly challenging to model contingencies associated with non-firm loads that the Transmission System was not designed and built to accommodate.

Currently, PJM's Energy Management System does not have the ability to distinguish between different types of load. This capability must be added to the Energy Management System to allow PJM to evaluate when to curtail Co-Located Load before implementing emergency procedures. In addition, PJM must determine how to properly model and reflect Non-Firm Contract Demand Transmission Service and Co-Located Load in the different systems given that Non-Firm Contract Demand Transmission Service requires the Transmission System to operate on reduced contingency margins. Finally, because PJM will have to rely on Operating Plans for Non-Firm Contract Demand Transmission Service, PJM must be able to "dispatch" (i.e., curtail) Non-Firm Contract Demand Transmission Service with little to no advance notification to respond to significant SOL/IROL exceedances.⁴⁶ This will require significant modifications to the market clearing engines utilized in both the Day-ahead and Real-time Markets. These modifications must be carefully developed and tested to ensure there are no adverse impacts to other market participants.

Even after PJM's systems are updated to incorporate Non-Firm Contract Demand Transmission Service, the provision of this service will still be challenging from an

⁴⁶ Transmission Operations, *PJM Manual 3: Transmission Operations*, PJM Interconnection, L.L.C., § 2 (rev. 70, Mar. 4, 2026), <https://www.pjm.com/-/media/DotCom/documents/manuals/m03.pdf>.

operational perspective. PJM's systems must not only accurately reflect how Non-Firm Contract Demand Transmission Service affects the system, but also PJM must account for this service in the Operating Plans, including potential SOL/IROL exceedances, and then implement those plans manually when needed in real time. When PJM is creating an Operating Plan from the Day-ahead Market, it will address SOL/IROL exceedances with switching solutions, generation changes, and system changes (e.g., putting reactive devices in service). Because the system is not designed to accommodate Non-Firm Contract Demand 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. As a result, the system will have less flexibility to respond to unexpected changes during operations. For example, if a storm moves through an area and trips multiple facilities, PJM may be facing several unexpected SOL exceedances and will need to rapidly implement manual actions to restore the system to a stable state. When Non-Firm Contract Demand Transmission Service is taking service from the grid, it is very likely that it will be significantly contributing to these exceedances because the system was not reinforced to accommodate the additional load. As a result, it will be imperative that these loads can be removed from the system as soon as possible in addition to the other activities that the PJM operator needs to undertake, such as generation redispatch, utilization of emergency back-up plans, etc. which entail voice-to-voice communication with generation and transmission owners to implement. Non-Firm Contract Demand Transmission Service introduces another entity that PJM will need to coordinate with during this chain of events, which will inevitably lengthen the time it takes to restore the system to a stable state and avoid additional damage to equipment and/or reliability.

Once PJM determines how to incorporate Non-Firm Contract Demand Transmission Service into its systems, PJM will need additional language in its Tariff and PJM Manuals to operationalize requests for service. PJM is still evaluating appropriate Tariff language to do this, and reserves the right to further supplement the record in this proceeding if and when PJM develops such Tariff language. For example, PJM will need tariff language that reflects the time needed for PJM to evaluate requests for Non-Firm Contract Demand Transmission Service and the tools that will be utilized. Finally, given the system risks associated with the provision of this service, the Tariff must be clear that PJM has full discretion to curtail this service. PJM believes the Connect and Manage Senior Task Force will significantly inform these issues.⁴⁷

B. Interim NITS Customers Should Not Be Allowed Access to Co-Located Generation when PJM Has Curtailed the Load

Several entities commented that the Commission should allow Eligible Customers taking Interim NITS the ability to draw energy from the Co-Located Generating Facility when the Eligible Customer is curtailed and the Co-Located Load is no longer allowed to draw energy from the Transmission System.⁴⁸ The Show Cause Order suggested such opportunity may be available, but only “if PJM’s Tariff otherwise allows.”⁴⁹ Thus, in response to the Show Cause Order’s suggestion and at the urging of stakeholders, PJM thoroughly examined whether the Tariff should allow Interim NITS customers to directly

⁴⁷ See *Connect and Manage Senior Task Force*, PJM Interconnection, L.L.C., <https://www.pjm.com/committees-and-groups/task-forces/camstf> (last visited Apr. 22, 2026).

⁴⁸ Advanced Energy/SEIA Reply Brief at 19; Joint Co-Location Developers Reply Brief at 18; Enchanted Rock Reply Brief at 7-8; *PJM Interconnection, L.L.C.*, Response of the Data Center Coalition, Docket Nos. EL25-49-000, et al., at 3-4 (Mar. 25, 2026) (“Data Center Coalition Response”).

⁴⁹ Show Cause Order, 193 FERC ¶ 61,217, at P 201 (“We further note that, when curtailed, Eligible Customers taking this transmission service on behalf of Co-Located Loads may be able to continue to take energy from the Interconnection Customer with which they are co-located if PJM’s Tariff otherwise allows.”).

take energy from the Co-Located Generating Facility when PJM has curtailed the Eligible Customer's access to the Transmission System.⁵⁰ PJM determined that the answer is no, for the several reasons discussed below.

One, as directed by the Show Cause Order, Interim NITS (as well as the Contract Demand Transmission Services) must be designed based on two key principles: (1) the services are designed to serve loads that are “willing and able to control their withdrawals from the transmission system;”⁵¹ and (2) the services are designed to allow PJM to maintain system reliability.⁵² Consistent then are PJM's Illustrative Tariff provisions which call for the Curtailment of Interim NITS prior to dispatching PJM's Pre-Emergency Load Response Program, i.e., before Demand Response resources are called upon to reduce load to stave off emergency procedures, or in response to a transfer capability shortage as a result of system reliability conditions.⁵³ As such, the instances in which Curtailment would occur are when there are serious reliability issues facing the Transmission System. Stated simply, Interim NITS will be curtailed when the system cannot support it in real time, whether with sufficient generation or transmission capacity.⁵⁴

⁵⁰ Indeed, PJM discussed this specific issue with stakeholders at a March 16, 2026 workshop. *See Co-Located Load Use Cases: Co-Located Load Order Workshop*, PJM Interconnection, L.L.C., 12 (Mar. 16, 2026), <https://www.pjm.com/-/media/DotCom/committees-groups/workshops/cllsco/2026/20260316/20260316-item-02---co-located-load-use-cases---presentation.pdf>.

⁵¹ Show Cause Order, 193 FERC ¶ 61,217, at P 204.

⁵² *See, e.g.*, Show Cause Order, 193 FERC ¶ 61,217, at PP 201 (“[T]his new interim, non-firm transmission service will facilitate the timely provision of transmission service to Eligible Customers taking transmission service on behalf of Co-Located Loads, while preserving reliability for other transmission customers.”), 212 (“We also note that, as discussed in the briefing questions below, PJM will determine the technical and engineering requirements of special protection schemes to help address reliability risks associated with unreserved use of the transmission system.”), 227 (discussing requirement that would “provide additional clarity and transparency regarding the steps that PJM and Interconnection Customers are taking to maintain transmission system reliability before an existing generating facility can serve Co-Located Load”).

⁵³ *See* Illustrative Tariff, Part XI, Subpart A, section 705.2; *see* Initial Brief at 63-64, 71-73.

⁵⁴ Curtailment in advance of pre-emergency procedures is consistent with the Show Cause Order's directive that Interim NITS customers would “avoid paying generator capacity costs in return for their willingness to

Two, such an outcome would remove the co-located generator from serving the Transmission System as a whole *during emergency or pre-emergency conditions*—times when PJM needs all resources at its disposal to maintain reliability. PJM would endeavor to dispatch all network resources—as well as all other generation resources on the system—to the maximum extent possible to reduce the likelihood of Interim NITS Curtailment. Indeed, PJM would dispatch the co-located generator to minimize any transmission constraints on the system, including any constraints that would cause the Co-Located Load to be curtailed, reducing the risk of Curtailment for transmission reliability. But, Interim NITS must be designed to allow PJM to maintain system reliability—both from a transmission and capacity perspective,⁵⁵ and allowing an interruptible customer to preclude PJM from accessing a generation resource during times of system stress would be contrary to that objective, and could undermine reliability of the PJM Region.

Further, to the extent the co-located generator is a committed Capacity Resource, the PJM Region has first call on such resource’s energy to meet the region’s needs. There should not be a situation where the co-located generator is allowed to make the economic choice of meeting its capacity commitment and performing to serve the region as a whole, or incurring Performance Assessment Charges to serve the Co-Located Load. Allowing

curtail their withdrawals in advance of emergency condition” and such “willingness to curtail would potentially allow them to obtain service more quickly.” Show Cause Order, 193 FERC ¶ 61,217, at P 201.

⁵⁵ See, e.g., Show Cause Order, 193 FERC ¶ 61,217, at PP 201 (“[T]his new interim, non-firm transmission service will facilitate the timely provision of transmission service to Eligible Customers taking transmission service on behalf of Co-Located Loads, while preserving reliability for other transmission customers.”), 212 (“We also note that, as discussed in the briefing questions below, PJM will determine the technical and engineering requirements of special protection schemes to help address reliability risks associated with unreserved use of the transmission system.”), 227 (discussing requirement that would “provide additional clarity and transparency regarding the steps that PJM and Interconnection Customers are taking to maintain transmission system reliability before an existing generating facility can serve Co-Located Load”).

such an economic choice to occur would be contrary to the Show Cause Order’s key principles for offering these new transmission services.

Interim NITS, under normal, non-emergency conditions would be directly supplied from the Co-Located Generating Facility (without exposure to transmission constraints) so long as that is the economic resource to serve the load. This is due to the physics of the connection. The risk exposure to Interim NITS in terms of Curtailment is limited primarily by the conditions where: (1) PJM cannot “reliably” supply any additional withdrawals from the network beyond the output of the Co-Located Generating Facility; or (2) PJM is experiencing system-wide resource emergency conditions. For the first condition, the Co-Located Load would have to be curtailed regardless to a net-zero exchange at the Point of Interconnection, limiting its withdrawal from the Transmission System. Given that the first condition relates to transmission reliability risk, the Co-Located Load would still have direct, physical access to the output of the Co-Located Generating Facility. For the second condition, given that the Interim NITS-served Co-Located Load is not backed by any capacity procurement, such load cannot obtain preferential access to the Co-Located Generating Facility, which has capacity obligations to PJM.

Three, as a type of *Network* Integration Transmission Service, Interim NITS is served by the pool of network resources and not any one “dedicated” resource, particularly not resources that would facilitate the provision of network integration service on a net basis. As PJM explained in its Initial Brief, “[g]enerally speaking, the non-rate terms and conditions for Interim NITS are the same as for NITS,⁵⁶ with modifications necessary to

⁵⁶ Compare Illustrative Tariff, Part XI, Subpart A, sections 700-07, with Tariff, Part III.

implement the interim and non-firm nature of the service.”⁵⁷ And, PJM intends to service Interim NITS and NITS loads in the same manner—up until there are system reliability issues that require Curtailment of Interim NITS. As such, PJM would serve Interim NITS loads through its security constrained economic dispatch (both day-ahead and in real-time) in the exact same manner it serves its NITS loads today. Said another way, all generating resources that are available (i.e., not on outage or otherwise unable to be brought on-line in a timely manner) will be utilized to serve the Interim NITS customer. The Interim NITS customer would only be curtailed after these actions are taken and if the system is in an unreliable state due to transmission system violations or capacity/reserve shortages. If the customer was not curtailed solely due to its proximity to the Co-Located Generating Facility, the system would not be in a reliable state, which would jeopardize equipment and reliability.

This is in stark contrast to co-location arrangements under Contract Demand Transmission Services, where the Co-Located Generating Facility would “dedicate” a MW level of output to the Co-Located Load, i.e., the Co-Located Load would therefore be able to take energy from the Co-Located Generating Facility without concern for Curtailment due to system issues. Allowing an Interim NITS-served Co-Located Load to take energy from the Co-Located Generating Facility during Curtailment would allow the Interim NITS customer to effectively transform its service to something akin to Contract Demand Transmission Service at times when the system is stressed. But, if the Co-Located Load

⁵⁷ Initial Brief at 67. This is consistent with the Show Cause Order’s directive that Interim NITS is designed to merely be a transition service until the system can support the customer’s NITS request. *See* Show Cause Order, 193 FERC ¶ 61,217, at P 200 (“We reiterate that this interim, non-firm transmission service should be temporary—only available to Eligible Customers that have requested NITS on behalf of Co-Located Loads that cannot yet be reliably served with NITS—and available only until the necessary Network Upgrades are completed and the Co-Located Load is designated as Network Load.”).

wants to avoid relying on the Transmission System to meet its energy needs during times of system stress and instead rely on the Co-Located Generator, then it should sign up for Non-Firm Contract Demand Transmission Service where the co-located generator has no obligation to serve PJM system load.⁵⁸

Four, such an outcome would be illogical. Interim NITS is predicated on the Co-Located Load’s “willingness to curtail.”⁵⁹ Allowing an Interim NITS-served Co-Located Load access to the Co-Located Generating Facility for its own individual use during times of system stress would be wholly contrary to that foundational element of the Show Cause Order’s justification for Interim NITS. Instead of curtailing to help address the system reliability issue, the Interim NITS customer would be allowed to continue drawing energy from a resource connected to the system. Further, it would be illogical to grant this right to the transitional, temporary Interim NITS when such right is not available to full NITS customers.⁶⁰

⁵⁸ See Show Cause Order, 193 FERC ¶ 61,217, at P 196 (“The Commission explained that its existing policy already provides customers with the opportunity to reduce network service costs to the extent a customer is not relying on the transmission system to meet its energy needs (i.e., by taking [Point-to-Point Service] instead of NITS.)” (citing *Preventing Undue Discrimination and Preference in Transmission Service*, Order No. 890, 118 FERC ¶ 61,119, at P 1619, *order on reh’g*, Order No. 890-A, 121 FERC ¶ 61,297 (2007), *order on reh’g & clarification*, Order No. 890-B, 123 FERC ¶ 61,299 (2008), *order on reh’g & clarification*, Order No. 890-C, 126 FERC ¶ 61,228, *order on clarification*, Order No. 890-D, 129 FERC ¶ 61,126 (2009)).

⁵⁹ Show Cause Order, 193 FERC ¶ 61,217, at P 201.

⁶⁰ See Show Cause Order, 193 FERC ¶ 61,217, at P 196 (explaining that it is unlawful for NITS customers to net dedicated generation and that “splitting a discrete load is antithetical to the concept of network service’ because ‘a load at a discrete point of delivery cannot be partially integrated—it is either fully integrated or not integrated’” (quoting Order No. 888-A, 78 FERC ¶ 61,220, 1996–2000 FERC Stats. & Regs., Regs. Preambles ¶ 31,048, at 30,262)).

C. The Illustrative Tariff Properly Details How PJM Will Study Requests for New Transmission Services and Determine the Level of Service that Can Be Reliably Provided

Several entities commented that PJM’s Illustrative Tariff provisions do not provide sufficient detail surrounding the processes through which PJM will study requests for Interim NITS and Contract Demand Transmission Services.⁶¹ In particular, Vistra and Constellation Energy Generation, LLC (“Constellation”) complain that the Illustrative Tariff provisions⁶² reserve too much discretion to PJM and the applicable PJM Transmission Owner(s),⁶³ lack sufficient detail,⁶⁴ and “allow for the perpetuation of existing discrimination, delays, tying, and encumbrances of large load configurations by Transmission Owners.”⁶⁵ These claims lack merit. As discussed below, the Illustrative Tariff provisions appropriately detail PJM’s process, role, and standards for studying requests for these new transmission services to serve load. Further, PJM will work with stakeholders to develop implementation details for such study process, which will be set forth in the PJM Manuals.

⁶¹ Vistra Reply Brief at 31-32; Constellation Reply Brief at 14-15; Advanced Energy/SEIA Reply Brief at 15-16.

⁶² See Initial Brief, Illustrative Tariff, Part XI, Subpart A, section 704 (Study Procedures for Interim Network Integration Transmission Service Requests) and Subpart B, section 712 (Study Procedures for Contract Demand Transmission Service).

⁶³ Vistra Reply Brief at 31-38.

⁶⁴ Constellation Reply Brief at 14-16.

⁶⁵ Constellation Reply Brief at 15-16. For their part, the PJM Transmission Owners contend that the Tariff should specify the sequencing of studies as between PJM and the applicable PJM Transmission Owner(s), such that the Transmission Owner’s load integration study should be completed first. Joint Response of Indicated PJM Transmission Owners, Docket Nos. EL25-49-000, et al., at 6 (Mar. 25, 2026) (“Indicated PJM Transmission Owners Response”).

1. *The Illustrative Tariff provisions regarding transmission studies and determination of service build from existing Tariff provisions*

To accommodate the new transmission services directed by the Show Cause Order, PJM has built on its existing processes for studying requests for new transmission services to serve loads within the PJM Region (as distinct from transmission service to PJM's borders), with additional processes necessary to study the novel aspects of Interim NITS and Firm and Non-Firm Contract Demand Transmission Services.

Currently, in PJM, the Transmission Owners study in the first instance all requests to connect new loads to the transmission system (as opposed to transmission service to the border), and entities requesting new transmission service to serve such loads must apply for NITS from PJM.⁶⁶ For each Zone, the Transmission Owner studies the integration of the requested load and identifies upgrades (i.e., Supplemental Projects) necessary to accommodate the new loads' demands on the transmission system. PJM then performs what is commonly referred to as a "do no harm" analysis, which analyzes how those Transmission Owner-identified upgrades would affect the regional Transmission System, i.e., the Bulk Electric System, and ensure the integration of the new load and associated transmission upgrades do not cause harm to the PJM interconnected transmission system. For this, PJM looks at how the Transmission Owner-identified facilities needed to serve the load interact with the current-year Regional Transmission Expansion Plan ("RTEP")

⁶⁶ This is generally true across the country. *See, e.g., Interconnection of Large Loads to the Interstate Transmission System*, Initial Comments of the MISO Transmission Owners, Docket No. RM26-4-000, at 5 (Nov. 21, 2025) ("MISO Transmission Owners Initial Comments") ("The interconnection of load to the transmission system, regardless of size, is largely a matter of state jurisdiction. As such, the transmission owner, load serving entity ("LSE"), and the load owner play lead roles in managing and interconnecting load to the transmission system. Specifically, the load owner seeking to interconnect to [Midcontinent Independent System Operator, Inc.'s ("MISO")] transmission system coordinates with the appropriate transmission owner and LSE, which are the same entity in a large part of the MISO region.").

base case, NERC’s transmission planning criteria, and the Transmission Owners’ FERC Form 715 planning criteria, as applicable, to determine whether any further upgrades are necessary to integrate those facilities while maintaining reliability or whether more efficient or cost effective baseline upgrades are needed that may replace any of the contemplated Transmission Owner-identified upgrades.⁶⁷ NITS can then be provided consistent with the in-service date of the identified upgrades.

The allocation of responsibilities between the Transmission Owners and PJM in the current study process follows the division of rights recently affirmed by both Commission and reviewing courts (i.e., Transmission Owners’ reservation of rights over local planning and PJM’s responsibility for the regional Transmission System).⁶⁸ PJM maintains this division of labor in the Illustrative Tariff provisions.⁶⁹ For example, upon receipt of an application for Contract Demand Transmission Service, PJM will notify the affected

⁶⁷ PJM performs such do no harm analyses regularly—often monthly—and studies Transmission Owner-identified upgrades together. See Transmission Planning Department, *PJM Manual 14B: PJM Regional Transmission Planning Process*, PJM Interconnection, L.L.C., § 1.1 (rev. 58, Dec. 17, 2025), <https://www.pjm.com/-/media/DotCom/documents/manuals/m14b.pdf> (“[P]rior to integrating a Supplemental Project into the RTEP base case PJM performs a ‘do no harm study’ to evaluate whether a proposed Supplemental Project will adversely impact the reliability of the Transmission System as represented in the planning models used in all other PJM reliability planning studies. If as a result of the ‘do no harm study’, system upgrades are required, then the system upgrades will be considered part of the Supplemental Project and are the responsibility of the Transmission Owner sponsoring the Supplemental Project.”). Pursuant to the do no harm study, PJM analyzes the impact of a contemplated local project to determine whether it would adversely affect PJM reliability criteria. If PJM identifies an adverse reliability impact, PJM notifies the PJM Transmission Owner that it has identified system upgrades necessary to maintain the reliability of the transmission system. Such system upgrades must be incorporated into the local project before the local planning facilities can be incorporated into the PJM Transmission Owners’ local plan and submitted for inclusion into the RTEP. See *PJM Transmission Owners Attachment M-3 Process Guidelines*, PJM Interconnection, L.L.C., 6 (Aug. 15, 2022), <https://www.pjm.com/-/media/DotCom/planning/rtep-dev/pjm-to-attachment-m3-process-guidelines.pdf>.

⁶⁸ See, e.g., *PJM Interconnection, L.L.C.*, 172 FERC ¶ 61,136, *order addressing arguments raised 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 addressing arguments raised 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).

⁶⁹ See Illustrative Tariff, Part XI, Subpart A, section 704 and Subpart B, section 712.

Transmission Owner(s)⁷⁰ and then “will coordinate” with them to “complete studies, including load integration studies”⁷¹ to determine “whether (and to what level as applicable) (i) Firm Contract Demand Transmission Service can be reliably provided and identify any necessary enhancements to the Transmission System to accommodate the requested level of service, and/or (ii) Non-Firm Contract Demand Transmission Services can be reliably provided.”⁷² PJM will also evaluate whether PJM needs to do additional studies of its own, and make that determination “in accordance with the PJM Manuals.”⁷³ PJM will rely on the studies to determine whether (and to what level as applicable) it can “reliably provide[]” the requested Contract Demand Transmission Service.⁷⁴

2. *The Illustrative Tariff provisions reflect that PJM requires discretion in studying to determine the amount of transmission service that can be provided reliably*

Contrary to the assertions made by Vistra and Constellation,⁷⁵ the Illustrative Tariff affords PJM and/or the affected Transmission Owner(s) an appropriate amount of discretion. *First*, PJM is not seeking any more discretion than it currently has under its existing study processes for study processes. The Illustrative Tariff follows PJM’s existing practice, which has been in place for decades.

⁷⁰ See Illustrative Tariff, Part XI, Subpart B, section 712.1.

⁷¹ Illustrative Tariff, Part XI, Subpart B, section 710.3.

⁷² Illustrative Tariff, Part XI, Subpart B, section 710.3.

⁷³ Illustrative Tariff, Part XI, Subpart B, section 712.1.

⁷⁴ Illustrative Tariff, Part XI, Subpart B, section 710.3 (“Following completion of all studies, Transmission Provider will make the determination, in consultation with the affected PJM Transmission Owner(s), about whether (and to what level as applicable) Firm Contract Demand Transmission Service or Non-Firm Contract Demand Transmission Services can be reliably provided for an Application, and if so, what level of service may be provided.”).

⁷⁵ Vistra Reply Brief at 33; Constellation Reply Brief at 14-16.

Second, PJM's 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. Evaluation of firm service requests will require and follow similar study procedures to what is now required for NITS. For non-firm services, i.e., Interim NITS and Non-Firm Contract Demand Transmission Service, 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. The details of the studies involved will depend on a number of factors, including: (1) how constrained is the area/zone of interconnection; (2) the actual conditions at which the load is expected to require the level of non-firm service; and (3) the nature of the constraints present (e.g., powerflow, stability, and short circuit). The varying constraint and risk levels, as well as complexities of implementing remedial actions or control schemes to manage these risks, will require varying levels of scrutiny to ensure system reliability is maintained, and that sufficient guardrails are present to protect the system against identified risks.

Because PJM operates the Transmission System for the benefit of *all* loads, PJM has myriad factors and considerations to keep in mind when making such determinations. PJM is not a gatekeeper and does not discriminate in favor of any type of load in performing these evaluations. Rather, PJM's job is to evaluate each request for transmission service from all perspectives to ensure that it can reliably provide the requested service to serve the load. Ultimately, as previously noted, the implementation details in the PJM Manual will be developed publicly by PJM and its stakeholders will develop PJM Manual language

to publicly provide the implementation details as to how PJM will determine whether it can reliably provide the requested service.⁷⁶

Third, in response to Vistra’s specific claim that PJM’s reservation of discretion as to whether a study is required for Interim NITS,⁷⁷ Vistra overlooks that the Illustrative Tariff provides that, after receiving a request for Interim NITS, PJM “shall determine on a non-discriminatory basis whether additional studies are needed *beyond* what was required to evaluate the Eligible Customer’s request for Network Integration Transmission Service.”⁷⁸ That is, PJM will evaluate the study for the customer’s NITS request to determine whether *additional* studies are needed—or if the NITS study does or can provide sufficient information. This is reasonable for a number of reasons. One, if the customer requests NITS and Interim NITS at the same time, then such requests could be examined in the same study. This is precisely the type of implementation detail that can be set forth in the PJM Manuals. Two, if PJM determines that the NITS study already conclusively answers the question of whether and how much Interim NITS may be provided until the needed upgrades are in service, then it makes no sense to perform an additional study that would reach the same result. This is particularly true where the current NITS study provides that the customer could go ahead and get the requested level of Interim NITS immediately. A requirement for PJM (and/or applicable Transmission Owner(s)) to perform additional studies would only unnecessarily delay the provision of Interim NITS.

More generally, any PJM decision to not study will be based on its knowledge of the system in that area, earlier and ongoing studies information in the area, and the

⁷⁶ See Illustrative Tariff, Part XI, Subpart B, section 710.3.

⁷⁷ See Vistra Reply Brief at 33.

⁷⁸ Illustrative Tariff, Part XI, Subpart A, section 704.1 (emphasis added).

information already available to PJM and whether PJM needs to perform a study should be within its discretion. PJM should not be required to perform a study that is not needed to evaluate the service request. Any concerns that PJM will summarily reject service requests without basis are unfounded. Requests for NITS and Firm Contract Demand Transmission Service will generally be granted; the only variable is whether new transmission facilities must be installed to accommodate the requests. Requests for Interim NITS will be granted consistent with the results of any NITS study and/or additional study if necessary. Finally, with respect to Non-Firm Contract Demand Transmission Service requests, to the extent PJM determines that none or only a portion of the requested level of service can be reliably provided, the Illustrative Tariff would require PJM to “provide a written explanation of its reasons for” whole or partial denial of service.⁷⁹ Such written explanation would provide the customer basis to understand PJM’s reasoning for the denial and could form the basis of any complaint to the Commission. Generally speaking, PJM is not going to turn people away or deny service; rather, PJM will study the system and identify changes that would need to be made to accommodate the request.

Fourth, as to the timeline for performing the studies, as discussed, PJM’s evaluation of any request for transmission service to serve loads in PJM is dependent on the load integration studies performed by the applicable Transmission Owner(s). Given that such load integration studies are a matter of local transmission planning, PJM does not have the authority to dictate timelines to the Transmission Owners to complete their studies. Like all transmission owners across the country, PJM’s Transmission Owners are grappling with how to accommodate the increasing requests for large loads to interconnect.

⁷⁹ See Illustrative Tariff, Part XI, Subpart B, section 710.3.

However, experience appears to be leading to more efficient processes. In this regard, Exelon Corporation (“Exelon”), the parent of several Transmission Owners, recently filed testimony detailing its large load study process. Exelon noted that “[t]he details of the study process are evolving,” which makes sense given the new issues presented by integrating so many large loads at once.⁸⁰ Exelon explained that it has adopted a cluster study process through which it studies all requests submitted within a given “window” collectively to determine their “cumulative impact on the transmission system.”⁸¹ And, it is “[t]hrough this analysis” that Exelon “identifies whether any transmission or high voltage system reinforcements or expansions are needed to ensure the safety, reliability, and efficiency of those systems, as well as the utility’s ability to serve all its customers.”⁸² Exelon explained that it adopted the cluster study process because the pre-existing “one-by-one studies” were too slow and “delayed” its ability to process the requests.⁸³ Only once such Transmission Owner’s studies are complete is PJM able to conduct its studies and identify any additional Transmission System facilities necessary to accommodate the transmission service request.⁸⁴

Additionally, while PJM and the Transmission Owners have much experience studying requests for NITS to serve load in PJM and Point-to-Point Transmission Service to the PJM border, they do not have much experience with studying non-firm transmission

⁸⁰ *PJM Interconnection, L.L.C.*, Answer of Exelon Corporation to the Motion for Leave and Supplemental Protest of Constellation Energy Generation, LLC, Docket Nos. ER26-1088-000 & ER26-1479-000 (Apr. 14, 2026) (“Exelon Answer”); *id.*, Declaration of David Weaver, PE (Attachment A) ¶ 6 (“Weaver Declaration”).

⁸¹ Weaver Declaration ¶ 6.

⁸² Weaver Declaration ¶ 6.

⁸³ Weaver Declaration ¶ 7.

⁸⁴ PJM studies Transmission Owner-identified facilities necessary to integrate loads on a cluster basis.

services to serve loads in PJM. To tackle this nascent issue and provide an opportunity for a fulsome analysis of providing non-firm transmission service to large loads, PJM intends to soon initiate discussions with stakeholders to develop PJM Manual language to implement the Illustrative Tariff. This stakeholder process likely will include discussions on the processes for studying and providing Interim NITS and Non-Firm Contract Demand Transmission Service.

3. *The Illustrative Tariff appropriately provides sufficient notice while allowing for implementation details to be in the PJM Manuals*

Vistra and Constellation complain that the Illustrative Tariff is “missing information” related to the performance of the studies for transmission service to serve loads in PJM, and thus runs contrary to the Commission’s “rule of reason”⁸⁵ and would allow for discrimination by Transmission Owners.⁸⁶ These claims miss the mark.

The Illustrative Tariff puts all parties on sufficient notice as to how PJM will determine whether (and to what level) it can provide the requested transmission service and the study procedures to arrive at that determination.⁸⁷ The Illustrative Tariff provides the standard to which PJM will evaluate the requests—whether the requested level of service can be provided reliably.⁸⁸ For Firm Contract Demand Transmission Service, the

⁸⁵ Vistra Reply Brief at 36-38.

⁸⁶ Constellation Reply Brief at 14.

⁸⁷ See Illustrative Tariff, Part XI, Subpart A, section 702.3 (Determination of Whether Interim Network Integration Transmission Service Can Be Reliably Provided); *id.*, section 704.1 (Notice of Need for Study); Illustrative Tariff, Part XI, Subpart B, section 710.3 (Determination of Whether Firm Contract Demand Transmission Service and Non-Firm Contract Demand Transmission Service Can Be Reliably Provided); *id.*, section 712.1 (Study Procedures for Firm Contract Demand Transmission Service); *id.*, section 712.2 (Study Procedures for Non-Firm Contract Demand Transmission Service).

⁸⁸ See Illustrative Tariff, Part XI, Subpart A, section 702.3 (Determination of Whether Interim Network Integration Transmission Service Can Be Reliably Provided); Illustrative Tariff, Part XI, Subpart B, section 710.3 (Determination of Whether Firm Contract Demand Transmission Service and Non-Firm Contract Demand Transmission Service Can Be Reliably Provided); *see also* Show Cause Order, 193 FERC

Illustrative Tariff provides that PJM “and the affected Transmission Owner(s) shall coordinate to study the effects of providing the requested Firm Contract Demand Transmission Service on the affected Transmission Owner(s)’s system pursuant to the applicable affected Transmission Owner requirements.”⁸⁹ And, PJM will “determine, in accordance with the PJM Manuals, any necessary studies for reliably providing the requested Firm Contract Demand Transmission Service.”⁹⁰ The studies will “provide data relevant to the determination of whether (and to what level as applicable) (i) Firm Contract Demand Transmission Service can be reliably provided and identify any necessary enhancements to the Transmission System to accommodate the requested level of service, and/or (ii) Non-Firm Contract Demand Transmission Services can be reliably provided.”⁹¹ Further, as discussed, the Illustrative Tariff describes the coordination and consultation between PJM and the applicable Transmission Owner(s) necessary to reliably provide transmission service to serve loads in PJM.⁹²

While the Illustrative Tariff describes the procedures and studies for the new Contract Demand Transmission Services, such level of detail and work is generally not required for Interim NITS determinations given that such service is derivative of the

¶ 61,217, at P 200 (The Commission recognizing that Interim NITS “would only be available to the extent PJM determines that it can provide some level of interim service *reliably*.” (emphasis added)).

⁸⁹ Illustrative Tariff, Part XI, Subpart B, section 712.1. In response to Vistra’s request for the Transmission Owners’ planning criteria, Vistra Reply Brief at 33, those criteria are often set forth in each Transmission Owner’s FERC Form 715.

⁹⁰ Illustrative Tariff, Part XI, Subpart B, section 712.1.

⁹¹ Illustrative Tariff, Part XI, Subpart B, section 710.3.

⁹² Illustrative Tariff, Part XI, Subpart B, section 710.3.

customer’s existing NITS request and associated studies, although the Illustrative Tariff authorizes PJM to perform additional studies if needed.⁹³

Courts have made clear that the Commission has “broad bounds of discretion” in applying the rule of reason,⁹⁴ and “even specifiable practices that significantly affect rates need not be included if they are clearly implied by the tariff’s express terms.”⁹⁵ The Commission understands that “study assumptions and parameters are likely to change over time as planners gain experience in implementing the new planning procedures. Thus, rigid specifications or formulas set out in the Tariff would likely lead to less reliable assessments due to the inability of planners to adapt to changing circumstances.”⁹⁶ Indeed, 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.

Thus, the Illustrative Tariff provides more than enough detail to meet the rule of reason, as it provides sufficient detail, “while leaving PJM and stakeholders with sufficient discretion to improve various implementation details over time as they gain experience with [the new transmission services].”⁹⁷ Indeed, the Illustrative Tariff calls for such further development. For Contract Demand Transmission Services, the Illustrative Tariff provides

⁹³ See Illustrative Tariff, Part XI, Subpart A, section 704.1.

⁹⁴ *City of Cleveland v. FERC*, 773 F.2d 1368, 1376 (D.C. Cir. 1985).

⁹⁵ *Hecate Energy Greene Cnty. 3 LLC v. FERC*, 72 F.4th 1307, 1314 (D.C. Cir. 2023).

⁹⁶ *Sw. Power Pool, Inc.*, 136 FERC ¶ 61,050, at P 37 (2011); see also *Midcontinent Indep. Sys. Operator, Inc.*, 190 FERC ¶ 61,147, at P 23 (2025) (“It is beneficial for MISO to retain discretion—within Tariff boundaries—to improve study assumptions and parameters over time as it gains experience and learns from stakeholders. Rigid specification would hamper this discretion.”).

⁹⁷ *PJM Interconnection, L.L.C.*, 175 FERC ¶ 61,084, at P 65 (2021).

that “[d]escriptions of [PJM’s] and/or the applicable Transmission Owner(s)’ specific methodology for assessing whether [the request service] can be reliably provided, will be set forth in Tariff, Part XI, Subpart B, section 712, in the PJM Manuals, and in Transmission Owner standards, as applicable.”⁹⁸

PJM develops PJM Manual provisions in consultation with stakeholders⁹⁹ and the PJM Manuals are publicly posted.¹⁰⁰ This means that (1) the PJM Manuals will provide guidance as to when PJM may need to perform such a study; and (2) stakeholders, like Constellation and Vistra who complain about the Illustrative Tariff language, will have a fulsome opportunity to participate in the development of such PJM Manual language.¹⁰¹ This is a benefit—that such implementation details will be developed in consultation with stakeholders, including parties interested in co-location arrangements and Transmission Owners.

As the Show Cause Order recognized, co-location arrangements are a fairly novel concern. Thus, PJM, its stakeholders, the Commission, and others have not had much experience with serving these arrangements, studying or providing non-firm service to loads, or studying large loads in the number and scale the county is currently seeing. While PJM has been working diligently to develop just and reasonable terms and conditions, as

⁹⁸ Illustrative Tariff, Part XI, Subpart B, section 710.3.

⁹⁹ PJM employs a formalized, collaborative stakeholder process for the creation and revision of business practices manuals, so that PJM seeks endorsement by stakeholders. *See* Stakeholder Affairs Department, *PJM Manual 34: PJM Stakeholder Process*, PJM Interconnection, L.L.C., § 11.15 (rev. 22, Sep. 25, 2025), <https://www.pjm.com/-/media/DotCom/documents/manuals/m34.pdf> (discussing stakeholder process to revise PJM Manuals).

¹⁰⁰ *See Manuals*, PJM Interconnection, L.L.C., <https://www.pjm.com/library/manuals.aspx> (last visited Apr. 22, 2026).

¹⁰¹ The development of the Manual implementation details will occur once the Commission rules on the appropriate terms and conditions for the transmission services. This sequencing is logical, as PJM and its stakeholders cannot know how to implement the terms and conditions until they are determined.

set forth in the Illustrative Tariff provisions, and has engaged in regular consultation with its stakeholders regarding the same,¹⁰² the development timeline has been compressed. However, as discussed, PJM and its stakeholders continue to examine these issues outside this proceeding, and the ongoing Connect and Manage Senior Task Force¹⁰³ may benefit and inform how PJM should study these new non-firm transmission services. Indeed, PJM, in the near future intends to collaborate with stakeholders on the development of PJM Manual language to implement the Illustrative Tariff, which would allow Co-Located Load arrangement application submission, necessary studies, and agreement preparation to move forward.¹⁰⁴

Regardless, at root, Vistra's and Constellation's complaints regarding the level of detail in PJM's study procedures generally concern the Transmission Owner's load integration studies. But any "lack of detail" regarding load integration studies comports with the jurisdictional boundaries of the Federal Power Act ("FPA"), as recognized by the Show Cause Order, which was careful to assert jurisdiction only over the Eligible Customers taking transmission service on behalf of Co-Located Loads. The Transmission Owners' processes for studying the integration of new loads on to the transmission system, and identifying upgrades (i.e., Supplemental Projects) to accommodate such loads, does not inherently implicate the Commission's FPA jurisdiction.

¹⁰² PJM has held nine stakeholder workshops to discuss compliance with the Show Cause Order and implementation of its directives. *See Co-Located Load Order Workshop*, PJM Interconnection, L.L.C., <https://www.pjm.com/committees-and-groups/workshops/cllsco> (last visited Apr. 22, 2026).

¹⁰³ *See Connect and Manage Senior Task Force*, PJM Interconnection, L.L.C., <https://www.pjm.com/committees-and-groups/task-forces/camstf> (last visited Apr. 22, 2026).

¹⁰⁴ PJM also intends to explore with stakeholders whether and how to study the impacts of both the Co-Located Load and Co-Located Generating Facility together, as appropriate and as compatible with the service type requested.

4. *The Illustrative Tariff reasonably requires PJM to determine whether the requested level of transmission service can be “reliably provided”*

Vistra asserts that “[i]t is therefore unclear what it means to ensure that non-firm transmission service can be provided ‘reliably.’”¹⁰⁵ Vistra bases this contention on the argument that, because an Eligible Customer has “agreed to be curtailable,” its use of the Transmission System is limited only by use of “transmission customers of higher priority.”¹⁰⁶ Apparently, in Vistra’s view, entities can simply utilize any unused transmission capacity for use on a non-firm basis without concern for transmission reliability. This is overly simplistic and incorrect. As explained above, it is not the case that the Transmission System has significantly underutilized capacity to provide the envisioned services.

As discussed, PJM’s Transmission System is extremely complex and highly integrated, with over 1,400 interconnecting generators, a record summer peak load of 165,563 MW (set in 2006), and serves over 67 million people within the PJM Region. In addition, PJM must manage loop flows from neighboring regions, congestion management along its seams, and manage day to day, planned and unplanned outages that need the remnant capability on the system to be enabled. Continuously filling all remnant transmission capability on the PJM system will limit and complicate the necessary outage scheduling for both generation and transmission facilities further imposing higher operational risk. This operational risk needs to be carefully identified and managed by PJM beforehand instead of spontaneously managing non-firm load under an increasingly

¹⁰⁵ Vistra Reply Brief at 39.

¹⁰⁶ Vistra Reply Brief at 39.

stressed system. Furthermore, as load continues to grow by the forecasted approximately 5-6 gigawatts (“GW”) each year due predominantly to large loads with a very high capacity factor, any historic generation/transmission operating margins are rapidly shrinking. This is not just a peak day concern, but rather a year-round concern due to the high capacity factor of these new loads. Not only does the load increase complicate operations, the significant, both in scope and quantity, baseline upgrades that have been identified to be in-service over the next several years require major, long term transmission outages of multiple extra-high voltage lines, transformers, buses and substations that need to be coordinated across the Transmission System.

It is well understood that everything on the system interacts and there can be ripple effects from even the smallest incident.¹⁰⁷ Thus, PJM cannot naively grant service requests without proper studies. Many of the large load service requests may directly affect, both physically and performance-wise, the operation and reliability of key generating plants, which in turn can have a major impact on the overall system. PJM must ensure the reliability of the system is maintained for a specific time frame (requested interim or non-firm service duration) and be prepared to manage reliably within such pre-specified and studied state. The Commission recognized this basic fact in the Show Cause Order. There, it stated that Interim NITS “would only be available to the extent PJM determines that it can provide some level of interim service *reliably*.”¹⁰⁸

¹⁰⁷ The 2003 Northeast Blackout was precipitated, in part, by overloaded high-voltage power lines in northern Ohio sagging due to heat and contacting overgrown trees. U.S.-Canada Power System Outage Task Force, *Final Report on the August 14, 2003 Blackout in the United States and Canada: Causes and Recommendations*, North American Electric Reliability Corporation, 18-20 (Apr. 2004), https://www.nerc.com/globalassets/our-work/reports/event-reports/august_2003_blackout_final_report.pdf.

¹⁰⁸ Show Cause Order, 193 FERC ¶ 61,217, at P 200 (emphasis added).

To do so, PJM, as the Transmission Provider and Reliability Coordinator, must be sure that provision of any service would not impair system reliability. The reliable interconnection of large loads requires assessment of thermal, voltage, and stability issues, among others, which may be mitigated with new transmission facilities, or upgrades, all of which are necessary to ensure these new large loads are served with the reliability level compliant with the planning standards given their potential role in national security. Such assessment is not as simple as looking at a single transmission path element performance under one operating condition. Rather, PJM must ensure that it does not violate SOLs/IROLs in the event of contingencies or abnormal system conditions.

5. *The Illustrative Tariff can accommodate phased-in Co-Located Loads*

The Data Center Coalition argues that the Illustrative Tariff provisions would not “accommodate the phased and incremental development that characterizes large load projects.”¹⁰⁹ This is incorrect. PJM has presented in the Illustrative Tariff broad terms and conditions to process and approved requests for Interim NITS and Contract Demand Transmission Services to serve Co-Located Loads.

The Illustrative Tariff provides a workable pathway for phased development or load ramping. The obvious path for Co-Located Load that increases over time and “align[s] transmission service with phased project development”¹¹⁰ is NITS—a transmission service *designed* to accommodate load growth. To the extent, the Eligible Customer elects Contract Demand Transmission Service, a service which by its name is for a defined MW, contracted amount, and any change to the contracted MW quantity would require a new

¹⁰⁹ Data Center Coalition Response at 6.

¹¹⁰ Data Center Coalition Response at 6.

service request to be studied. This is reasonable, and entirely consistent with how generator interconnections are treated across the county.¹¹¹

The customer can elect to request Interim NITS or Firm Contract Demand Transmission Service for their full load amount ahead of time and utilize that capacity as their demand increases up to the applied for firm service level. The advantage of such approach is to ensure the transmission facilities needed to provide reliable service are efficiently identified and addressed with the initial application. This is an economic tradeoff that ensures lower interruption levels and certainty of service as well as associated cost. Importantly, the Commission directed PJM to offer Contract Demand Transmission Service as an alternative to NITS. Thus, at this time, it is reasonable for Contract Demand Transmission Service to *not* have the same load growth accommodating attributes as NITS.

With respect to the Data Center Coalition’s suggestion that the rules should provide for a “transition between service constructs,”¹¹² the Illustrative Tariff allows for customers to submit a request for the type of transmission service they want. PJM will then evaluate whether it needs to perform a study or it can grant the request without a study. Given that different transmission services place different demand on the Transmission System, PJM must have the opportunity to examine the request to determine whether the requested level of service can be provided reliably.

¹¹¹ See *Improvements to Generator Interconnection Procedures and Agreements*, Order No. 2023, 184 FERC ¶ 61,054, at P 1409 (“Once the executed facilities study agreement is returned, the transmission provider may decide to automatically treat requests to add a generating facility to an existing interconnection request as material modifications without review.”), *limited order on reh’g*, 185 FERC ¶ 61,063 (2023), *order on reh’g & clarification*, Order No. 2023-A, 186 FERC ¶ 61,199, *errata notice*, 188 FERC ¶ 61,134 (2024), *appeals pending sub nom. Advanced Energy United v. FERC*, Nos. 23-1282, et al. (D.C. Cir. Oct. 6, 2023).

¹¹² Data Center Coalition Response at 6.

D. Non-Monetary Penalties Are Just and Reasonable and Necessary to Support the Reliable Operation of the Grid

A number of parties object to the non-monetary operational penalties set forth in the Illustrative Tariff, which would work in tandem with financial penalties to ensure reliability of the Bulk Electric System.¹¹³ Contrary to their claims, these non-monetary operational penalties are not “extreme punishments that were not contemplated by the [Show Cause Order].”¹¹⁴ These penalties do not “effectively deny customers service after a single failure to curtail or shed load[.]”¹¹⁵ Rather, as discussed below, non-monetary, operational penalties are effectively remedial actions that would be taken to support reliability.

In brief, the non-monetary penalties described in PJM’s Initial Brief are: (1) in the event of a misoperation of the necessary control technology and protection system installed to limit the Co-Located Load’s withdrawal of energy from the Transmission System, a temporary pause in service of up to 120 days to permit time to investigate, identify, and fix control technologies or protection system schemes that have misoperated; and (2) a disqualification penalty that would require Eligible Customers to transition to taking NITS.

Parties’ critiques focus primarily on the disqualification penalties. Such complaints are without regard to the impacts of having two misoperations at the same facility; each of which exposes the system to major reliability risks, and together demonstrate that the

¹¹³ Joint Co-Location Developers Reply Brief at 23-27; Constellation Reply Brief at 18-21; Vistra Reply Brief at 30; Data Center Coalition Response at 7-8.

¹¹⁴ Constellation Reply Brief at 19; *see also* Joint Co-Location Developers Reply Brief at 24 (“The threat of an extreme penalty like disqualification” is “not needed to protect system reliability.”); Data Center Coalition Response at 7 (“PJM proposes an extremely stringent penalty framework under which a single failure to comply with load shedding or curtailment instructions results in automatic disqualification from service.”).

¹¹⁵ Joint Co-Location Developers Reply Brief at 23.

customer unable and/or unwilling to perform under their contracted terms and conditions. Requesting monetary penalties, in place of non-monetary penalties, undermines the value of reliability and hands it to a single site or a class of load that may decide to pay the penalty in place of operate as agreed to ensuring overall system reliability. A temporary pause up to 120 days is consistent with NERC requirements,¹¹⁶ and disqualification penalties do not disqualify Eligible Customers from taking transmission service, but rather align Eligible Customers' demonstrated use of the system with the type of transmission service best suited to their usage. Where Eligible Customers have been disqualified from taking Firm Contract Demand Transmission Service, Non-Firm Contract Demand Transmission Service, or Interim NITS on behalf of Co-Located Load, they retain the option to take NITS which, in and of itself, addresses Curtailment, Load Shed, and control technology or protection scheme misoperation risk.

Importantly, only Eligible Customers who use the system in a manner detrimental to the reliability of the Transmission System would be subject to non-monetary penalties. That is, only Eligible Customers who elect to take Firm/Non-Firm Contract Demand Transmission Service or Interim NITS but then either (1) fail to follow dispatch instructions to shed load or curtail; or (2) have requisite control technologies or protection system schemes that misoperate would be subject to non-monetary penalties. These co-location arrangements may involve physical and/or electrical interconnections with critical power plants that their reliable and predictable operation is crucial to the reliability of the overall

¹¹⁶ See, e.g., *PRC-004-6 — Protection System Misoperation Identification and Correction*, North American Electric Reliability Corporation (June 12, 2025), <https://www.nerc.com/globalassets/standards/reliability-standards/prc/prc-004-6.pdf>; *PRC-012-2 — Remedial Action Schemes*, North American Electric Reliability Corporation (June 12, 2025), <https://www.nerc.com/globalassets/standards/reliability-standards/prc/prc-012-2.pdf>.

PJM interconnected system. The non-monetary operational penalties are designed to ensure that customers are offered the flexibility of these new transmission services only to the extent they are willing and able to manage their load in a way that maintains overall system reliability.

As discussed below, the non-monetary operational penalties described in PJM’s Initial Brief represent a measured approach that balances significant reliability concerns with the interest in integrating large loads quickly. That said, in response to concerns raised by intervenors about the application of disqualification penalties regardless of cause, PJM also describes, below, revisions to the Illustrative Tariff language that add some discretionary language to the strict application of non-monetary operational penalties.

1. *The size and pace of large load integration give rise to heightened reliability risk that calls for non-monetary penalties in addition to financial penalties*

The cost of *unreliability*—whether measured in dollars, frequency of rolling blackouts, impacts on national security or economic development, or loss-of-life—must not be underestimated. Reliability underscores every aspect of the penalty scheme described in PJM’s Initial Brief.

NERC has found that “[t]he size and speed at which data centers are being connected to and operated on the [Bulk Electric System] is creating one of the greatest near-term reliability challenges.”¹¹⁷ In one incident, highlighted in NERC’s 2025 State of Reliability Overview, “approximately 1,500 MW of data centers disconnected simultaneously and unexpectedly from the [Bulk Electric System] due to a transmission

¹¹⁷ 2025 State of Reliability: Assessment Overview of 2024 Bulk Power System Performance, North American Electric Reliability Corporation, 8 (June 2025), https://www.nerc.com/globalassets/programs/rapa/pa/nerc_sor_2025_overview.pdf (“NERC 2025 State of Reliability Overview”).

line fault in 2024.”¹¹⁸ NERC compared “[a] loss of load of this size . . . to a large nuclear power plant coming on-line immediately and unexpectedly, creating an imbalance due to too much generation on the system.”¹¹⁹

NERC’s latest Long Term Reliability Assessment found that PJM faces a “high risk” of potential electricity supply shortfalls under normal and extreme weather conditions by 2029, and is presently already at “elevated risk” of experiencing such shortfalls due primarily to “vigorous large-load and data center development.”¹²⁰ Likewise, PJM’s long-term 2026 Load Forecast expects that, driven primarily by data centers, summer peak demand will rise from 160 GW in 2025, to 222 GW by 2036, and 253 GW by 2046.¹²¹

The Commission, in this proceeding, has recognized that the speed with which large loads are being added and the unprecedented size of the projected loads present unique challenges and risks to reliability.¹²² As PJM’s Independent Market Monitor states plainly, Non-Firm Contract Demand Transmission Service and Interim NITS “create significant reliability risks for the transmission system.”¹²³

Undoubtedly, the rapid influx of large load presents reliability challenges. But as Chairman Swett recently observed in a keynote speech to the Energy Bar Association,

¹¹⁸ NERC 2025 State of Reliability Overview at 8 (citing *Incident Review: Considering Simultaneous Voltage-Sensitive Load Reductions*, North American Electric Reliability Corporation (Jan. 8, 2025), https://www.nerc.com/globalassets/our-work/reports/event-reports/incident_review_large_load_loss.pdf#search=load%20loss%20data%20center).

¹¹⁹ NERC 2025 State of Reliability Overview at 8.

¹²⁰ *Long-Term Reliability Assessment*, North American Electric Reliability Corporation, 7-9, 91 (Jan. 29, 2026), https://www.nerc.com/globalassets/our-work/assessments/nerc_ltra_2025.pdf.

¹²¹ PJM Resource Adequacy Planning Department, *2026 PJM Load Forecast Report*, PJM Interconnection, L.L.C., 6 (Jan. 14, 2026), <https://www.pjm.com/-/media/DotCom/library/reports-notice/load-forecast/2026-load-report.pdf> (“PJM 2026 Load Forecast”).

¹²² Show Cause Order, 193 FERC ¶ 61,217, at P 6.

¹²³ *PJM Interconnection, L.L.C.*, Reply Brief of the Independent Market Monitor for PJM, Docket Nos. EL25-49-000, et al., at 2 (Mar. 26, 2026) (“IMM Reply Brief”).

maintaining a reliable grid need not be in tension with integrating large loads.¹²⁴ Large loads can be responsibly integrated in a manner that mitigates reliability risk. Non-monetary operational penalties are essential to the responsible integration of large loads.

2. *PJM's non-monetary penalties and requirements on Eligible Customers using necessary control technologies or protection systems are not unduly discriminatory*

Commission precedent undermines Vistra's assertion that non-monetary penalties, as well as requirements on Eligible Customers using necessary control technologies or protection systems, violate the "comparability requirement" and are thus unduly discriminatory.¹²⁵ According to Vistra, these requirements treat Eligible Customers serving Co-Located Loads "differently from any other entities . . . including the PJM Transmission Owners."¹²⁶

The comparability principle "requires that transmission providers treat similarly situated customers comparably in the transmission planning process."¹²⁷ However, the principle applies only to similarly situated customers. Where customers are not similarly situated, the comparability principles do not apply.

The Commission has found that where an RTO or Independent System Operator has shown that customers serving large loads differ from customers serving more traditional loads, different treatment may be warranted. Earlier this year, the Commission

¹²⁴ See James Downing, *Swett Wants to 'Push Right up to' the Edge of Precedent as FERC Chair*, RTO Insider (Apr. 15, 2026), <https://www.rtoinsider.com/130267-ferc-swett-wants-to-push-precedent-to-edge/>.

¹²⁵ Vistra Reply Brief at 30-31.

¹²⁶ Vistra Reply Brief at 30.

¹²⁷ *Building for the Future Through Electric Regional Transmission Planning and Cost Allocation*, Order No. 1920-A, 189 FERC ¶ 61,126, at P 318 (2024), *order on reh'g & clarification*, Order No. 1920-B, 191 FERC ¶ 61,026 (2025), *appeals pending sub nom. Appalachian Voices v. FERC*, Nos. 24-1650, et al. (4th Cir. July 16, 2024).

accepted Southwest Power Pool, Inc.’s (“SPP”) High Impact Large Load (“HILL”) and High Impact Large Load Generation Assessment (“HILLGA”) processes,¹²⁸ finding that SPP had “shown that unprecedented growth in large loads in the SPP region presents significant and unique operational and planning challenges.”¹²⁹ The Commission concluded that SPP’s proposed processes for “new large loads into SPP’s transmission system” were not unduly discriminatory despite differing from processes applicable to other loads “given their unique operating characteristics.”¹³⁰ Imposing “more stringent eligibility requirements for the HILLGA process, compared to the requirements set forth in the Commission’s *pro forma* [Large Generator Interconnection Procedures]” was determined to be “just and reasonable and not unduly discriminatory or preferential because they will help deter speculative interconnection requests[.]”¹³¹ While SPP is structurally very different from PJM and there is a different allocation of rights between SPP and its transmission owners than in PJM—making SPP’s HILL/HILLGA distinguishable from the facts facing PJM, that does not affect the fundamental premise that treatment of Co-Located Loads may differ from treatment of more traditional loads without being unduly discriminatory.¹³²

¹²⁸ *Sw. Power Pool, Inc.*, 194 FERC ¶ 61,031, at P 60 (2026) (“HILL/HILLGA Order”).

¹²⁹ HILL/HILLGA Order, 194 FERC ¶ 61,031, at P 60.

¹³⁰ HILL/HILLGA Order, 194 FERC ¶ 61,031, at P 61.

¹³¹ HILL/HILLGA Order, 194 FERC ¶ 61,031, at P 65.

¹³² HILL/HILLGA Order, 194 FERC ¶ 61,031, at PP 65-66; *id.* concur op. (Commissioner Rosner) at P 3 (“There are also clear parallels between SPP’s approach in its HILLs and HILLGA processes and the new transmission services the Commission recently directed PJM to create for load co-located with generation. While the mechanics of these approaches are distinct between the different regions, . . . [t]he common thread is a recognition that when generation is paired with load that is physically proximate, the impacts on the transmission system are lower than they are in the status quo, in which large loads and generation are planned separately.”); *see, e.g., Hess Corp. v. PJM Interconnection, L.L.C.*, 142 FERC ¶ 61,040, at P 35 (2013) (“Discrimination is undue when there is a difference in rates or services among similarly situated customers that is not justified by some legitimate factor.” (citing *City of Anaheim*, 113 FERC ¶ 61,091, at P 130 (2005))); *Viridity Energy, Inc. v. PJM Interconnection, L.L.C.*, 155 FERC ¶ 61,060, at P 22 (2016).

Similarly, in this proceeding, the Commission has recognized that the speed with which large loads are being added and the unprecedented size of the projected loads present unique challenges and risks to reliability and resource adequacy.¹³³ Furthermore, as discussed in Section II.D.1, above, NERC, the Independent Market Monitor for PJM, 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, create unique reliability and resource adequacy risks, and are of an unprecedented size and scale.

Because SPP had shown that the new large loads in SPP's transmission system are not similarly situated to traditional loads, the Commission held that different and even comparatively more stringent treatment of new large loads was not unduly discriminatory.¹³⁴ First, as stated in PJM's Initial Brief, each and every Service Agreement for Non-Firm Contract Demand Transmission Service must include any appropriate necessary control technologies and/or protection systems PJM determines are necessary to ensure the reliability and stability of PJM's Transmission System.¹³⁵ The control technologies and protection systems necessary to provide Non-Firm Contract Demand Transmission Service (and Interim NITS) are emblematic of the complexity associated with Non-Firm Contract Demand Transmission Service from an operations and planning perspective.¹³⁶ Second, the non-monetary penalties are necessary to effectuate that Eligible Customers are "willing and able to control their withdrawals from the transmission

¹³³ Show Cause Order, 193 FERC ¶ 61,217, at P 6 & n.16 (citing *PJM Interconnection, L.L.C.*, 190 FERC ¶ 61,115, at P 83 (2025)).

¹³⁴ HILL/HILLGA Order, 194 FERC ¶ 61,031, at P 60.

¹³⁵ Initial Brief at 35.

¹³⁶ See Initial Brief at 34-35.

system”¹³⁷ and that services are designed to allow PJM to maintain system reliability.¹³⁸ Disqualification penalties support the Commission’s underlying value proposition, as described in the Show Cause Order.

Constellation asserts that the disqualification penalties described in PJM’s Initial Brief are “extreme punishments . . . not contemplated by the [Show Cause Order].”¹³⁹ Contrary to Constellation’s claim, at bottom, disqualification penalties support the central value proposition expressly contemplated in the Show Cause Order—that Eligible Customers can take the level of “transmission service that aligns with their use of the transmission system and therefore aligns the charges for service with the benefits received.”¹⁴⁰

The Show Cause Order does not grant Eligible Customers an inalienable right to Firm/Non-Firm Contract Demand Transmission Services or Interim NITS. Rather, Eligible Customers who are “willing to limit their energy withdrawals” need not be limited to taking NITS.¹⁴¹ Conversely, an Eligible Customer who is *unwilling* to limit energy withdrawals when directed should take the level of “transmission service that aligns with their use of the transmission system[.]”¹⁴²

As the Show Cause Order explains, Eligible Customers should be allowed to choose the level of transmission service that aligns transmission service charges “with the benefits

¹³⁷ See Show Cause Order, 193 FERC ¶ 61,217, at P 204.

¹³⁸ Initial Brief at 42.

¹³⁹ Constellation Reply Brief at 19.

¹⁴⁰ Show Cause Order, 193 FERC ¶ 61,217, at P 199.

¹⁴¹ Show Cause Order, 193 FERC ¶ 61,217, at P 199.

¹⁴² Show Cause Order, 193 FERC ¶ 61,217, at P 199.

received.”¹⁴³ In other words, Eligible Customers who do not use all of the benefits of NITS may choose a comparatively less flexible and, generally, less expensive level of transmission service. Likewise, Eligible Customers should not receive benefits beyond the level of transmission service that they have paid for.

3. *Disqualification penalties that require Eligible Customers to transition to taking NITS do not effectively deny service to Eligible Customers and are a measured response*

Several parties argue that the disqualification penalties are “draconian,” “extreme,” and “effectively deny customers service.”¹⁴⁴ These arguments are pure hyperbole.

Disqualification penalties do not foreclose Eligible Customers from taking transmission service entirely. They simply uphold the requirement, rooted in longstanding Commission precedent and PJM’s planning, markets, and operation functions, that Eligible Customers take the level of service that aligns with their demonstrated use of the system. Where Eligible Customers demonstrate that they cannot (or are unwilling to) limit withdrawals, as may be required when Eligible Customers choose to take Firm/Non-Firm Contract Demand Transmission Service or Interim NITS, it is appropriate for those Eligible Customers to take NITS.

NITS, in and of itself, addresses Curtailment, Load Shed, and control technology or protection scheme misoperation risks. Where Eligible Customers demonstrate that their use of the Transmission System exposes the grid to such risks, transitioning such customers to taking NITS is a remedial measure that in fact better aligns an Eligible Customer’s needs to their level of service.

¹⁴³ Show Cause Order, 193 FERC ¶ 61,217, at P 199.

¹⁴⁴ Joint Co-Location Developers Reply Brief at 23-24; Vistra Reply Brief at 26.

The distinction among NITS, the new Firm/Non-Firm Contract Demand Transmission Services, and Interim NITS is rooted in the long-recognized distinction between Point-to-Point Transmission Service and NITS. As the Commission observed in Order No. 890, these services “are not precisely the same, nor were they intend[ed] to be identical.”¹⁴⁵ Order No. 888 created the distinction between these two services “to recognize the different ways in which transmission providers typically use their system.”¹⁴⁶ According to Order No. 890, “[c]ustomers of network service retain flexibility that is not enjoyed by point-to-point customers.”¹⁴⁷ Indeed, far from being an “excessively” punitive result, PJM customers have previously sought to convert from point-to-point service to network service to better align their transmission service with their needs.¹⁴⁸

PJM’s processes have been built around the long-held practice and expectation that load internal to PJM will take NITS.¹⁴⁹ Unlike point-to-point service, NITS is flexible, incorporated in PJM’s system planning studies and processes as well as PJM’s capacity market, and always firm.¹⁵⁰ NITS is not only the default transmission service taken by load internal to PJM, but it is a significantly more comprehensive and a higher quality of service when compared to point-to-point service.¹⁵¹ Thus, far from being “not commensurate with any potential damage[,]”¹⁵² the disqualification penalties simply require non-compliant

¹⁴⁵ Order No. 890, 118 FERC ¶ 61,119, at P 928.

¹⁴⁶ Order No. 890, 118 FERC ¶ 61,119, at P 928.

¹⁴⁷ Order No. 890, 118 FERC ¶ 61,119, at P 929.

¹⁴⁸ See, e.g., *FirstEnergy Sols. Corp.*, 127 FERC ¶ 61,208 (2009).

¹⁴⁹ Initial Brief at 48.

¹⁵⁰ Initial Brief at 48; Wharton Aff. ¶ 10.

¹⁵¹ Initial Brief at 48; *id.*, Affidavit of Dr. Sami Abdulsalam (Attachment B) ¶ 7 (“Abdulsalam Aff.”).

¹⁵² Joint Co-Location Developers Reply Brief at 26-27.

Eligible Customers to take the default transmission service. Further, disqualification is not a denial of service; rather, it allows for transitioning the customer to the service that aligns with its usage of the Transmission System. Any interval in which the customer must wait for transmission upgrades to be constructed to accommodate the customer's demonstrated usage is necessary and reasonable to maintain the reliability of the Transmission System for all other users.

4. *The Commission did not foreclose non-monetary penalties, particularly where financial penalties alone are insufficient to safeguard reliability*

Several entities suggest that penalties other than financial penalties exceed the scope of the Commission's Show Cause Order¹⁵³ and/or suggest that, even if the Commission permits non-monetary penalties, financial penalties alone should be sufficient to incent Eligible Customers to limit their use of the transmission system to their chosen level of Contract Demand or Interim NITS.¹⁵⁴ Neither positions withstand scrutiny.

First, while the Commission specifically directed application of a penalty rate to Eligible Customers, the Commission did not, as some intervenors suggest, limit potential remedies to financial penalties. In fact, in the same paragraph in which the Show Cause Order directs "PJM to apply a penalty rate,"¹⁵⁵ the Show Cause Order "also direct[s] parties to brief . . . *any other remedial* action that PJM should take to address withdrawals in excess of the contract demand."¹⁵⁶ Thus, the Commission, in addition to requiring a financial penalty, also expressly solicited briefing on other actions that PJM should take when

¹⁵³ Constellation Reply Brief at 19; Vistra Reply Brief at 29-30.

¹⁵⁴ See Constellation Reply Brief at 20-21; Joint Co-Location Developers Reply Brief at 25.

¹⁵⁵ Show Cause Order, 193 FERC ¶ 61,217, at P 212.

¹⁵⁶ Show Cause Order, 193 FERC ¶ 61,217, at P 212 (emphasis added).

Eligible Customers withdraw energy from the PJM Transmission System in excess of contract demand.

Second, 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-locating with potentially critical generating facilities within the interconnection. According to the Commission’s longstanding precedent, to incent compliance with reliability requirements, “[a] monetary penalty must be assessed and structured in such a way that a user, owner or operator of the Bulk-Power System does not consider its imposition as simply an economic choice or a cost of doing business.”¹⁵⁷ In other words, to have meaningful deterrence value, large loads cannot be permitted to simply buy out of behavior that risks the reliability of the Bulk Power System; the monetary penalty cannot simply be an opportunity cost given the grave reliability risks these large loads present to the Transmission System if not properly managed.

While the Commission has, as *Vistra* notes, previously found that tailored financial penalties were appropriate and sufficient for penalizing unreserved use in the past,¹⁵⁸ that certainly does not mean financial penalties are sufficient based on the facts and circumstances before the Commission in *this* proceeding. As noted above, based on PJM’s latest long-term load forecast, while the summer peak demand in 2025 was 160 GW, driven largely by data centers, it is forecasted to grow to 222 GW by 2036 and 253 GW by 2046.¹⁵⁹

¹⁵⁷ See *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards*, Order No. 672, 114 FERC ¶ 61,104, at P 455, *order on reh’g*, Order No. 672-A, 114 FERC ¶ 61,328 (2006).

¹⁵⁸ *Vistra* Reply Brief at 29.

¹⁵⁹ PJM 2026 Load Forecast at 6.

Given the size and pace of large load growth, no monetary penalty alone can accurately reflect the value of maintaining reliability in the face of unprecedented load growth.¹⁶⁰

Third, while *Vistra* would paint non-monetary penalties as a departure from Commission precedent, the Commission has long held that where monetary penalties are found to be insufficient to incentivize actions consistent with reliability, it may be 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.¹⁶¹ The Commission discussed, at length, the usefulness of non-monetary penalties after the Energy Policy Act of 2005¹⁶² granted the Commission the authority to certify a national Electric Reliability Organization to create and enforce mandatory, rather than voluntary, reliability standards. Such non-monetary penalties included, for example, limits to certain “activities, functions or operations” such as “a ban on engaging in certain transactions or *limiting the operation of facilities.*”¹⁶³ As such, not only are non-monetary operational penalties well within the scope of this proceeding, they have long been considered by the Commission to be a significant tool to support grid reliability.

¹⁶⁰ This is particularly true given that, tech hyperscalers—Amazon Web Services, Inc., Alphabet Inc. (Google), Microsoft Corporation, Meta Platforms, Inc., and Oracle Corporation—driving much of the outsized load growth announced over \$600 billion in capital expenditures for 2026—“a 36% jump from 2025 and more than 4x what the entire publicly traded U.S. energy sector spends to drill wells, refine oil and deliver gasoline” with approximately \$450 billion of that capitalize expenditure going directly to AI infrastructure. Jaachi Mbach, *Big Tech Will Spend \$600B on AI in 2026: 5 Stocks Cashing the Checks*, Investing.com (Feb. 6, 2026), <https://www.investing.com/analysis/big-tech-will-spend-600b-on-ai-in-2026-5-stocks-cashing-the-checks-200674615>. In 2025, the total combined revenue of just the top five tech hyperscalers, often referred to as the “Big Five,” reached approximately \$1.15 trillion. Sarath C P, *Fortune 500 Companies List (2025)*, Eqvista (Aug. 22, 2025), <https://eqvista.com/fortune-500-companies-in-the-us/>.

¹⁶¹ See Order No. 672, 114 FERC ¶ 61,104, at PP 49, 455 (amending regulations to incorporate criteria to qualify as Electric Reliability Organization and discussing range of monetary and non-monetary penalties).

¹⁶² Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594 (codified as amended in scattered sections of 42 U.S.C. and 16 U.S.C.).

¹⁶³ See Order No. 672, 114 FERC ¶ 61,104, at P 552 (emphasis added).

Fourth, the Joint Co-Location Developers’ suggestion that “PJM should adopt financial penalties sufficient to deter intentional gaming of transmission service subscription”¹⁶⁴ is misguided. The penalty structure described in PJM’s Initial Brief and the Illustrative Tariff is not intended to address gaming, which is subject to the oversight of FERC’s Office of Enforcement and Regulatory Accounting. Gaming exposes entities, including individuals, to civil penalties of up to \$1.5 million per violation per day, as well as other remedial actions under the Commission’s enforcement powers.¹⁶⁵ Joint Co-Location Developers propose that PJM similarly consider “intent” before determining whether to impose disqualification penalties, and appear to suggest that disqualification penalties are more akin to violations of the Commission’s Anti-Market Manipulation Rule, which does require a showing of intent or recklessness.¹⁶⁶ But while an Eligible Customer’s failure to operate within the limits of their chosen level of transmission service may have enforcement implications, the penalty scheme described in this proceeding is, first and foremost, based on incenting behavior that supports reliability.

5. *Requiring disqualified Eligible Customers to take NITS on behalf of Co-Located Load enables necessary, proactive planning of the system to support reliable service*

The Joint Co-Location Developers suggest that PJM’s disqualification penalties are unnecessary, because “[t]ransmission owners always have the ability to manually disconnect a facility in case of potential severe reliability risk.”¹⁶⁷ This claim is foundationally incorrect since neither PJM nor the Transmission Owner, will become aware

¹⁶⁴ Joint Co-Location Developers Reply Brief at 24-25.

¹⁶⁵ 18 C.F.R. § 1b.

¹⁶⁶ 18 C.F.R. § 1c.2 (Prohibition of electric energy market manipulation). For a comparison with the Securities Exchange Commission Rule, see 17 C.F.R. § 240.10b-5.

¹⁶⁷ Joint Co-Location Developers Reply Brief at 24.

of an improperly set-up protection scheme only after the misoperation incident, which will expose the PJM interconnected system to risk. Shifting responsibility away from the Eligible Customer (and Co-Located Load) to appropriately limit their energy withdrawals is inconsistent with the reliable operation of the Transmission System. Protecting against severe reliability risk is of course not simply a matter of Transmission Owners, *sua sponte*, connecting and disconnecting facilities at will in a just-in-time manner. It requires careful coordination between PJM and Transmission Owners and data-driven system planning, where NITS plays a central role.¹⁶⁸

The contention that “transmission owners’ abilities to manually disconnect a facility in case of severe reliability risk defangs any possible justification for PJM’s [penalty] regime”¹⁶⁹ is not grounded in reality. PJM is a centrally dispatched Balancing Authority which uses Security Constrained Economic Dispatch to apply least-cost solutions, while also controlling active transmission constraints over PJM’s 88,333 miles of transmission lines and ensuring PJM’s 67 million customers are reliably served.¹⁷⁰ The connectivity of the Bulk Power System means that when a transmission owner manually cuts load suddenly, without proper coordination, it can have disastrous and dangerous cascading system effects.

As the region’s Balancing Authority, PJM relies on NITS to ensure that generation is not bottled and is deliverable to load on a second-by-second basis, 365 days a year.¹⁷¹ Furthermore, NITS is incorporated into PJM’s system planning studies processes as well

¹⁶⁸ Wharton Aff. ¶¶ 10, 13-14.

¹⁶⁹ Joint Co-Location Developers Reply Brief at 26 (footnote omitted).

¹⁷⁰ Wharton Aff. ¶¶ 10-11.

¹⁷¹ Wharton Aff. ¶ 10.

as PJM's capacity market. Put simply, PJM relies on NITS to proactively plan for the overall level of service needed.¹⁷² NITS provides a level of transparency to PJM's system planning functions that other types of transmission service do not afford.

6. *Revisions to the Illustrative Tariff language address certain intervenors' critiques of disqualification penalties*

Several parties have sought reconsideration of the "strict liability" or "no fault" application of the disqualification penalties.¹⁷³ After careful consideration of parties' concerns about disqualification penalties applying regardless of cause or fault on a strict liability basis, PJM has made certain revisions to the Illustrative Tariff language, as set forth in Illustrative Tariff, Part XI, Subpart A, section 705.6(d) and Subpart B, section 713.7(d) 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.

Specifically, PJM has included language that would allow PJM, based on the facts and circumstances present to determine that the Eligible Customer was not at fault for (1) not following established Load Shedding and Curtailment procedures; and/or (2) the misoperation of the Eligible Customer's necessary control technology or protection system. Thus, with these new provisions, the Eligible Customer will not be held liable for the actions of others.

¹⁷² See Abdulsalam Aff. ¶ 7.

¹⁷³ Joint Co-Location Developers Reply Brief at 23-27; Constellation Reply Brief at 18-21.

E. Effective Date

1. *Upon Commission setting the terms and conditions for the new transmission services, PJM can begin receiving requests for such services and studying applications*

Several entities complain that a June 1, 2029 effective date for the Illustrative Tariff would be unjust and unreasonable.¹⁷⁴ In its Initial Brief, PJM explained that June 1, 2029, is a reasonable and appropriate effective date for these new transmission services. PJM detailed, with supporting testimony, a number of reasons why PJM cannot *provide* these new transmission services until June 1, 2029.¹⁷⁵ Stated another way, PJM discussed June 1, 2029, as the effective date for the commencement of the transmission services. PJM was not specific as to when it could start accepting requests for these new services and commence the appropriate studies.

Consistent with this clarification that June 1, 2029, is the effective date for *providing* the new transmission services, PJM further clarifies that, once the Commission establishes the terms and conditions for the new transmission services—and the Commission has accepted the corresponding Tariff provisions, PJM is willing to start accepting requests for the new transmission services and processing such applications. This approach is reasonable. PJM cannot start studying requests until it knows what it is studying, which will be unsettled until the Commission fixes the terms and conditions.¹⁷⁶ Nonetheless, as discussed, PJM intends to get a headstart on establishing the details as to

¹⁷⁴ See *Vistra Reply Brief* at 5-7; *Joint Co-Location Developers Reply Brief* at 27-30.

¹⁷⁵ *Initial Brief* at 79-82; *Horger Aff.* ¶¶ 6-17.

¹⁷⁶ See 16 U.S.C. § 824e(a); *PJM Interconnection, L.L.C.*, 175 FERC ¶ 61,137, at P 93 (“While the January 2017 Order set an effective date of January 19, 2017 for PJM’s compliance filing, when the Commission acts under section 206 of the FPA, it cannot make the rate effective under the filed rate doctrine until it sets out the just and reasonable rate with the ‘necessary predictability’ so that the ‘numerical rate is specified clearly enough that customers know what the utility or pipeline will do.’” (citing *Aera Energy LLC v. FERC*, 789 F.3d 184, 190-92 (D.C. Cir. 2015))), *order on requests for clarification & reh’g*, 176 FERC ¶ 61,027 (2021).

how PJM 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. Part of those discussions likely will focus on the details for studying requests for these new transmission services. Thus, once the Commission fixes the terms and conditions for Interim NITS, Eligible Customers serving Co-Located Loads with pending NITS applications would be able to apply for Interim NITS, and PJM would be able to study such requests.

With these clarifications, there is no need to establish a “[t]ransitional [m]echanism” for pending NITS applications, as Constellation suggests.¹⁷⁷

2. *A June 1, 2029 effective date is required to procure capacity for the capacity backed Firm Contract Demand Transmission Service*

As PJM explained in its Initial Brief, with supporting testimony, given current tight conditions, any Co-Located Load to be served through these new transmission services must be reflected in the load forecasts used for RPM Auctions to ensure that PJM procures needed capacity.¹⁷⁸ As of the date of the filing of this brief, the Base Residual Auction for the 2029/2030 Delivery Year, starting June 1, 2029, is the first Base Residual Auction in which the effects of these transmission services for Eligible Customers can be considered (including procuring necessary capacity for firm transmission services).¹⁷⁹

¹⁷⁷ See Constellation Reply Brief at 14.

¹⁷⁸ See Initial Brief at 79 (citing Horger Aff. ¶ 11).

¹⁷⁹ PJM explained why Incremental Auctions would not be the appropriate vehicle to procure capacity for these services. See Initial Brief at 80-81.

3. *A June 1, 2029 effective date is required for the provision of these new, curtailable services*

As PJM explained in its Initial Brief, with supporting testimony, the provision of the new transmission services will require significant changes to PJM’s core Markets and Operations systems.¹⁸⁰ While some entities question this claim,¹⁸¹ the Independent Market Monitor for PJM recognizes that “PJM will be required to significantly modify core systems, including software changes, to address, among other things, curtailing the load of a customer’s co-located Load being served by two different levels of transmission service,” and that such software changes would be “pervasive[.]”¹⁸²

The Joint Co-Location Developers fault PJM for failing to support the specific timeline for software development.¹⁸³ However, as PJM explained, because these are *new* types of transmission services to serve loads in PJM and the terms and conditions are currently unknown, a more exact development schedule cannot be determined at this time.¹⁸⁴

¹⁸⁰ Initial Brief at 80 (citing Horger Aff. ¶ 16).

¹⁸¹ See Joint Co-Location Developers Reply Brief at 29-30.

¹⁸² IMM Reply Brief at 8.

¹⁸³ See Joint Co-Location Developers Reply Brief at 29.

¹⁸⁴ See Initial Brief at 81 & n.227 (“Changes to these systems will necessarily be dependent on vendor availability, the speed with which the system changes can be designed, and the interaction of these requested changes with other competing priorities, including system changes to implement other Commission-directed initiatives. In particular, PJM anticipates that, implementing the proposed Curtailment priorities applicable to Interim NITS and Non-Firm Contract Demand Transmission Service, which can affect prices and dispatch instructions, will require PJM to work with vendors to develop system automation that will avoid non-optimal, untimely, and inefficient outcomes.” (citing Horger Aff. ¶ 16)).

F. Issues Beyond the Scope of This Proceeding

1. Advanced Energy United and Solar Energy Industries Association improperly assert PJM should not study all interconnecting generators

Advanced Energy United and Solar Energy Industries Association contend that “PJM’s proposal appears to require all co-located generating facilities participating in the new transmission services will be required to go through PJM’s interconnection queue,” and “subjecting *non-exporting* resources to the full interconnection queue imposes costs, delays, and administrative burdens that are wholly disproportionate to the reliability benefits achieved,” given that these resources’ “output is dedicated entirely to serving its co-located load and . . . will never inject power into the system.”¹⁸⁵ The Commission can easily reject this contention both procedurally and on the merits.

First, the Show Cause Order did not direct PJM to alter the scope of its interconnection studies for generators, and therefore this claim is beyond the scope of this proceeding.¹⁸⁶

Second, on the merits, to maintain system reliability, PJM must study all interconnecting generators—but the scope of the study will be dictated by the interconnection request. Thus, for example, if an interconnection request specifies that the resource will be energy-only (not capacity) and does not intend to output energy onto the

¹⁸⁵ Advanced Energy/SEIA Reply Brief at 15-16.

¹⁸⁶ See, e.g., *Midwest Indep. Sys. Operator, Inc.*, 156 FERC ¶ 61,034, at P 58 (2016) (rejecting arguments as beyond the scope of a paper hearing), *order on reh’g & clarification*, 164 FERC ¶ 61,191 (2018); cf. *N. Ind. Pub. Serv. Co. v. Midcontinent Indep. Sys. Operator, Inc.*, 158 FERC ¶ 61,049, at P 60 n.122 (2017) (“As the Commission stated, it ‘has long established that compliance filings must be limited to the specific directives ordered by the Commission. 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.’” (quoting *Cal. Indep. Sys. Operator Corp.*, 148 FERC ¶ 61,023, at P 23 n.27 (2014))); *Midwest Indep. Transmission Sys. Operator, Inc.*, 125 FERC ¶ 61,156, at P 57 n.51 (2008) (same).

Transmission System, because the equipment being connected behind that Point of Interconnection will still interact with the Transmission System, PJM would perform short circuit and stability studies. These studies would allow PJM to understand this interaction and identify any reliability concerns. Further, such studies are required because PJM cannot assume that an interconnected generator will *never* output energy onto the system. For example, if the large load is never constructed, goes out of business, or changes its demand level or profile, the dedicated generator would need to sell energy to the PJM system in order to be economic. It is unrealistic to think the generator would go away if the Co-Located Load disappeared. In short, any generator synchronized to the grid must have an agreement governing its parallel operation.

2. *The Commission should ignore other issues raised that are beyond the scope of this paper hearing*

Several parties raised issues that are not within the scope of this paper hearing. The Show Cause Order defined the scope of the paper hearing as “the appropriate rates, terms, and conditions” of the new transmission services.¹⁸⁷ The Commission confined the other issues addressed in the Show Cause Order to the two compliance filings. Thus, any order on the paper hearing should ignore as beyond the scope issues regarding transmission service for charging energy storage resources¹⁸⁸ and Behind the Meter Generation.¹⁸⁹

¹⁸⁷ Show Cause Order, 193 FERC ¶ 61,217, at P 194 (“With respect to the new transmission services that we require, we establish paper hearing procedures to determine the appropriate rates, terms, and conditions of those services.”).

¹⁸⁸ See Joint Co-Location Developers Reply Brief at 13-17.

¹⁸⁹ See *PJM Interconnection, L.L.C.*, Responsive Brief of Industrial Customer Organizations and Amtrak, Docket Nos. EL25-49-000, et al., at 13-23 (Mar. 25, 2026).

III. REVISIONS TO ILLUSTRATIVE TARIFF FILED WITH INITIAL BRIEF

To aid the Commission in determining the appropriate terms and conditions for Interim NITS and the two Contract Demand Transmission Services and facilitate swift adoption of these new transmission services, PJM included as Attachment A to PJM's Initial Brief Illustrative Tariff language that sets forth just and reasonable non-rate terms and conditions for the new transmission services available to Eligible Customers taking service on behalf of Co-Located Loads. The Illustrative Tariff also offered other participants the opportunity to review and provide comment on how to improve PJM's terms and conditions for these transmission services.

Upon further review and in consideration of others' comments, particularly those by the Indicated PJM Transmission Owners, PJM believes certain revisions to the Illustrative Tariff are warranted, as discussed below. Attachment A to this reply brief shows those revisions to the Illustrative Tariff in redline against the version included in PJM's Initial Brief. Specifically, PJM makes the following revisions to the Illustrative Tariff.

Illustrative Tariff, Part XI, Subpart A – Interim Network Integration Transmission Service

- **Section 702.3:** Consistent with the Show Cause Order's holding that Interim NITS "would only be available to the extent PJM determines that it can provide some level of interim service reliably,"¹⁹⁰ PJM has revised this section to provide that PJM will, in consultation with the affected Transmission Owner(s), determine how much Interim NITS "can be provided reliably to an Eligible Customer."
- **Section 702.4:** Given the key role of Transmission Owners in interconnecting loads to the system, PJM agrees with the comments of the Indicated PJM Transmission Owners¹⁹¹ that the technical requirements required before Interim NITS may commence should include any technical requirements identified by applicable Transmission Owner(s), and is adding this in the list of technical requirements.

¹⁹⁰ Show Cause Order, 193 FERC ¶ 61,217, at P 200.

¹⁹¹ See Indicated PJM Transmission Owners Response at 13.

- Section 703.2:** PJM revises this section to clarify that, prior to providing an Eligible Customer NITS for a given Co-Located Load arrangement, to the extent an Eligible Customer designates a new Co-Located Load, or increases the size of the designated Co-Located Load, such “new Co-Located Load or increase to a designated Co-Located Load shall be studied pursuant to a new Application.” In other words, to the extent, the Eligible Customer changes the Co-Located Load to be served by a given service request prior to the commencement of NITS (e.g., during the period in which Interim NITS may be provided), PJM will need to study such change.
- Section 703.3:** This section requires the Eligible Customer to annually update PJM as to the specifics of the Co-Located Load and Co-Located Generating Facility, and imposes an ongoing obligation to provide PJM with timely notice of any material change to the Co-Located Load and Co-Located Generating Facility. PJM agrees with the comments of the Indicated PJM Transmission Owners, that the applicable Transmission Owner(s) should also receive such notice, and has revised the section to require the Eligible Customer to provide notice to both PJM and the applicable Transmission Owner(s). In addition, PJM adds a reference to the PJM Manuals for greater description of what would constitute a “material change.”¹⁹²
- Section 705.1:** PJM agrees with the Indicated PJM Transmission Owners that both the Eligible Customer and the applicable Transmission Owner(s) will play key roles in implementing any Curtailments, and therefore is revising section 705.1 to provide that PJM will also notify the applicable Transmission Owner(s): “Prior to the Service Commencement Date, the Eligible Customer shall demonstrate its ability to fully comply with the Load Shedding and Curtailment procedures pursuant to this section 705, and the Service Agreement for Interim Network Integration Transmission Service. The Eligible Customer shall implement any Load Shedding and/or Curtailment directive given by Transmission Provider. To the extent practicable, the Transmission Provider will notify the Eligible Customer and applicable Transmission Owner(s) of any Curtailment in a timely manner.”
- Section 705.5:** Given the role of Transmission Owners in managing their transmission systems and interconnecting loads, PJM agrees with the Indicated PJM Transmission Owners¹⁹³ that any functional modification to an installed necessary control technologies and protection systems required to provide Interim NITS should be approved by PJM “and coordinated with the affected Transmission Owner(s).”
- Section 705.6:** As discussed above in Section II.D.6, PJM agrees with the comments that the consequences for failure to follow PJM instructions or misoperation of the necessary control technology and protection systems should arise only when the Eligible Customer (or the served Co-Located Load) is actually

¹⁹² See Indicated PJM Transmission Owners Response at 14.

¹⁹³ See Indicated PJM Transmission Owners Response at 16.

the party at fault. Accordingly, PJM is including a new section 705.6(d) to establish this rule.

- **Section 706.2:** PJM agrees with the Indicated PJM Transmission Owners that Transmission Owners should not pay redispatch costs caused by the Eligible Customer,¹⁹⁴ and is revising section 706.2 accordingly.

Illustrative Tariff, Part XI, Subpart B – Contract Demand Transmission Services

- **Section 710.4:** Consistent with the revision to section 702.4 described above, PJM is revising the list of technical requirements an Eligible Customer must meet before Contract Demand Transmission Service may commence to include any technical requirements identified by applicable Transmission Owner(s).

PJM is also revising technical requirements to include the “demonstration that the Eligible Customer has operational control to respond to operating instructions from the Transmission Provider to reduce energy withdrawals or disconnect the Co-Located Load within five (5) minutes or as specified in the PJM Manuals.” PJM inadvertently omitted this temporal requirement in the Initial Brief’s Illustrative Tariff. However, this requirement is necessary in order for the Contract Demand Transmission Services to be curtailable and the loads to be dispatchable and implements the rule in section 713.1 that “Eligible Customers must respond to any real time instruction to curtail or otherwise reduce load within five (5) minutes.” PJM’s markets operate in five-minute intervals, and they require behavior modification to occur correspondingly. This language also mirrors the technical requirements for Interim NITS in section 702.4.

- **Section 710.5:** PJM is adding a proviso that nothing in the description of the Eligible Customer facilities in section 710.5 “precludes the installation of any Transmission Owner-side protection facilities.”¹⁹⁵
- **Section 711.3:** Consistent with the revision to section 703.3 described above, PJM is revising the ongoing obligation to provide PJM with timely notice of any material change to the Co-Located Load and Co-Located Generating Facility to provide that the applicable Transmission Owner(s) should also receive such notice. In addition, PJM adds a reference to the PJM Manuals for greater description of what would constitute a “material change.”¹⁹⁶
- **Section 712.2:** PJM agrees with the Indicated PJM Transmission Owners that the applicable Transmission Owner(s) should be notified of any request for Non-Firm Contract Demand Transmission Service and is revising section 712.2 accordingly: “After receiving a request for Non-Firm Contract Demand Transmission Service,

¹⁹⁴ See Indicated PJM Transmission Owners Response at 17.

¹⁹⁵ See Indicated PJM Transmission Owners Response at 20.

¹⁹⁶ See Indicated PJM Transmission Owners Response at 20-21.

the Transmission Provider shall determine on a non-discriminatory basis, and in accordance with the PJM Manuals, whether studies are needed to assess whether the Transmission System has sufficient available capacity to provide Non-Firm Contract Demand Transmission Service, and if so, which studies are appropriate. Transmission Provider ~~may~~will notify the affected Transmission Owner of such request for Non-Firm Contract Demand Transmission Service, and the Transmission Provider will also consider the results of any studies conducted by the affected Transmission Owner(s).”

- **Section 713.1:** PJM agrees with the Indicated PJM Transmission Owners that both the Eligible Customer and the applicable Transmission Owner(s) will play key roles in implementing any curtailments, and therefore is revising section 713.1 to provide that PJM will also notify the applicable Transmission Owner(s): “Prior to the Service Commencement Date, the Eligible Customer shall demonstrate its ability to fully comply with the Load Shedding and Curtailment procedures pursuant to this section 713, the PJM Manuals, and the Service Agreement for Contract Demand Transmission Service, as provided in Attachment F-4. The Eligible Customer shall implement any Load Shedding and/or Curtailment directive given by Transmission Provider. To the extent practicable, the Transmission Provider will notify the Eligible Customer and applicable Transmission Customer(s) of any Curtailment in a timely manner. Eligible Customers must respond to any real time instruction to curtail or otherwise reduce load within five (5) minutes. Curtailments will be made on a non-discriminatory basis.”
- **Section 713.7:** As discussed above in Section II.D.6, PJM agrees with the comments that the consequences for failure to follow PJM instructions or misoperation of the necessary control technology and protection systems should arise only when the Eligible Customer (or the served Co-Located Load) is actually the party at fault. Accordingly, PJM is including a new section 713.7(d) to establish this rule.
- **Section 714.3:** PJM agrees with the Indicated PJM Transmission Owners that Transmission Owners should not pay redispatch costs caused by the Eligible Customer,¹⁹⁷ and is revising section 714.3 accordingly.

Illustrative Tariff, Attachment F-3A – Service Agreement For Regional Network Integration Transmission Service And/or Interim Network Integration Transmission Service (For Co-Located Load)

- **Section 2.0:** PJM agrees with the Indicated PJM Transmission Owners that there is a typo and is removing an errant “not” as follows: “Until the facilities listed above are completed, the Transmission Owner provides a Notice of Completion to PJM, and the facilities listed above are in service, the Eligible Customer may

¹⁹⁷ See Indicated PJM Transmission Owners Response at 22.

not only receive Interim Regional Network Integration Transmission Service subject to the conditions of Part XI of the Tariff.”

Illustrative Tariff, Part III – Network Integration Transmission Service

- **Section 29.2(x):** As PJM discussed in its Initial Brief, to ensure PJM is aware of and properly studies any Co-Located Loads to be served via NITS, PJM included an additional set of Application Procedures for Eligible Customers taking service on behalf of Co-Located Load seeking NITS in Part III.¹⁹⁸ However, upon reflection and based on comments received on PJM’s compliance filing, PJM is changing the provision as follows: “For Eligible Customers taking service on behalf of Co-Located Load: (1) a demonstration that the Co-Located Load on behalf of which the Eligible Customer is **seekingtaking** to obtain service and the Co-Located Generating Facility are located on the same side of the Delivery Point to the Transmission Provider’s Transmission System as the Co-Located Load”

IV. ADDITIONAL ILLUSTRATIVE TARIFF LANGUAGE TO INTEGRATE NEW TRANSMISSION SERVICES AND RESERVATION OF RIGHTS TO FURTHER SUPPLEMENT FILING

As PJM discussed in its Initial Brief, the addition of three new transmission services to offer new means for Eligible Customers to serve Co-Located Load, requires complex revisions to PJM’s transmission planning, interconnection, and operational procedures. PJM cautioned that the Illustrative Tariff does not represent all the potential tariff language and revisions necessary to implement these new services and fully integrate them into PJM’s planning, interconnection, and operational processes.¹⁹⁹ Additional changes are and will be necessary to fully integrate these new services into PJM, including into PJM’s energy, ancillary services, and capacity markets.²⁰⁰ Indeed, PJM will need to develop Tariff procedures (and implementing PJM Manual language) for taking and serving requests for Non-Firm Contract Demand Transmission Service in advance of the service request period.

¹⁹⁸ Illustrative Tariff, Part III (Network Integration Transmission Service), section 29.2(x).

¹⁹⁹ See Initial Brief at 78-79.

²⁰⁰ For example, PJM will need to revise its existing Tariff provisions addressing Real-time and Day-ahead Energy Market settlements to account for the new transmission services given that the current-effective provisions generally determine charges based on Network Load, and load served by Firm and Non-Firm Contract Demand Transmission Service cannot be Network Load.

PJM will continue to review its Governing Documents and reserves the right to supplement its filing with additional terms and conditions needed to effectuate these new transmission services to allow the paper hearing the benefit of such additional information. And, PJM recently initiated a new stakeholder body, the Connect and Manage Senior Task Force, that will examine issues that are very likely to bear on the terms and conditions of these new transmission services.

However, since filing its Initial Brief, PJM has determined that changes to the Auction Revenue Rights rules will need to be modified to recognize that Firm Contract Demand Transmission Service customers will contribute towards enhancing and maintaining the Transmission System and therefore should have the right to request Auction Revenue Rights. As shown in the updated Illustrative Tariff in Attachment A to this filing, PJM believes that Eligible Customers taking Firm Contract Demand Transmission Service should be treated similarly as Firm Point-to-Point Transmission Service customers for purposes of receiving Auction Revenue Rights. Accordingly, Eligible Customers taking Firm Contract Demand Transmission Service should be allowed to request Auction Revenue Rights in stage 2 of the allocation process, which is when Firm Point-to-Point Transmission Service customers are allowed to request Auction Revenue Rights. To effectuate this, PJM has provided a revision to the existing language in Operating Agreement, Schedule 1, section 7.4.2(d) to insert “Eligible Customers taking Firm Contract Demand Transmission Service” alongside “Transmission Customers,” i.e., Firm Point-to-Point Transmission Service customers. Plus, PJM has included what would be a new Operating Agreement, Schedule 1, section 7.4.2(l) to detail the Auction Revenue

Rights rules specific to Eligible Customers taking Firm Contract Demand Transmission Service.²⁰¹

V. DOCUMENT ENCLOSED

In addition to this reply brief, PJM encloses the following:

1. Attachment A: Redlines on Reply Brief to Illustrative Language for New Tariff, Part XI; Attachments F-3A and F-4; and Other Illustrative Tariff Revisions

VI. CONCLUSION

PJM respectfully requests that the Commission find that the Illustrative Tariff, as revised through this reply brief, forms part of a just and reasonable replacement rate in accordance with the requirements of the Show Cause Order.

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²⁰¹ Illustrative Tariff, Operating Agreement, Schedule 1, section 7.4.2(I).

Attachment A

Redlines on Reply Brief to Illustrative Language for New Tariff, Part XI; Attachments F-3A and F-4; and Other Illustrative Tariff Revisions

Tariff, Part XI

Transmission Services Available for Eligible Customers Taking Service on Behalf of Co-Located Loads

Subpart A – Interim Network Integration Transmission Service

700 Provision of Interim Network Integration Transmission Service

The Transmission Provider may provide Interim Network Integration Transmission Service to an Eligible Customer requesting Network Integration Transmission Service on behalf of a Co-Located Load pursuant to the applicable terms and conditions contained in the Tariff and the Service Agreement for Interim Network Integration Transmission Service, which is provided in Attachment F-3A. PJMSettlement shall be the Counterparty to the Interim Network Integration Transmission Service transactions under this Tariff.

Requests for Interim Network Integration Transmission Service must be made through the Transmission Provider. These requests shall require the filing of an Application as set forth in Tariff, Part XI, Subpart A, section 702 and be submitted in accordance with the applicable terms and conditions in the Tariff.

701 Nature of Interim Network Integration Transmission Service

701.1 Scope of Service

Interim Network Integration Transmission Service is a transmission service that allows an Eligible Customer taking service on behalf of a Co-Located Load that has requested Network Integration Transmission Service pursuant to Tariff, Part III, to receive transmission service on behalf of a Co-Located Load on a non-firm, interruptible basis for the period until the transmission upgrades required to provide the requested level of Network Integration Transmission Service are completed and placed in service. Such upgrades required to provide the requested level of Network Integration Transmission Service, along with the expected in-service dates, shall be set forth in the Service Agreement for Interim Network Integration Transmission Service.

Once the required transmission upgrades are completed and placed in service, according to the terms of the Service Agreement for Interim Network Integration Transmission Service in Attachment F-3A, the transmission service provided to the Eligible Customer will automatically convert from Interim Network Integration Transmission Service to Network Integration Transmission Service. As a result, the Co-Located Load will be designated as Network Load under Tariff, Part III, section 31.1.

An Eligible Customer taking transmission service on behalf of a Co-Located Load may not take Network Integration Transmission Service or Interim Network Integration Transmission Service for that Co-Located Load at the same time it is taking Firm Contract Demand Transmission Service or Non-Firm Contract Demand Transmission Service on behalf of that Co-Located Load.

The Eligible Customer taking Interim Network Integration Transmission Service must obtain or provide Ancillary Services pursuant to Tariff, Part I, section 3.

701.2 Interim Network Integration Transmission Service

The Transmission Provider may provide non-firm, interruptible transmission service over the Transmission System to the Eligible Customer for the delivery of capacity and energy to serve the Co-Located Load.

701.3 Restrictions on Use of Service

The Eligible Customer shall not use Interim Network Integration Transmission Service for (i) sales of capacity and energy to loads other than the Co-Located Load designated in its Service Agreement for Interim Network Integration Transmission Service, or (ii) direct or indirect provision of transmission service by the Eligible Customer to third parties.

701.4 Termination of Interim Network Integration Transmission Service

The provision of Interim Network Integration Transmission Service shall terminate upon completion of all upgrades identified in the Service Agreement for Interim Network Integration Transmission Service necessary to provide Eligible Customer with Network Integration Transmission Service under Tariff, Part III, according to the terms of the Service Agreement.

702 Initiating Service

702.1 Conditions Precedent for Receiving Service

Subject to the terms and conditions of Tariff, Part XI, the Transmission Provider may provide Interim Network Integration Transmission Service to any Eligible Customer taking transmission service on behalf of Co-Located Load, provided that:

- (i) The Eligible Customer has been designated to take transmission service on behalf of a Co-Located Load in the relevant Application, Service Agreement, or the Generation Interconnection Agreement for the Co-Located Generating Facility;
- (ii) The Eligible Customer has provided the information specified in, and otherwise complied with, the “PJM Credit Policy” set forth in Tariff, Attachment Q hereto;
- (iii) The Eligible Customer executes a Service Agreement for Interim Network Integration Transmission Service with the Transmission Provider pursuant to Tariff, Attachment F-3A, or requests in writing that the Transmission Provider file a proposed unexecuted Service Agreement for Interim Network Integration Transmission Service;
- (iv) The Eligible Customer has certified, in accordance with the PJM Manuals, that it is willing and able to limit energy withdrawals from the Transmission System when requested by the Transmission Provider; and
- (v) An Eligible Customer requesting Interim Network Integration Transmission Service and taking Interim Network Integration Transmission Service shall otherwise execute, if necessary, and comply with the PJM Governing Agreements.

The Eligible Customer shall submit an Application under this section 702.

702.2 Application Procedures

An Eligible Customer seeking Network Integration Transmission Service may apply for Network Integration Transmission Service and Interim Network Integration Transmission Service at the same time. However, an Eligible Customer shall not apply for Interim Network Integration Service without applying for Network Integration Transmission Service.

To apply for Interim Network Integration Transmission Service, an Eligible Customer must pay a study fee under Tariff, Part XI, Subpart A, section 704.2, which is in addition to the study fee required under an Application for Network Integration Transmission Service under Tariff, Part III, section 32.2.

702.3 Determination of Whether Interim Network Integration Transmission Service Can Be Reliably Provided

The Transmission Provider, in consultation with the affected Transmission Owner(s), will determine the amount of Interim Network Integration Transmission Service that can be provided reliably to an Eligible Customer, including through the use of temporary solutions, while maintaining the reliability of the Transmission System. This determination will consider the results of the study procedures set forth in Tariff, Part XI, Subpart A, section 704.

702.4 Technical Requirements Prior to Commencement of Service

Interim Network Integration Transmission Service shall not commence until the Transmission Provider, the affected Transmission Owner(s), and the Eligible Customer, or a third party, have completed installation of all equipment specified under the Service Agreement for Interim Network Integration Transmission Service, consistent with Good Utility Practice and any additional requirements reasonably and consistently imposed to ensure the reliable operation of the Transmission System. The Transmission Provider and the affected Transmission Owner(s) shall exercise reasonable efforts, in coordination with the Eligible Customer, to complete such arrangements as soon as practicable taking into consideration the Service Commencement Date.

These technical requirements include, but are not limited to: (i) installation of necessary hardware and software to limit energy withdrawals, including metering equipment; (ii) provision of an operational contact and backup contact for the Eligible Customer, available twenty-four (24) hours a day and seven (7) days a week; (iii) certification from the Eligible Customer that it is staffed with PJM Certified Operators pursuant to PJM Manual 40; (iv) demonstration from the Eligible Customer of its ability to receive voice and electronic signals from the Transmission Provider; (v) demonstration that the Eligible Customer has operational control to respond to operating instructions from the Transmission Provider to reduce or disconnect the Co-Located Load within five (5) minutes or as specified in PJM Manuals; (vi) satisfaction of any technical requirements identified by the applicable Transmission Owner(s); and (vii) demonstration that the Eligible Customer has operational control of the necessary control technologies and protection systems set forth in Tariff, Part XI, Subpart A, section 705, as applicable.

702.5 Eligible Customer Facilities

The provision of Interim Network Integration Transmission Service shall be conditioned upon the Eligible Customer constructing, maintaining, and operating the facilities on its side of the Delivery Point necessary to reliably deliver capacity and energy from the Transmission Provider's

Transmission System to the Eligible Customer or, with respect to service provided pursuant to a state required retail access program, for otherwise arranging for the delivery of its energy from the Delivery Point or interconnection. The Eligible Customer shall be solely responsible for constructing or installing all facilities on the Eligible Customer's side of such Delivery Point or, with respect to service provided pursuant to a state required retail access program, for otherwise arranging for the delivery of its energy from the Delivery Point or interconnection.

702.6 Filing of Service Agreement

The Transmission Provider will file the Service Agreement for Interim Network Integration Transmission Service, provided in Attachment F-3A, with the Commission in compliance with applicable Commission regulations.

703 Designation of Co-Located Load

703.1 Co-Located Load

The Eligible Customer must designate the individual Co-Located Load on whose behalf the Transmission Provider will provide Interim Network Integration Transmission Service.

The Co-Located Load shall be specified in the Service Agreement for Interim Network Integration Transmission Service except with respect to loads served pursuant to state required retail access programs for which the Transmission Customer shall provide information regarding Network Loads using the Transmission Provider's specified electronic information system for such programs in accordance with the Service Agreement.

703.2 New Co-Located Loads or Increase to Designated Co-Located Loads Connected with the Transmission Provider

Prior to the Service Commencement Date of Network Integration Transmission Service, if an Eligible Customer designates a new Co-Located Load, or increases the size of the designated Co-Located Load, the new Co-Located Load or increase to a designated Co-Located Load shall be studied pursuant to a new Application.

703.3 Information Updates

The Eligible Customer shall provide the Transmission Provider with annual updates of (i) the demand characteristics of the Co-Located Load, and (ii) the supply characteristics of the Co-Located Generating Facility, both consistent with those included in its Application for Network Integration Transmission Service under Tariff, Part III, Section 31.6.

In addition, the Eligible Customer also shall have an ongoing obligation to provide the Transmission Provider and applicable Transmission Owner(s) with timely written or electronic notice of material changes, as discussed in the PJM Manuals, in the foregoing sentence as well as any other information listed in Tariff, Part XI, Subpart A, section 702 or provided in its Application for Network Integration Transmission Service pursuant to Tariff, Part III, section 31.6 relating to the Eligible Customer's Co-Located Load or other aspects of its facilities or operations affecting the Transmission Provider's ability to provide reliable service. Failure to timely inform the Transmission Provider of a material change in (i) the demand characteristics of the Co-Located

Load, or (ii) the supply characteristics of the Co-Located Generating Facility may constitute a breach of the Eligible Customer's Service Agreement.

704 Study Procedures for Interim Network Integration Transmission Service Requests

704.1 Notice of Need for Study

After receiving a request for Interim Network Integration Transmission Service, the Transmission Provider shall determine on a non-discriminatory basis whether additional studies are needed beyond what was required to evaluate the Eligible Customer's request for Network Integration Transmission Service.

If the Transmission Provider determines that additional studies are necessary to evaluate the requested service, it shall inform the Eligible Customer of those studies as soon as practicable. In such cases, the Transmission Provider shall, within thirty (30) days of receipt of a Completed Application, tender an Application and Studies Agreement pursuant to which the Eligible Customer shall agree to reimburse the Transmission Provider for the required studies. For a service request to remain a Completed Application, the Eligible Customer shall execute the Application and Studies Agreement and return it to the Transmission Provider within fifteen (15) days and provide a study fee pursuant to Tariff, Part XI, Subpart A, section 704.2. If the Eligible Customer elects not to execute the Application and Studies Agreement, its Application for Interim Network Integration Transmission Service shall be deemed withdrawn and its study fee shall be returned with interest.

704.2 Study Fee for Interim Network Integration Transmission Service

Eligible Customer shall pay a study fee, as determined by the Transmission Provider, to apply for Interim Network Integration Transmission Service.

705 Load Shedding and Curtailments

705.1 General

Prior to the Service Commencement Date, the Eligible Customer shall demonstrate its ability to fully comply with the Load Shedding and Curtailment procedures pursuant to this section 705, and the Service Agreement for Interim Network Integration Transmission Service. The Eligible Customer shall implement any Load Shedding and/or Curtailment directive given by Transmission Provider. To the extent practicable, the Transmission Provider will notify the Eligible Customer and applicable Transmission Owner(s) of any Curtailment in a timely manner. The Eligible Customer must respond to any real time instructions to curtail or otherwise reduce load within five (5) minutes. Curtailments will be made on a non-discriminatory basis. Any requests by the Transmission Provider to Curtail will be consistent with Good Utility Practice.

705.2 Curtailment of Interim Network Integration Transmission Service

Interim Network Integration Transmission Service shall be Curtailed before Firm Contract Demand Transmission Service and Network Integration Transmission Service. The Transmission Provider may curtail Interim Network Integration Transmission Service prior to dispatching the

Pre-Emergency Load Response Program as further set forth in the PJM Manuals, or in response to a transfer capability shortage as a result of system reliability conditions.

705.3 Load Shedding

To the extent that a system contingency exists on the Transmission Provider's Transmission System and the Transmission Provider determines that it is necessary for the Transmission Owners and the Eligible Customer taking Interim Network Integration Transmission Service to shed load, the Eligible Customer and the Transmission Owners shall shed load in accordance with previously established procedures under the Service Agreement for Interim Network Integration Transmission Service and the PJM Manuals.

705.4 System Reliability

Notwithstanding any other provisions of this Tariff, the Transmission Provider reserves the right, consistent with Good Utility Practice and on a not unduly discriminatory basis, to Curtail Interim Network Integration Transmission Service without liability on the Transmission Provider's part for the purpose of making necessary adjustments to, changes in, or repairs on its lines, substations and facilities, and in cases where the continuance of Interim Network Integration Transmission Service would endanger persons or property. In the event of any adverse condition(s) or disturbance(s) on the Transmission Provider's Transmission System or on any other system(s) directly or indirectly interconnected with the Transmission Provider's Transmission System, the Transmission Provider, consistent with Good Utility Practice, also may Curtail Interim Network Integration Transmission Service in order to (i) limit the extent or damage of the adverse condition(s) or disturbance(s); (ii) prevent damage to generating or transmission facilities; or (iii) expedite restoration of service. The Transmission Provider will give the Eligible Customer as much advance notice as is practicable in the event of such Curtailment.

705.5 Necessary Control Technologies and Protection Systems

To ensure protection of the Transmission System, and to ensure that the Eligible Customer taking Interim Network Integration Transmission Service on behalf of a Co-Located Load limits its energy withdrawals from the Transmission System to its approved level of Interim Network Integration Transmission Service, including during a period in which the Transmission Provider has directed Curtailment or Load Shedding, prior to the Service Commencement Date, the Transmission Provider, affected Transmission Owner(s), and the Eligible Customer shall establish necessary control technologies and protection systems in accordance with the PJM Manuals, which may include a Remedial Action Scheme, for each Service Agreement for Interim Network Integration Transmission Service. The necessary control technologies and protection systems must be developed in accordance with the PJM Manuals and be approved by the Transmission Provider. The necessary control technologies and protection systems may be functionally modified from time to time in accordance with the PJM Manuals. Any functional modification to the necessary control technologies and protection systems must be developed with the affected Transmission Owner(s) and, before taking effect, such functional modification must be approved by the Transmission Provider and coordinated with the affected Transmission Owner(s).

705.6 Consequences of Failure to Follow Instructions or Misoperation of Necessary Control Technologies and Protection Systems

(a) In the first instance that an Eligible Customer fails to respond to established Load Shedding and Curtailment procedures, as set forth in this section 705, the Eligible Customer shall be disqualified from taking Interim Network Integration Transmission Service.

(b) In the first instance that a necessary control technology or protection system for a given Service Agreement misoperates, the Eligible Customer shall be prohibited from taking transmission service under its Service Agreement or otherwise withdrawing energy from the Transmission System for a period of up to one hundred and twenty (120) days from such event, which may be shortened or extended per mutual agreement, to allow for an analysis of the such event, which may be shortened or extended per mutual agreement, to allow for an analysis of the operational performance of the necessary control technologies and protection systems.

In the second instance that an Eligible Customer's necessary control technology or protection system associated with a Service Agreement misoperates, the Eligible Customer shall be disqualified from taking Interim Network Integration Transmission Service.

(c) Following disqualification in accordance with subsections (a) or (b) above, to receive transmission service on behalf of the subject Co-Located Load, the Eligible Customer may only take Network Integration Transmission Service and such service may only commence after all upgrades necessary for the Transmission Provider to provide Network Integration Transmission Service are placed into service.

(d) The Transmission Provider may, in its sole discretion and on a prospective basis only, determine that the facts and circumstances demonstrate that Eligible Customer was not at fault for (i) an Eligible Customer's, or the Co-Located Load's served by the Eligible Customer, failure to implement Load Shedding and Curtailment procedures or (ii) a misoperation of the Eligible Customer's necessary control technology or protection system associated with a Service Agreement. In the event, the Transmission Provider makes such a no fault determination, the precipitating event shall not be considered toward disqualification under this section 705.

705.7 Penalty for Unreserved Use of Interim Network Integration Transmission Service

[Reserved]

706 Rates and Charges

706.1 Monthly Demand Charge

[Reserved]

706.2 Redispatch Charge

The Eligible Customer ~~and each Transmission Owner~~ shall pay any redispatch costs as set forth in Tariff, Attachment K.

706.3 Stranded Cost Recovery

Any Transmission Owner may seek to recover stranded costs from the Eligible Customer pursuant to this Tariff in accordance with the terms, conditions and procedures set forth in FERC Order No. 888. However, the Transmission Owner must separately file any proposal to recover stranded costs under section 205 of the Federal Power Act.

706.4 Other Charges

Eligible Customer shall pay administrative services charges under Tariff, Schedule 1A; Tariff, Schedule 9; and Tariff, Schedule 10, consistent with the charges assessed to loads taking Network Integration Transmission Service.

Eligible Customer shall pay Ancillary Services charges in accordance with Tariff, Part I, section 3.

Eligible Customer shall pay Black Start Service charges in accordance with Tariff, Schedule 6A.

707 Operating Agreement

707.1 Operation under The Operating Agreement

The Eligible Customer shall plan, construct, operate, and maintain its facilities in accordance with Good Utility Practice and in conformance with the Operating Agreement.

The terms and conditions under which the Eligible Customer shall operate its facilities and the technical and operational matters associated with the implementation of Tariff, Part XI shall be specified in the Operating Agreement.

The Operating Agreement shall provide for the Eligible Customer and Transmission Provider to (i) operate and maintain equipment necessary for integrating the Eligible Customer within the Transmission Provider's Transmission System (including, but not limited to, remote terminal units, metering, communications equipment and relaying equipment); (ii) transfer data between the Transmission Provider and the Eligible Customer (including, but not limited to, heat rates and operational characteristics of Network Resources, generation schedules for units outside the Transmission Provider's Transmission System, interchange schedules, required unit outputs for redispatch, voltage schedules, loss factors and other real time data); (iii) use software programs required for data links and constraint dispatching; (iv) exchange data on forecasted loads and resources necessary for long-term planning; and (v) address any other technical and operational considerations required for implementation of Tariff, Part XI, including scheduling protocols.

Subpart B – Contract Demand Transmission Services

708 Provision of Contract Demand Transmission Services

(a) The Transmission Provider will provide Firm Contract Demand Transmission Service or Non-Firm Contract Demand Transmission Service, or both, to an Eligible Customer taking service on behalf of a Co-Located Load pursuant to the applicable terms and conditions contained in Tariff, Part XI and the Service Agreement for Contract Demand Transmission Services, provided in Attachment F-4. Firm Contract Demand Transmission Service or Non-Firm Contract Demand Transmission Service are for an Eligible Customer taking service on behalf of a Co-Located Load that is willing and able to limit withdrawals of energy from the Transmission System when required by the Transmission Provider.

(b) Firm Contract Demand Transmission Service is for the transfer of capacity and energy to an Eligible Customer on behalf of a designated Co-Located Load, up to a defined, predetermined megawatt level of transmission service as requested by the Eligible Customer and confirmed by the Transmission Provider, using capacity and energy procured by the Transmission Provider. Non-Firm Contract Demand Transmission Service is for the transmission of energy to an Eligible Customer on behalf of a designated Co-Located Load, on an as-available basis, up to a defined, predetermined megawatt level of transmission service as requested by the Eligible Customer and confirmed by the Transmission Provider, using energy procured by the Transmission Provider. PJMSettlement shall be the Counterparty to the Firm Contract Demand Transmission Service and Non-Firm Contract Demand Transmission Service transactions under this Tariff.

(c) Prior to the Commencement of Service, for an Eligible Customer to take Non-Firm Contract Demand Transmission Service on behalf of a Co-Located Load, the Eligible Customer must demonstrate the implementation of the necessary control technologies and protection systems, approved by the Transmission Provider to allow the Eligible Customer to effectively limit withdrawals from the Transmission System to serve such Co-Located Load.

(d) Requests for Firm Contract Demand Transmission Service or Non-Firm Contract Demand Transmission Service, or both, must be made through the Transmission Provider. These requests shall (i) require the filing of an Application as set forth in Tariff, Part XI, Subpart B, section 710.1 and Tariff, Part XI, Subpart B, section 710.2, and (ii) be submitted in accordance with the applicable terms and conditions in the Tariff.

709 Nature of Firm and Non-Firm Contract Demand Transmission Service

709.1 Priority of Service

Firm Contract Demand Transmission Service will always have priority over Non-Firm Contract Demand Transmission Service under the Tariff. All Firm Contract Demand Transmission Service will have equal priority with Network Integration Transmission Service.

709.2 Scope of Service

(a) Firm Contract Demand Transmission Service is a transmission service that allows an Eligible Customer taking service on behalf of a Co-Located Load to receive firm transmission service on behalf of that Co-Located Load up to a defined, predetermined megawatt level of service pursuant to the applicable terms and conditions contained in the Tariff and the Service Agreement for Contract Demand Transmission Service provided in Tariff, Attachment F-4. An Eligible Customer taking service on behalf of a Co-Located Load must apply for Firm Contract Demand Transmission Service for no less than the megawatt level of the gross demand of the Co-Located Load that will not be served by the dedicated level of energy from the Co-Located Generating Facility.

(b) Non-Firm Contract Demand Transmission Service is a transmission service that allows an Eligible Customer taking service on behalf of Co-Located Loads to obtain non-firm, interruptible transmission service on behalf of a Co-Located Load in the event the Co-Located Generating Facility is on outage and unable to provide any of the dedicated level of energy, and receive that service up to defined, predetermined megawatt level of service pursuant to the applicable terms and conditions contained in the Tariff and Service Agreement for Contract Demand Transmission Service, provided in Tariff Attachment F-4. An Eligible Customer taking service on behalf of a Co-Located Load must apply for Non-Firm Contract Demand Transmission Service equivalent to the megawatt level of the Co-Located Generating Facility dedicated to serving the Co-Located Load; provided however, that the level of service required under the foregoing may be reduced to the extent the amount of Firm Contract Demand Transmission Service contracted exceeds megawatt level of the gross demand of the Co-Located Load that will not be served by the dedicated level of energy from the Co-Located Generating Facility. An Eligible Customer with an effective Service Agreement will be eligible to obtain Non-Firm Contract Demand Transmission Service on a given Operating Day only to the extent the portion of the Co-Located Generating Facility dedicated to serving the Co-Located Load is on outage.

(c) The cumulative amount of Firm Contract Demand Transmission Service and Non-Firm Contract Demand Transmission Service requested by the Eligible Customer on behalf of the Co-Located Load must equal the entire gross demand of the Co-Located Load.

(d) For any given Co-Located Load, once an Eligible Customer has taken, or is applying for, Network Integration Transmission Service or Interim Network Integration Transmission Service on behalf of such Co-Located Load, an Eligible Customer shall not be eligible to apply for or take Firm Contract Demand Transmission Service or Non-Firm Contract Demand Transmission Service for that same Co-Located Load.

(e) After an Eligible Customer has submitted an Application for Contract Demand Transmission Service for a given Co-Located Load, any material change in the megawatt level of the gross-demand of the Co-Located Load or in the megawatt level of the Co-Located Generating Facility dedicated to the Co-Located Load would require a new Application.

709.3 Restrictions on Use of Service

The Eligible Customer shall not use Firm Contract Demand Transmission Service or Non-Firm Contract Demand Transmission Service for (i) sales of capacity and energy to loads other than the

Co-Located Load designated in its Service Agreement for Contract Demand Transmission Service, or (ii) direct or indirect provision of transmission service by the Eligible Customer to third parties.

709.4 Anti-Toggling Provision

To the extent permitted in accordance with section 709.2, for the portion of the Co-Located Load served by Firm Contract Demand Transmission Service, the Eligible Customer, or its successor, shall not seek Non-Firm Contract Demand Transmission Service for five (5) years following the effective date of the Service Agreement for Contract Demand Transmission Service.

However, the foregoing limitation in this subsection shall not apply in the event of (i) a physical change to the Co-Located Generating Facility that would materially and permanently alter the megawatt level dedicated to the Co-Located Load, or (ii) a physical change to the Co-Located Load that would materially and permanently alter the megawatt level of its gross demand.

710 Initiating Service

710.1 Conditions Precedent for Receiving Service

Subject to the terms and conditions of Tariff, Part XI, the Transmission Provider will provide Firm Contract Demand Transmission Service or Non-Firm Contract Demand Transmission Service, or both, to any Eligible Customer taking transmission service on behalf of Co-Located Load, provided that:

- (i) The Eligible Customer has been designated to take transmission service on behalf of a Co-Located Load in the relevant Application, Service Agreement, or the Generation Interconnection Agreement for the Co-Located Generating Facility;
- (ii) The subject Co-Located Load has not been served by any Eligible Customer on behalf of such Co-Located Load taking, or applying to take, Network Integration Transmission Service or Interim Network Integration Transmission Service;
- (iii) The Eligible Customer has provided the information specified in, and otherwise complied with, the “PJM Credit Policy” set forth in Tariff, Attachment Q hereto;
- (iv) The Eligible Customer has executed a Service Agreement for Contract Demand Transmission Service with the Transmission Provider pursuant to Tariff, Attachment F-4, or requests in writing that the Transmission Provider file a proposed unexecuted Service Agreement for Contract Demand Transmission Service; such Service Agreement shall include (a) for Non-Firm Contract Demand Transmission Service, the operational procedures necessary to implement necessary control technologies and protection systems approved by the Transmission Provider that will limit energy withdrawals consistent with the terms of the Service Agreement; and (b) its agreement to be curtailed under certain conditions set forth in the Service Agreement and in the PJM Tariff;
- (v) The Eligible Customer has certified, in accordance with the PJM Manuals, that it is willing and able to limit energy withdrawals from the Transmission System when requested by the Transmission Provider;
- (vi) The Eligible Customer must, in accordance with the PJM Manuals, submit to the Transmission Provider an authorization or certification from its Relevant Electric

- Retail Regulatory Authority which affirms that the Eligible Customer is authorized to provide energy to the Co-Located Load; and
- (vii) Eligible Customer has completed other certification requirements provided in the PJM Manuals, including to be an Electric Distributor, as applicable; and
 - (viii) The Eligible Customer taking Contract Demand Transmission Service on behalf of a Co-Located Load shall otherwise execute, if necessary, and comply with the PJM Governing Agreements.

710.2 Application Procedures

An Eligible Customer may apply for Firm Contract Demand Transmission Service or Non-Firm Contract Demand Transmission Service, or both, to take service on behalf of a Co-Located Load. The entire gross demand of the Co-Located Load must be served by a combination of Firm Contract Demand Transmission Service and Non-Firm Contract Demand Transmission Service.

To the extent the dedicated portion of the Co-Located Generating Facility does not meet the entire gross demand of the Co-Located Load, an Eligible Customer seeking Contract Demand Transmission Service must apply for: (i) Firm Contract Demand Transmission Service for at least the portion of the gross demand of the Co-Located Load not served by dedicated output from the Co-Located Generating Facility; and (ii) Non-Firm Contract Demand Transmission Service for the portion of the gross demand of the Co-Located Load served by dedicated output from the Co-Located Generating Facility; provided however, that the level of Non-Firm Contract Demand Transmission Service required may be reduced to the extent the amount of Firm Contract Demand Transmission Service contracted exceeds megawatt level of the gross demand of the Co-Located Load that will not be served by the dedicated level of energy from the Co-Located Generating Facility.

If requested by the Transmission Provider, an Application for Firm Contract Demand Transmission Service and/or Non-Firm Contract Demand Transmission Service shall provide all of the information included in 18 C.F.R. § 2.20, including but not limited to the following:

- (i) The identity, address, email address, and telephone number of the entity requesting service;
- (ii) A statement that the entity requesting service is, or will be upon Commencement of Service, an Eligible Customer under the Tariff;
- (iii) A demonstration that the Co-Located Load on behalf of which the Eligible Customer is seeking to obtain service and the Co-Located Generating Facility are located on the same side of the Delivery Point to the Transmission Provider's Transmission System as the Co-Located Load;
- (iv) A description of the supply characteristics of the Co-Located Generating Facility identified in subsection (iii) above, including the generation profile, its Maximum Facility Output, the megawatt level dedicated to serving the Co-Located Load, and other technical specifications as may be requested by the Transmission Provider;
- (v) A description of the demand characteristics of the Co-Located Load identified in subsection (iii) above, including the demand profile and other technical specifications as may be requested by the Transmission Provider;

- (vi) The requested Service Commencement Date;
- (vii) The transmission capacity requested for the Delivery Point on the Transmission Provider's Transmission System behind which the Co-Located Load and Co-Located Generating Facility are located; and
- (viii) Any additional information required by the Transmission Provider.

The Transmission Provider shall treat this information consistent with the standards of conduct contained in Part 37 of the Commission's regulations.

If an Application fails to meet the requirements of the Tariff, the Transmission Provider shall notify the Eligible Customer requesting service within fifteen (15) days of receipt of the reasons for such failure. The Transmission Provider will attempt to remedy minor deficiencies in the Application through informal communications with the Eligible Customer. If such efforts are unsuccessful, the Transmission Provider shall return the Application, along with any deposit, with interest. Upon receipt of a new or revised Application that fully complies with the requirements of this section 710, the Eligible Customer shall be assigned a new queued time and/or Project Identifier, as applicable, consistent with the date of the new or revised Application.

710.3 Determination of Whether Firm Contract Demand Transmission Service and Non-Firm Contract Demand Transmission Service Can Be Reliably Provided

Pursuant to Tariff, Part XI, Subpart B, section 712, Transmission Provider will coordinate with the affected Transmission Owner(s) to complete studies, including load integration studies, which will provide data relevant to the determination of whether (and to what level as applicable) (i) Firm Contract Demand Transmission Service can be reliably provided and identify any necessary enhancements to the Transmission System to accommodate the requested level of service, and/or (ii) Non-Firm Contract Demand Transmission Services can be reliably provided. During this study period, Transmission Provider may also perform other studies.

Following completion of all studies, Transmission Provider will make the determination, in consultation with the affected PJM Transmission Owner(s), about whether (and to what level as applicable) Firm Contract Demand Transmission Service or Non-Firm Contract Demand Transmission Services can be reliably provided for an Application, and if so, what level of service may be provided.

If the Transmission Provider determines that only a portion of the Non-Firm Contract Demand Transmission Service requested by Eligible Customer can be provided reliably, the Transmission Provider will provide a written explanation of its reasons for partial denial of service. In such an event, the Eligible Customer must apply for either (i) Firm Contract Demand Transmission Service for the balance of the gross demand of its Co-Located Load, consistent with Tariff, Part XI, Subpart B, section 709.2, or (ii) Network Integration Transmission Service under Tariff, Part III.

If the Transmission Provider determines that no level of Non-Firm Contract Demand Transmission Service requested by Eligible Customer can be provided reliably, the Transmission Provider will provide a written explanation of its reasons for denial of service. In such an event, to receive Contract Demand Transmission Service, the Eligible Customer must apply for either (i) Firm Contract Demand Transmission Service for the entire gross demand of its Co-Located Load,

consistent with Tariff, Part XI, Subpart B, section 709.2, or (ii) Network Integration Transmission Service under Tariff, Part III.

Descriptions of the Transmission Provider's and/or the applicable Transmission Owner(s)' specific methodology for assessing whether Firm Contract Demand Transmission Service or Non-Firm Contract Demand Transmission Service, or both, can be reliably provided, will be set forth in Tariff, Part XI, Subpart B, section 712, in the PJM Manuals, and in Transmission Owner standards, as applicable.

710.4 Technical Requirements Prior to Commencement of Service

Firm Contract Demand Transmission Service and Non-Firm Contract Demand Transmission Service shall not commence until the Transmission Provider, the affected Transmission Owner(s), and the Eligible Customer, or a third party, have completed installation of all equipment specified under the Service Agreement for Contract Demand Transmission Service, as provided in Attachment F-4, consistent with Good Utility Practice and any additional requirements reasonably and consistently imposed to ensure the reliable operation of the Transmission System. The Transmission Provider and the affected Transmission Owner(s) are to complete such arrangements as soon as practicable taking into consideration the Service Commencement Date.

As applicable, these technical requirements may include, but are not limited to: (i) installation of necessary hardware and software to limit energy withdrawals, including metering equipment and any facilities necessary to implement the necessary control technologies and protection systems associated with the provisions of Non-Firm Contract Demand Transmission Service set forth in the Service Agreement for Contract Demand Transmission Service; (ii) provision of an operational contact and backup contact for the Eligible Customer, available twenty-four (24) hours a day and seven (7) days a week; (iii) certification from the Eligible Customer that it is staffed with PJM Certified Operators (PJM Manual 40); (iv) demonstration from the Eligible Customer of its ability to receive voice and electronic signals from the Transmission Provider; (v) demonstration that the Eligible Customer has operational control to respond to operating instructions from the Transmission Provider to reduce energy withdrawals or disconnect the Co-Located Load within five (5) minutes or as specified in the PJM Manuals; (vi) satisfaction of any technical requirements identified by the applicable Transmission Owner(s); and (vii) as applicable, demonstration that the Eligible Customer has operational control of the necessary control technologies and protection systems required pursuant to Tariff, Part XI, Subpart B, section 713 and set forth in the Service Agreement for Contract Demand Transmission Service.

710.5 Eligible Customer Facilities and Network Facilities

The provision of Firm Contract Demand Transmission Service or Non-Firm Contract Demand Transmission Service, or both, shall be conditioned upon the Eligible Customer constructing, maintaining, and operating the facilities (i) on its side of the Delivery Point necessary to reliably deliver and receive energy and capacity; and (ii) only in the case of Non-Firm Contract Demand Transmission Service, to implement the necessary control technologies and protection systems required pursuant to Tariff, Part XI, Subpart B, section 713 and specified in the Service Agreement for Contract Demand Transmission Service, as Transmission Provider may require. Nothing herein precludes the installation of any Transmission Owner-side protection facilities.

As set forth in the Service Agreement for Contract Demand Transmission Service, the Eligible Customer may also be responsible for the cost of network upgrades from the Transmission Provider's Transmission System to the Delivery Point. In the case of Firm Contract Demand Transmission Service, the Transmission Provider shall be responsible for ensuring the Transmission System can deliver and receive energy and capacity to the Delivery Point.

The Eligible Customer shall be solely responsible for constructing or installing all facilities on the Eligible Customer's side of each such Delivery Point or, with respect to service provided pursuant to a state required retail access program, for otherwise arranging for the delivery of its energy from the Delivery Point.

710.6 Execution and Filing of Service Agreement

The Transmission Provider will file the Service Agreement for Contract Demand Transmission Service, as set forth in Attachment F-4, with the Commission in compliance with applicable Commission regulations, and subject to the provisions below.

(a) Transmission Provider shall provide the final Service Agreement for Contract Demand Transmission Service, along with any applicable schedules, to the parties in electronic form. Not later than fifteen (15) Business Days after receipt of the Service Agreement for Contract Demand Transmission Service, Eligible Customer shall:

- (i) execute the final Service Agreement for Contract Demand Transmission Service in electronic form and return it to Transmission Provider electronically;
- (ii) request in writing dispute resolution as allowed under Tariff, Part I, section 12; or
- (iii) request in writing that Transmission Provider file with the Commission the final Service Agreement for Contract Demand Transmission Service in unexecuted form. The unexecuted Service Agreement for Contract Demand Transmission Service shall contain terms and conditions deemed appropriate by Transmission Provider for the Application.

As needed for Firm Contract Demand Transmission Service, the Eligible Customer shall also provide any required adjustments to Security for facility upgrades.

(b) If the Eligible Customer determines that final agreement negotiations are at an impasse, the Eligible Customer shall notify Transmission Provider of the impasse, and Eligible Customer may request Transmission Provider to file the unexecuted agreement with FERC or request in writing dispute resolution as allowed under Tariff, Part I, section 12. If Transmission Provider, in its sole discretion, determines that the negotiations are at an impasse, Transmission Provider shall notify the Eligible Customer of the impasse, and may file the unexecuted agreement with the FERC.

(c) Eligible Customer and Transmission Provider may not proceed under such Service Agreement for Contract Demand Transmission Service until:

- (i) thirty (30) days after such agreement, if executed and nonconforming, has been filed with FERC;

- (ii) such agreement, if unexecuted, has been filed with and accepted by FERC;
or
- (iii) the earlier of thirty (30) days after such agreement, if conforming, has been executed or has been reported in Transmission Provider's Electronic Quarterly Reports.

710.7 Termination

Although the Service Agreement for Contract Demand Transmission Service is presumed to continue without expiration, it may be terminated where:

(a) An incumbent Eligible Customer will be replaced by a successor Eligible Customer, in which case the incumbent's service shall only terminate if the successor agrees to commence the taking of the service, the appropriate service agreement is executed, and all other applicable terms and conditions of the Tariff and PJM Governing Agreements are satisfied;

(b) An incumbent Eligible Customer seeks to terminate its service and no successor Eligible Customer exists, in which case the incumbent must provide PJM with forty-two (42) months' notice prior to the commencement of a Delivery Year in which Eligible Customer seeks the termination, subject to receiving all necessary regulatory approvals for such termination, if any;

(c) An Eligible Customer is disqualified from receiving Contract Demand Transmission Service under Tariff, Part XI, Subpart B, section 713.7;

(d) The Eligible Customer is in breach of its obligations under the Service Agreement or the Tariff, Part XI. For example, to the extent any material changes to the gross demand of the Co-Located Load or the design, configuration, or output of the Co-Located Generating Facility occur without being studied by the Transmission Provider to determine whether such changes would affect the Transmission Provider's ability to reliably provide the level of service specified in the Eligible Customer's Contract Demand Transmission Service Agreement, the Eligible Customer may be considered in breach of its obligations and the agreement may be subject to termination in accordance with the provisions of this Tariff and/or the Service Agreement for Contract Demand Transmission Service; or

(e) On such other date as mutually agreed upon by the parties.

711 Designation of Co-Located Load and Co-Located Generating Facility

711.1 Required Designations

(a) The Eligible Customer must designate the individual Co-Located Load on behalf of which it is taking Firm Contract Demand Transmission Service, or Non-Firm Contract Demand Transmission Service, or both. The Co-Located Load shall be specified in the Service Agreement for Contract Demand Transmission Service, provided in Attachment F-4.

(b) The Eligible Customer must designate the individual Co-Located Generating Facility that will serve the individual Co-Located Load in subsection (a) and provide the megawatt level of energy from the Co-Located Generating Facility dedicated to serving the Co-Located Load.

711.2 No Change in Delivery Point

No change in the Delivery Point for any Firm Contract Demand Transmission Service or Non-Firm Contract Demand Transmission Service shall be permitted.

711.3 Information Updates

The Eligible Customer shall provide the Transmission Provider with annual updates of (i) the demand characteristics of the Co-Located Load, and (ii) the supply characteristics of the designated Co-Located Generating Facility, both consistent with the information included in its Application for Contract Demand Transmission Service under Tariff, Part XI.

In addition, the Eligible Customer also shall have an ongoing obligation to provide the Transmission Provider and applicable Transmission Owner(s) with timely written or electronic notice of material changes, as discussed in the PJM Manuals, in the foregoing sentence as well as any other information listed in Tariff, Part XI, Subpart B, section 710 or provided in its Application for Contract Demand Transmission Service or other aspects of its facilities or operations affecting the Transmission Provider's ability to provide reliable service. Failure to timely inform the Transmission Provider of a material change in (i) the demand characteristics of the Co-Located Load, or (ii) the supply characteristics of the Co-Located Generating Facility may constitute a breach of the Eligible Customer's Service Agreement and subject to termination under Tariff, Part XI, Subpart B, section 710.7.

712 Study Procedures for Contract Demand Transmission Service

712.1 Study Procedures for Firm Contract Demand Transmission Service

After the Eligible Customer submits a Completed Application for Firm Contract Demand Transmission Service, the Transmission Provider shall notify the affected Transmission Owner(s) of the Completed Application. As necessary, Transmission Provider and the affected Transmission Owner(s) shall coordinate to study the effects of providing the requested Firm Contract Demand Transmission Service on the affected Transmission Owner(s)'s system pursuant to the applicable affected Transmission Owner requirements.

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. If the Transmission Provider determines that such studies are necessary to evaluate the requested service, it shall inform the Eligible Customer of those studies as soon as practicable. The Transmission Provider will also consider the results of any studies conducted by the affected Transmission Owner(s).

712.2 Study Procedures for Non-Firm Contract Demand Transmission Service

After receiving a request for Non-Firm Contract Demand Transmission Service, the Transmission Provider shall determine on a non-discriminatory basis, and in accordance with the PJM Manuals, whether studies are needed to assess whether the Transmission System has sufficient available capacity to provide Non-Firm Contract Demand Transmission Service, and if so, which studies are appropriate. Transmission Provider ~~may~~will notify the affected Transmission Owner of such request for Non-Firm Contract Demand Transmission Service, and the Transmission Provider will also consider the results of any studies conducted by the affected Transmission Owner(s).

712.3 Application and Studies Agreement

In the event the Transmission Provider determines studies are necessary to evaluate the requested Contract Demand Transmission Service, the Transmission Provider shall tender an Application and Studies Agreement pursuant to which the Eligible Customer shall agree to reimburse the Transmission Provider for the required studies. For a service request to remain a Completed Application, the Eligible Customer shall execute the Application and Studies Agreement and return it to the Transmission Provider within fifteen (15) Business Days and provide the study fee pursuant to Tariff, Part XI, Subpart B, section 712.4. If the Eligible Customer elects not to execute the Application and Studies Agreement, its Application shall be deemed withdrawn and its fee shall be returned with interest.

712.4 Study Fee

Eligible Customer shall pay a study fee, as determined by the Transmission Provider, to apply for Firm Contract Demand Transmission Service or Non-Firm Contract Demand Transmission Service.

713 Load Shedding and Curtailments for Contract Demand Transmission Service

713.1 General

Prior to the Service Commencement Date, the Eligible Customer shall demonstrate its ability to fully comply with the Load Shedding and Curtailment procedures pursuant to this section 713, the PJM Manuals, and the Service Agreement for Contract Demand Transmission Service, as provided in Attachment F-4. The Eligible Customer shall implement any Load Shedding and/or Curtailment directive given by Transmission Provider. To the extent practicable, the Transmission Provider will notify the Eligible Customer and applicable Transmission Owner(s) of any Curtailment in a timely manner. Eligible Customers must respond to any real time instruction to curtail or otherwise reduce load within five (5) minutes. Curtailments will be made on a non-discriminatory basis.

713.2 Load Shedding

To the extent that a system contingency exists on the Transmission Provider's Transmission System and the Transmission Provider determines that it is necessary for the Eligible Customer to shed load at the designated Co-Located Load, the Eligible Customer shall shed load in accordance with previously established procedures under the Service Agreement for Contract Demand Transmission Service.

713.3 Curtailment of Firm Contract Demand Transmission Service

For purposes of Curtailment, Firm Contract Demand Transmission Service shall be treated as the equivalent of Network Integration Transmission Service.

713.4 Curtailment of Non-Firm Contract Demand Transmission Service

Non-Firm Contract Demand Transmission Service shall be Curtailed before Firm Contract Demand Transmission Service and Network Integration Transmission Service. The Transmission Provider may Curtail Non-Firm Contract Demand Transmission Service prior to dispatching the Pre-Emergency Load Response Program as further set forth in the PJM Manuals, or in response to a transfer capability shortage as a result of system reliability conditions.

713.5 System Reliability

Notwithstanding any other provisions of this Tariff, the Transmission Provider reserves the right, consistent with Good Utility Practice and on a not unduly discriminatory basis, to Curtail Firm Contract Demand Transmission Service or Non-Firm Contract Demand Transmission Service, or both, without liability on the Transmission Provider's part, for the purpose of making necessary adjustments to, changes in, or repairs on its lines, substations, and facilities, and in cases where the continuance of Firm Contract Demand Transmission Service or Non-Firm Contract Demand Transmission Service, or both, would endanger persons or property. In the event of any adverse condition(s) or disturbance(s) on the Transmission Provider's Transmission System or on any other system(s) directly or indirectly interconnected with the Transmission Provider's Transmission System, the Transmission Provider, consistent with Good Utility Practice, also may Curtail Firm Contract Demand Transmission Service or Non-Firm Contract Demand Transmission Service in order to (i) limit the extent or damage of the adverse condition(s) or disturbance(s), (ii) prevent damage to generating or transmission facilities, or (iii) expedite restoration of service. The Transmission Provider will give the Eligible Customer as much advance notice as is practicable in the event of such Curtailment.

713.6 Necessary Control Technologies and Protection Systems for Non-Firm Contract Demand Transmission Service

To ensure protection of the Transmission System and that the Eligible Customer limits its energy withdrawals from the Transmission System to the level of Contract Demand Transmission Service provided in its Service Agreement for Contract Demand Transmission Service, including during a period in which the Transmission Provider has directed Curtailment or Load Shedding, prior to the Service Commencement Date, the Transmission Provider, affected Transmission Owner(s), and the Eligible Customer shall establish necessary control technologies and protection systems in accordance with the PJM Manuals, which may include a Remedial Action Scheme, for each Service Agreement for Non-Firm Contract Demand Transmission Service. The necessary control technologies and protection systems must be developed in accordance with the PJM Manuals and be approved by the Transmission Provider. The necessary control technologies and protection systems may be functionally modified from time to time. Any functional modification to the necessary control technologies and protection systems must be developed with the affected Transmission Owner(s) and approved by the Transmission Provider.

713.7 Consequences of Failure to Follow Instructions or Misoperation of Necessary Control Technologies and Protection Systems in a Contract Demand Transmission Service Agreement

(a) In the first instance that an Eligible Customer taking Firm Contract Demand Transmission Service or Non-Firm Contract Demand Transmission Service fails to respond to established Load Shedding and Curtailment procedures, as set forth in this section 713, the Eligible Customer shall be disqualified from taking Firm Contract Demand Transmission Service and Non-Firm Contract Demand Transmission Service.

(b) In the first instance that a necessary control technology or protection system for a given Service Agreement for Non-Firm Contract Demand Transmission Service misoperate, the Eligible Customer shall be prohibited from taking transmission service under its Service Agreement (both Firm Contract Demand Transmission Service and Non-Firm Contract Demand Transmission Service) or otherwise withdrawing energy from the Transmission System for a period of up to one hundred and twenty (120) days from such event, which may be shortened or extended per mutual agreement, to allow for an analysis of the operational performance of the necessary control technologies and protection systems.

In the second instance that an Eligible Customer's necessary control technology or protection system associated with a Service Agreement for Non-Firm Contract Demand Transmission Service misoperate, the Eligible Customer shall be disqualified from taking Firm Contract Demand Transmission Service and Non-Firm Contract Demand Transmission Service.

(c) Following disqualification under subsections (a) or (b) above, to receive any transmission service over the Transmission System, the Eligible Customer must apply for Network Integration Transmission Service under Tariff, Part III, with the option to qualify for Interim Network Integration Transmission Service under Tariff, Part XI subject to the provisions of the Tariff.

(d) The Transmission Provider may, in its sole discretion and on a prospective basis only, determine that the facts and circumstances demonstrate that Eligible Customer was not at fault for (i) an Eligible Customer's, or the Co-Located Load's served by the Eligible Customer, failure to implement Load Shedding and Curtailment procedures or (ii) a misoperation of the Eligible Customer's necessary control technology or protection system associated with a Service Agreement. In the event, the Transmission Provider makes such a no fault determination, the precipitating event shall not be considered toward disqualification under this section 713.

713.8 Penalty for Unreserved Use of Contract Demand Transmission Service

[Reserved]

714 Rates and Charges for Firm Contract Demand Transmission Service

714.1 Monthly Demand Charge

[Reserved]

714.2 Network Upgrade Charge

[Reserved]

714.3 Redispatch Charge

The Eligible Customer ~~and each Transmission Owner~~ shall pay any redispatch costs as set forth in Tariff, Attachment K.

714.4 Stranded Cost Recovery

Any Transmission Owner may seek to recover stranded costs from the Eligible Customer pursuant to this Tariff in accordance with the terms, conditions and procedures set forth in FERC Order No. 888. However, the Transmission Owner must separately file any proposal to recover stranded costs under section 205 of the Federal Power Act.

714.5 Other Charges

Eligible Customer shall pay administrative services charges under Tariff, Schedule 1A; Tariff, Schedule 9; and Tariff, Schedule 10 based on the total quantity of MWhs of energy delivered using Firm Contract Demand Transmission Service, except in the case of any capacity-related charges under these schedules, which shall be based on the Eligible Customer's Unforced Capacity Obligation.

Eligible Customer shall pay Ancillary Services charges, except for Regulation, based on the total quantity in MWhs of energy delivered to the Co-Located Load using Firm Contract Demand Transmission Service in accordance with Tariff, Part I, section 3.

Eligible Customer shall pay Black Start Service charges based on the gross demand of the Co-Located Load in accordance with Tariff, Schedule 6A.

Eligible Customer shall pay Regulation charges based on the gross demand of the Co-Located Load.

715 Rates and Charges for Non-Firm Contract Demand Transmission Service

715.1 Monthly Demand Charge

[Reserved]

715.2 Redispatch Charge

The Eligible Customer and each Transmission Owner shall pay any redispatch costs as set forth in Tariff, Attachment K.

715.3 Stranded Cost Recovery

Any Transmission Owner may seek to recover stranded costs from the Eligible Customer pursuant to this Tariff in accordance with the terms, conditions and procedures set forth in FERC Order No. 888. However, the Transmission Owner must separately file any proposal to recover stranded costs under section 205 of the Federal Power Act.

715.4 Other Charges

Eligible Customer shall pay administrative services charges under Tariff, Schedule 1A; Tariff, Schedule 9; and Tariff, Schedule 10 based on the total quantity of MWhs of energy delivered using Non-Firm Contract Demand Transmission Service, except any capacity-related charges under these schedules will not apply.

Eligible Customer shall pay Ancillary Services charges, except for Regulation, based on the total quantity in MWhs of energy delivered to the Co-Located Load using Non-Firm Contract Demand Transmission Service in accordance with Tariff, Part I, section 3.

To the extent the Eligible Customer does not have an effective Service Agreement for Firm Contract Demand Transmission Service, Eligible Customer shall pay Black Start Service charges based on the gross demand of the Co-Located Load in accordance with Tariff, Schedule 6A.

To the extent the Eligible Customer does not have an effective Service Agreement for Firm Contract Demand Transmission Service, Eligible Customer shall pay Regulation charges based on a gross demand of the Co-Located Load.

716 Operating Agreement

716.1 Operating Agreement

The Eligible Customer shall plan, construct, operate and maintain its facilities in accordance with Good Utility Practice and in conformance with the Operating Agreement.

The terms and conditions under which the Eligible Customer shall operate its facilities and the technical and operational matters associated with the implementation of Tariff, Part XI shall be specified in the Operating Agreement.

The Operating Agreement shall provide for the Eligible Customer and Transmission Provider to (i) operate and maintain equipment necessary for integrating the Eligible Customer within the Transmission Provider's Transmission System (including, but not limited to, remote terminal units, metering, communications equipment and relaying equipment); (ii) transfer data between the Transmission Provider and the Eligible Customer (including, but not limited to, heat rates and operational characteristics of Network Resources, generation schedules for units outside the Transmission Provider's Transmission System, interchange schedules, unit outputs for required redispatch, voltage schedules, loss factors and other real time data); (iii) use software programs required for data links and constraint dispatching; (iv) exchange data on forecasted loads and resources necessary for long-term planning; and (v) address any other technical and operational considerations required for implementation of Tariff, Part XI, including scheduling protocols.

ATTACHMENT F-3A

**Service Agreement For
Regional Network Integration Transmission Service
And/or
Interim Network Integration Transmission Service
(For Co-Located Load)**

1.0 This Service Agreement, dated as of the date the last party executes this agreement, is entered into, by and between the Office of the Interconnection of PJM Interconnection, L.L.C. (the Transmission Provider) as the administrator of the Tariff, PJMSettlement Inc. (“Counterparty”) as the counterparty, and _____ (“Network Customer”). [If applicable: This Service Agreement supersedes the Service Agreement among Transmission Provider, Counterparty, and [insert prior Network Customer’s entity name], [insert Service Agreement Number], effective date [insert], which was filed with the Commission in Docket No. [insert].]

2.0 [Instructions: Choose one of the following]

[The Network Customer has been determined by the Transmission Provider to have a valid request for Network Transmission Service under the Tariff and to have satisfied the conditions for service imposed by the Tariff.]

[or]

[The Network Customer, which is an Eligible Customer taking transmission service on behalf of Co-Located Load, has been determined by the Transmission Provider to have a valid request for Network Transmission Service under the Tariff and to have satisfied the conditions for service imposed by the Tariff, except for the condition that the following facilities must be completed and placed into service:

[If applicable, list facilities to be completed and placed into service.]

Until the facilities listed above are completed, the Transmission Owner provides a Notice of Completion to PJM, and the facilities listed above are in service, the Eligible Customer may ~~not~~ only receive Interim Regional Network Integration Transmission Service subject to the conditions of Part XI of the Tariff.

3.0 Regional Network Integration Transmission Service under this agreement shall commence on the later of: (1) the requested service commencement date of _____, or (2) the date on which construction of any Direct Assignment Facilities and/or Network Upgrades are completed, or (3) such other date as it is permitted to become effective by

the Commission. Network Customer taking Regional Network Integration Transmission Service shall take such service on terms that do not expire.

Regional Network Integration Transmission Service shall terminate consistent with Tariff, Part I, section 2.5. Specifically, Regional Network Integration Transmission Service may be terminated where: (1) an incumbent Network Customer will be replaced by a successor Network Customer, in which case the incumbent's service shall only terminate if the successor agrees to commence the taking of the service, the appropriate service agreement is executed, and all other applicable terms and conditions of the PJM Governing Agreements are satisfied; (2) an incumbent Network Customer seeks to terminate its service and no successor Network Customer exists, in which case the incumbent must provide PJM with forty-two (42) months' notice prior to the commencement of a Delivery Year, subject to receiving all necessary regulatory approvals for such termination, if any; or (3) on such other date mutually agreed upon by the Parties.

[If applicable] [Interim Network Integration Transmission Service under this agreement shall commence on the later of: (1) the requested service commencement date of _____, or (2) such other date as it is permitted to become effective by the Commission. On the date on which construction of any Direct Assignment Facilities and/or Network Upgrades are completed, Interim Network Integration Transmission Service shall terminate consistent with Tariff, Part XI, and Regional Network Integration Transmission Service shall begin.]

- 4.0 The Transmission Provider agrees to provide and the Network Customer agrees to take and pay for Regional Network Integration Transmission Service, when applicable, and Interim Regional Network Integration Transmission Service, when applicable, in accordance with the provisions of the Tariff, including the Operating Agreement (which is incorporated herein by reference), and this Service Agreement as they may be amended from time to time. Failure to timely inform the Transmission Provider of a material change in (i) the demand characteristics of the Co-Located Load or (ii) the supply characteristics of the Co-Located Generating Facility may constitute a breach of the Eligible Customer's Service Agreement and this Service Agreement may be terminated pursuant to Tariff, Part XI, Subpart B, section 710.7.

[If applicable] [The Eligible Customer will comply with the necessary control technologies and protection systems provisions in Tariff, Part XI, prior to the Service Commencement Date.]

- 5.0 The Eligible Customer certifies it is willing and able to limit its usage of the Transmission System when requested by the Transmission Provider.
- 6.0 Any notice or request made to or by either Party regarding this Service Agreement shall be made to the representative of the other Party as indicated below.

Transmission Provider (on behalf of Transmission Provider and Counterparty):

PJM Interconnection, L.L.C.
2750 Monroe Blvd.
Audubon, PA 19403

Network Customer:

7.0 The Tariff for Network Integration Transmission Service, Tariff, Part III, and Interim Network Integration Transmission Service, Tariff, Part XI, is incorporated herein and made a part hereof.

IN WITNESS WHEREOF, the Parties have caused this Service Agreement to be executed by their respective authorized officials.

Office of the Interconnection:

By: _____
Name Title Date

Counterparty:

By: _____
Name Title Date

Network Customer:

By: _____
Name Title Date

SPECIFICATIONS FOR
REGIONAL NETWORK INTEGRATION TRANSMISSION SERVICE

1.0 Regional Network Integration Transmission Service Amount (MW): _____ MW

2.0 Description of Co-Located Generating Facility: _____

Maximum Facility Output of Co-Located Generating Facility: _____ MW

3.0 Description of Co-Located Load: _____

Gross Demand of Co-Located Load: _____ MW

4.0 Service under this Agreement may be subject to some combination of the charges detailed below. (The appropriate charges for individual transactions will be determined in accordance with the terms and conditions of the Tariff.)

4.1 Embedded Cost Transmission Charge: _____

4.2 Facilities Study Charge: _____

4.3 Direct Assignment Facilities Charge: _____

4.4 Ancillary Services Charge: _____

4.5 Other Supporting Facilities Charge: _____

**{If applicable} SPECIFICATIONS FOR
INTERIM REGIONAL NETWORK INTEGRATION TRANSMISSION SERVICE**

1.0 Interim Regional Network Integration Transmission Service Amount (MW): _____ MW

2.0 Description of Co-Located Generating Facility: _____

Maximum Facility Output of Co-Located Generating Facility: _____ MW

3.0 Description of Co-Located Load: _____

Gross Demand of Co-Located Load: _____ MW

4.0 Service under this Agreement may be subject to some combination of the charges detailed below. (The appropriate charges for individual transactions will be determined in accordance with the terms and conditions of the Tariff.)

4.1 Embedded Cost Transmission Charge: _____

4.2 Facilities Study Charge: _____

4.3 Direct Assignment Facilities Charge: _____

4.4 Ancillary Services Charge: _____

4.5 Other Supporting Facilities Charge: _____

ATTACHMENT F-4

**Service Agreement For
Contract Demand Transmission Service
(For Co-Located Load)**

1.0 This Service Agreement, dated as of the date the last party executes this agreement, is entered into, by and between the Office of the Interconnection of PJM Interconnection, L.L.C. (the Transmission Provider) as the administrator of the Tariff, PJMSettlement Inc. (“Counterparty”) as the counterparty, and _____ (“Eligible Customer”). [If applicable: This Service Agreement supersedes the Service Agreement among Transmission Provider, Counterparty, and [insert prior Eligible Customer’s entity name], [insert Service Agreement Number], effective date [insert], which was filed with the Commission in Docket No. [insert].]

2.0 [Instructions: Choose one of the following depending on whether facilities upgrades are needed.]

[If facilities upgrades are not needed or if Eligible Customer is seeking solely Non-Firm Contract Demand Transmission Service] The Eligible Customer, who is taking transmission service on behalf of Co-Located Load, has been determined by the Transmission Provider to have a valid request for [Firm Contract Demand Transmission Service and/or Non-Firm Contract Demand Transmission Service] under the Tariff and to have satisfied the conditions for service imposed by the Tariff.

[or]

[If facilities upgrades are needed, assuming Eligible Customer is seeking at least a portion of Firm Contract Demand Transmission Service] [The Eligible Customer, who is taking transmission service on behalf of Co-Located Load, has been determined by the Transmission Provider to have a valid request for Firm Contract Demand Transmission Service under the Tariff and to have satisfied the conditions for service imposed by the Tariff, except for the condition that the following facilities must be completed and placed into service:]

[If applicable, list facilities to be completed and placed into service.]

Until the facilities listed above are completed, the Transmission Owner provides a Notice of Completion to PJM, and the facilities listed above are in service, the Eligible Customer may not receive Firm Contract Demand Transmission Service under Tariff, Part XI.

3.0 Contract Demand Transmission Service under this agreement shall commence on the later of: (1) the requested service commencement date of _____, or (2) the date

on which construction of any Direct Assignment Facilities and/or Network Upgrades are completed, or (3) such other date as it is permitted to become effective by the Commission.

Contract Demand Transmission Service shall terminate consistent with Tariff, Part XI, section 710.7.

- 4.0 The Transmission Provider agrees to provide and the Eligible Customer agrees to take and pay for Contract Demand Transmission Service in accordance with the provisions of the Tariff, including the Operating Agreement (which is incorporated herein by reference), and this Service Agreement, as they may be amended from time to time. Failure to timely inform the Transmission Provider of a material change in (i) the demand characteristics of the Co-Located Load or (ii) the supply characteristics of the Co-Located Generating Facility may constitute a breach of the Eligible Customer's Service Agreement and this Service Agreement may be terminated pursuant to Tariff, Part XI, Subpart B, section 710.7.
- 5.0 The Eligible Customer will comply with the necessary control technologies and protection systems provisions in Tariff, Part XI, prior to the Service Commencement Date.
- 6.0 The Eligible Customer certifies it is willing and able to limit its usage of the Transmission System when requested by the Transmission Provider.
- 7.0 Any notice or request made to or by either Party regarding this Service Agreement shall be made to the representative of the other Party as indicated below.

Transmission Provider (on behalf of Transmission Provider and Counterparty):

PJM Interconnection, L.L.C.
2750 Monroe Blvd.
Audubon, PA 19403

Eligible Customer:

- 8.0 Tariff, Part XI, for Contract Demand Transmission Services, as it may be revised from time to time, is incorporated herein and made a part hereof.

IN WITNESS WHEREOF, the Parties have caused this Service Agreement to be executed by their respective authorized officials.

Office of the Interconnection:

By: _____
Name Title Date

Counterparty:

By: _____
Name Title Date

Eligible Customer:

By: _____
Name Title Date

CERTIFICATION

I, _____, certify that I am a duly authorized officer of
_____ (Eligible Customer) and that
_____ (Eligible Customer) will not request service under
this Service Agreement to assist an Eligible Customer to avoid the reciprocity provision of this
Open-Access Transmission Tariff.

(Name)

(Title)

Subscribed and sworn before me this _____ day of _____, _____.

(Notary Public)

My Commission expires: _____

SPECIFICATIONS FOR
CONTRACT DEMAND TRANSMISSION SERVICE

1.0 Firm Contract Demand Transmission Service Amount (MW): _____ MW

Non- Firm Contract Demand Transmission Service Amount (MW): _____ MW

2.0 Description of Co-Located Generating Facility: _____

Maximum Facility Output of Co-Located Generating Facility: _____ MW

MW of Co-Located Generating Facility dedicated to Co-Located Load: _____ MW

3.0 Description of Co-Located Load: _____

Gross Demand of Co-Located Load: _____ MW

4.0 Service under this Agreement may be subject to charges specified in the Tariff, which may change from time to time, plus some combination of the charges detailed below. (The appropriate charges for individual transactions will be determined in accordance with the terms and conditions of the Tariff.)

4.1 Embedded Cost Transmission Charge: _____

4.2 Facilities Study Charge: _____

4.3 Direct Assignment Facilities Charge: _____

4.4 Ancillary Services Charge: _____

4.5 Other Supporting Facilities Charge: _____

Schedule A

Single Line Diagram

Part III Network Integration Transmission Service

29 Initiating Service

...

29.2 Application Procedures:

...

(x) For Eligible Customers taking service on behalf of Co-Located Load: (1) a demonstration that the Co-Located Load on behalf of which the Eligible Customer is ~~seeking~~taking to obtain service and the Co-Located Generating Facility are located on the same side of the Delivery Point to the Transmission Provider's Transmission System as the Co-Located Load; (2) description of the supply characteristics of the Co-Located Generating Facility, including the generation profile and other technical specifications as may be requested by the Transmission Provider; and (3) a description of the demand characteristics of the Co-Located Load above, including the demand profile and other technical specifications as may be requested by the Transmission Provider.

...

Operating Agreement, Schedule 1

7.4 Allocation of Auction Revenues.

...

7.4.2 Auction Revenue Rights.

...

(d) In stage 2 of the allocation process, the Office of the Interconnection shall conduct an iterative allocation process that consists of *two* rounds with up to one *half* of the remaining system Auction Revenue Rights capability allocated in each round. Each round of this allocation process will be conducted sequentially with Network Service Users and Transmission Customers and Eligible Customers taking Firm Contract Demand Transmission Service being given the opportunity to view results of each allocation round prior to submission of Auction Revenue Right requests into the subsequent round. In each round, each Network Service User shall designate a subset of buses from which Auction Revenue Rights will *source and sink*. Valid Auction Revenue Rights source buses include only Zones, generators, hubs and external Interface Pricing Points. *Valid Auction Revenue Rights sink buses include only Zones, generators, hubs and external Interface Pricing Points.* The Network Service User shall specify the amount of Auction Revenue Rights requested from each source bus *to each sink bus*. Prior to the 2015/2016 Planning Period, each Auction Revenue Right shall sink to the Energy Settlement Area of the Network Service User as described in Section 31.7 of Part III of the Tariff. Commencing with the 2015/2016 Planning Period, each Auction Revenue Right shall sink to the Energy Settlement Area of the Network Service User as described in Section 31.7 of Part III of the Tariff, unless the Network Service User's Energy Settlement Area represents the Residual Metered Load of an electric distribution company's fully metered franchise area(s) or service territory(ies) and the Network Service User elects to have its Auction Revenue Rights sink at the aggregate load buses in a Zone. The sum of each Network Service User's Auction Revenue Rights requests in each stage 2 allocation round for each Zone must be equal to or less than one *half* of the difference between the Network Service User's peak load for that Zone as determined pursuant to Section 7.4.2(b) and the sum of its Auction Revenue Right Allocation from stages 1A and 1B of the allocation process for that Zone. The stage 2 allocation to Transmission Customers shall be as set forth in subsection (f).

...

(l) An Eligible Customer taking Firm Contract Demand Transmission Service may request Auction Revenue Rights in stage 2 of the allocation process. In each round, each Eligible Customer taking Firm Contract Demand Transmission Service shall designate a subset of buses from which Auction Revenue Rights will source and sink. Valid Auction Revenue Rights source buses include only Zones, generators, hubs and external Interface Pricing Points. Valid Auction Revenue Rights sink buses include only Zones, generators, hubs and external Interface Pricing Points. The Eligible Customers taking Firm Contract Demand Transmission Service shall specify the amount of Auction Revenue Rights requested from each source to each sink. The Auction Revenue Rights that such an Eligible Customer taking Firm Contract Demand Transmission

Service may request in each round of stage 2 of the allocation process must be equal to or less than one half of the number of megawatts equal to the megawatts of Firm Contract Demand Transmission Service being provided.

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Washington, D.C., this 24th day of April 2026.

/s/ Ruth M. Porter

Ruth M. Porter

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