Davis Wright Tremaine LLP

November 16, 2026

Honorable Debbie-Anne A. Reese
Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

**Re:** ***Exelon Corporation, et al.*****, Docket No. ER27-520-000**
**Proposed Revisions to the PJM Open Access Transmission Tariff Addressing Transmission Service, Cost Allocation, and Cost Recovery for Large Loads and Co-Located Loads**

Dear Secretary Reese:

Pursuant to section 205 of the Federal Power Act ("FPA")[1] and Part 35 of the Commission's regulations,[2] the PJM Transmission Owners,[3] acting through the Consolidated Transmission Owners Agreement,[4] submit for filing revisions to the PJM Interconnection, L.L.C. ("PJM") Open Access Transmission Tariff ("Tariff").[5]

As discussed below, and supported by the Direct Joint Testimony of Peter Blazunas and Hanhan Hammer, the proposed Tariff revisions establish rates, cost allocation, cost recovery mechanisms, financial protections, revenue-crediting requirements, and transparency measures associated with transmission service to be taken by Eligible Customers[6] on behalf of Co-Located Loads and Large Loads.[7] These revisions are both responsive to and consistent with the preliminary findings made by the Commission in its June 18, 2026 *Order Instituting Proceeding*

---

1 16 U.S.C. § 824d.

2 18 C.F.R. Part 35.

3 The PJM Transmission Owners also may be referred to herein as "Transmission Owners."

4 Consolidated Transmission Owners Agreement, FERC Rate Schedule No. 42, § 7.3. These revisions were approved by the PJM Transmission Owners Agreement Administrative Committee on November 12, 2026.

5 Pursuant to Order No. 714, this filing is submitted electronically by PJM on behalf of the PJM Transmission Owners as part of an XML filing package conforming to the Commission's regulations. PJM makes this submission in its capacity as administrator of the Tariff and to retain administrative control over the electronic Tariff. Accordingly, the PJM Transmission Owners have requested that PJM submit the proposed Tariff revisions through the Commission's eTariff system as part of PJM's electronic Intra-PJM Tariff.

6 Capitalized terms not otherwise defined herein have the meanings set forth in the Tariff, the PJM Transmission Owners' proposed Tariff revisions and *pro forma* Cost Recovery Agreement filed herein, or in the proposed Tariff revisions included in PJM's companion section 205 filing.

7 Direct Joint Testimony of Peter Blazunas and Hanhan Hammer, Exhibit No. PTO-0001 ("Blazunas and Hammer Direct Joint Testimony").

*Under Section 206 of the Federal Power Act* in Docket No. EL26-67-000 ("Show Cause Order"),[8] and also comply with the Commission's June 18, 2026 *Order on Rehearing, Clarification, Compliance Filing and Paper Hearing* in Docket Nos. EL25-49, *et al*. ("Co-Located Load Paper Hearing Order").[9] Additionally, the proposed tariff revisions have been designed to be consistent with PJM's responsive section 205 filings establishing provisions for: (1) a new Fast Energization Process for generation interconnection and Large Load-related transmission service requests; (2) co-location and behind-the-meter generation; and (3) ride-through.

This filing consists of several key elements. With respect to each of these components, the PJM Transmission Owners have carefully considered and accounted for the need for ratepayer protections, Large Load and generation customer cost certainty and commercial stability, and cost transparency. The PJM Transmission Owners' proposal achieves a just and reasonable balance by protecting everyday customers from unfairly bearing the significant transmission-related costs necessary to connect and serve new Large Load and generation customers. At the same time, it promotes speed-to-power, which is critical to supporting the accelerating pace of Artificial Intelligence, the growth of domestic manufacturing, and other information technology developments. The elements are as follows:

1. A *pro forma* Cost Recovery Agreement and related implementing Tariff provisions. The *pro forma* Cost Recovery Agreement ("CRA") and related Tariff provisions are designed to address the Commission's concerns that the Tariff lacks an adequate mechanism to mitigate the risk of cost shifting among transmission customers. Consistent with the Show Cause Order, the *pro forma* CRA will require Eligible Customers taking service on behalf of Large Load customers to make a minimum contribution towards transmission owners' revenue requirements, along with a shortfall payment and crediting mechanism and financial security obligations, to ensure that each customer's minimum commitment is satisfied over the term of the CRA. The PJM Transmission Owners' proposal also appropriately recognizes, consistent with the Commission's acknowledgement,[10] that voluntary cost recovery agreements and other ratepayer protection mechanisms have been, and continue to be, utilized at the retail and wholesale level by utilities within PJM. Therefore, the PJM Transmission Owners' proposal makes clear that PJM Transmission Owners may continue to utilize existing and new consumer protection arrangements, as alternatives to the *pro forma* CRA, so long as those arrangements result in comparable protections and are accepted for filing by the Commission.

---

[8] *PJM Interconnection, L.L.C.*, 195 FERC ¶ 61,211 at PP 35, 41-101 (2026), *errata notice*, 196 FERC ¶ 61,122 (2026).

[9] *PJM Interconnection, L.L.C.*, 195 FERC ¶ 61,209 (2026). The PJM Transmission Owners will be submitting a letter in Docket Nos. EL25-49, *et al*. notifying the parties to that proceeding that the tariff revisions being submitted in this filing also satisfy the PJM Transmission Owners' compliance obligations from the Co-Located Load Paper Hearing Order.

[10] Show Cause Order at P 69.

2. Rates for Transmission Services Available to Large Loads and Co-Located Loads. The PJM Transmission Owners' proposal contains rates for the new services the Commission has required to be made available to Eligible Customers taking service on behalf of Co-Located Loads and that the Commission preliminarily found should also be extended to certain Large Loads. These include Firm Contract Demand Transmission Service ("FCDS"), Non-Firm Contract Demand Transmission Service ("NFCDS"), and Interim Network Integration Transmission Service ("Interim NITS"). The rates for these services are largely identical to those proposed by the PJM Transmission Owners and approved by the Commission in the Co-Located Load Paper Hearing Order, with the modifications required by the Commission in that Order. The PJM Transmission Owners have also included, consistent with the Co-Located Load Paper Hearing Order, financial penalties for unreserved use by Eligible Customers taking one of the new transmission services on behalf of Co-Located Loads or Large Loads.

3. Cost Allocation and Recovery of Upgrades Necessary to Provide Interconnection and Transmission Service. The PJM Transmission Owners are proposing a methodology for allocating and recovering the costs of transmission upgrades, referred to as Interconnection Reliability Reinforcements ("IRRs"), resulting from PJM's proposed Fast Energization Process.[11] The allocation methodology is based on a modified version of PJM's existing proportional impact allocation methodology for customers in its New Service Request process. Cost responsibility will be assigned to those Zones containing Large Loads being studied for transmission service in the PJM Fast Energization process. Those costs will be recovered through a combination of firm transmission service rates to customers in the Zones where the IRRs are located, along with a new Interconnection Reliability Reinforcement Charge assessed to Zones based on the calculated impact of the Large Loads within the Zones. As it pertains to the proportional impact-driven share of costs attributable to Co-Located Loads and Large Loads, this allocation methodology will apply to each portfolio of IRRs identified through PJM's Fast Energization Process for 15 years.[12] After that 15-year period, the remaining costs of the IRRs will be subject to regional allocation using the then-current Schedule 12 methodology that applies to Regional Transmission Expansion Plan ("RTEP") reliability projects. The proportional impact-driven share of costs attributable to generators in the Fast Energization Process will be recovered through a fee billed and collected by PJM over a 15-year period and credited back to customers in the Zones that are allocated IRR costs.

---

[11] PJM's proposed Fast Energization Process is an annual process that evaluates both generator interconnection and Large Load transmission service requests through a single cluster study, resulting in a consolidated portfolio of IRRs needed to provide interconnection and transmission service to the cluster of generator and Large Load-related service requests.

[12] References throughout this filing to the "portfolio" are those projects (*e.g.*, upgrades, transmission reinforcements) identified by PJM that will be required to accommodate both generators seeking interconnection and Eligible Customers seeking transmission service on behalf of Large Loads in each study cycle.

4. Transparency and Customer Protection Commitments. In addition to the basic cost allocation and rate design features of the PJM Transmission Owners' proposal, the PJM Transmission Owners are committing to make, on compliance, necessary changes to their formula rate templates to: (1) provide transparency to state regulators and other interested parties regarding the costs of transmission facilities being constructed by each Transmission Owner to provide transmission service to Large Loads; and (2) adopt a mechanism designed to protect wholesale transmission customers not regulated at the retail level (municipals, cooperatives, and other applicable load-serving entities) from having to bear excessive large-load-related transmission upgrade costs.

Each of these elements is designed to align with the Fast Energization proposal being submitted by PJM on the same date as this filing. Based on information provided to stakeholders,[13] PJM is proposing an approach that would process and study requests for both generator interconnection and transmission service on behalf of Large Loads in a single annual cluster, resulting in a portfolio of IRRs necessary to accommodate the aggregate of interconnection and transmission service requests in each cluster cycle. Although each of the elements of the Transmission Owners' proposal is designed to work in tandem with PJM's proposed Fast Energization Process, the essential elements are independently just and reasonable, and importantly, satisfy the Commission's preliminary findings in the Show Cause Order. In other words, regardless of how the Commission acts on PJM's filing, the Commission can and should determine that the key aspects of the PJM Transmission Owners' proposal, as discussed below, are just and reasonable and should be accepted. This remains the case even if certain incremental changes are required on compliance to ensure compatibility with the determinations the Commission makes regarding the planning and study process for generator interconnection and transmission service customers.

[13] PJM Interconnection, L.L.C., *Co-Located Load Order Workshop Meeting Materials*, Item 02 (Nov. 11, 2026), https://www.pjm.com/-/media/DotCom/committees-groups/workshops/cllsco/2026/20261112/20261112-item-02---raa-revisions-schedule-8-november-11-draft--redline.pdf (RAA Schedule 8 revisions); https://www.pjm.com/-/media/DotCom/committees-groups/workshops/cllsco/2026/20261112/20261112-item-02---tariff-revisions-part-i-definitions-november-11-draft---redline.pdf (Tariff, Part I revisions); https://www.pjm.com/-/media/DotCom/committees-groups/workshops/cllsco/2026/20261112/20261112-item-02---tariff-revisions-part-iii-nits-november-11-draft---redline.pdf (Tariff, Part III revisions); https://www.pjm.com/-/media/DotCom/committees-groups/workshops/cllsco/2026/20261112/20261112-item-02---tariff-revisions-part-viii-november-11-draft--redline.pdf (Tariff, Part VIII revisions); https://www.pjm.com/-/media/DotCom/committees-groups/workshops/cllsco/2026/20261112/20261112-item-02---tariff-revisions-part-xi-new-transmission-services-november-11-draft---redline.pdf (Tariff, Part XI revisions).

## I. EXECUTIVE SUMMARY

The proposed Tariff revisions contained in this filing establish rates, cost allocation, cost recovery mechanisms, financial protections, revenue-crediting requirements, and transparency measures associated with transmission service to be taken on behalf of Co-Located Loads and Large Loads. These revisions are responsive to and consistent with both the preliminary findings made by the Commission in its June 18, 2026 Show Cause Order as well as the Commission's Co-Located Load Paper Hearing Order issued on the same date. The proposed Tariff revisions are designed to work in tandem with PJM's section 205 filing submitted on the same date, which proposes a Fast Energization Process that combines both generator interconnection and transmission service requests made on behalf of Co-Located Loads and Large Loads into a single annual cluster process. The process would result in a consolidated portfolio of IRRs needed to provide interconnection and transmission service to the cluster of generator and Large Load-related service requests. However, the key elements of the PJM Transmission Owners' proposal are independently just and reasonable and fully address both the Commission's preliminary findings in the Show Cause Order and the policies underlying those findings.

The Commission has explained that the integration of significant new Large Loads is an urgent challenge requiring a timely, orderly, and nondiscriminatory path to transmission service that preserves reliability and affordability.[14] The PJM Transmission Owners' proposal reflects the need for prompt action and meets the Commission's objective to provide ratepayer protections, as identified in the Show Cause Order. The PJM Transmission Owners' proposed revisions therefore strike a practical balance. Namely, they provide sufficient terms to ensure that Large Loads and other responsible entities bear their share of the costs and revenue risks associated with their requests, thereby protecting other customers, without imposing unnecessary complexity or unpredictability that could jeopardize speed to power by impeding efficient planning.

Consistent with the Commission's findings that it was not seeking to alter or call into question existing cost allocation methods for transmission upgrades,[15] existing zonal NITS and formula rate structures remain the starting point for recovering applicable transmission revenue requirements, including transmission upgrades necessary to facilitate transmission service requested by Eligible Customers on behalf of Large Loads. The PJM Transmission Owners' proposed Tariff revisions supplement those structures with measures addressing distinct risks associated with Large Load integration, including secured commitments associated with the requested transmission service, potential shortfalls in or loss of anticipated firm service revenues, unreserved transmission use, and potential double recovery. For instance, and as explained further herein, the PJM Transmission Owners' proposal includes:

1. An obligation on Large Loads to enter into a *pro forma* CRA, or comparable alternative agreement, to ensure the Large Load Customer's committed contribution toward the applicable Transmission Owner's transmission revenue requirement and to require the Large Load Customer to provide Credit Support securing the associated payment

[14] Show Cause Order at PP 1-7, 35-39.

[15] *Id*. at P 81.

obligations. The *pro forma* CRA includes applicable shortfall and termination payments to reduce the revenue requirement that would otherwise need to be recovered from other transmission customers if the Large Load fails to take the committed level of transmission service, along with requirements to provide and maintain robust financial security. The PJM Transmission Owners propose to require Large Loads to enter into CRAs, or comparable agreements prior to entering PJM's Fast Energization Process to ensure a significant financial commitment on the part of the Large Load Customer and thereby deter speculative or duplicative transmission service requests. Any amounts collected from the Large Load Customer as a result of terminating the CRA prior to the commencement of service will first go towards defraying any costs associated with transmission development that is no longer needed, with any remaining amounts credited against the Transmission Owner's revenue requirement. Any termination amount collected from the Large Load Customer after service commences will be entirely credited against the Transmission Owner's revenue requirement, solely to the benefit of other customers. These mechanisms mitigate the risks of potential cost shifts to other transmission customers.

2. A methodology to allocate the costs of the portfolio of transmission upgrades, known as Interconnection Reliability Reinforcements, identified by PJM in its Fast Energization Process as needed to accommodate the generator interconnection and transmission service requests in each annual cycle. This methodology will allocate cost responsibility among PJM Zones – and only those zones with Large Loads studied within an annual cycle – in a manner roughly commensurate with benefits by utilizing modeled electrical impacts on identified constraints. This approach is consistent with the proportional impact methodology approved by the Commission and currently used by PJM to allocate costs associated with its current generator interconnection process. This methodology will also determine the proportional impact associated with generators seeking interconnection through the Fast Energization Process annual cycle, which will be recovered through a fee assessed over a 15-year period. The PJM Transmission Owners are also proposing that all IRRs be allocated to Zones containing Large Load-related transmission requests for 15 years, after which point the remaining costs will be allocated using the then-current general regional cost allocation methodology. This approach balances a recognition of the initial Large Load-related drivers of IRRs, with the fact that changes in system conditions, use and topology will result in a broader set of beneficiaries over time.

3. A commitment to include in their transmission owner-specific formula rates, on compliance, additional measures to protect municipal utilities, cooperatives, and other direct wholesale customers from bearing an excessive share of Large Load-related zonal costs. The PJM Transmission Owners are also committing to include in their formula rates cost information regarding transmission upgrades needed to provide service to Large Loads. This information will address both the transparency concerns identified by the Commission in the Show Cause Order, as well as provide state authorities with information relevant to any further allocation of those costs at the retail level.

4. Extending the rate design elements associated with the new transmission services required by the Commission in the Co-Located Load Paper Hearing Order to encompass the ability of Large Loads to take these new transmission services, which the PJM Transmission Owners understand PJM will be proposing in its own section 205 filing. The rate design also includes appropriate crediting provisions for the new transmission services required by the Commission to ensure that non-firm transmission revenues are used to offset rates paid by firm transmission customers. Moreover, the PJM Transmission Owners' proposal includes financial penalties for unreserved use of the transmission system that will apply to transmission service being taken on behalf of both Co-Located Load and Large Loads. These penalties will work in coordination with PJM's operational consequences both to ensure the reliable operation of the system and protect other transmission ratepayers from unfairly subsidizing customers that fail to abide by their contractual limits.

## II. BACKGROUND

### A. PJM Transmission Owner Filing Rights

As the Commission has noted, the PJM Transmission Owners have exclusive and unilateral rights regarding the cost allocation provisions of Schedule 12 of the Tariff.[16] The PJM Transmission Owners relied on those same authorities in their February 23, 2026 paper hearing brief in explaining their rights and obligations under the Consolidated Transmission Owners Agreement to develop and file the rates for the new transmission services that the Commission has required for Co-Located and Large Loads.[17] The Show Cause Order recognized the PJM Transmission Owners may submit this filing proposing revisions to the Tariff pursuant to their applicable FPA section 205 filing rights.[18]

### B. Procedural Background

#### 1. Co-Located Load Orders and Remaining Compliance Obligations.

On February 20, 2025, the Commission instituted a proceeding under section 206 of the FPA based on its preliminary concern that the Tariff did not address with sufficient clarity or consistency the rates, terms, and conditions applicable to co-location arrangements.[19]

---

[16] *See Neptune Regional Transmission System, LLC and Long Island Power Auth. v. PJM Interconnection, L.L.C.*, 175 FERC ¶ 61,247 at P 47 (2021), and *PPL Electric Utils. Corp.*, 177 FERC ¶ 61,123 at PP 34, 36 (2021); *see also* Tariff, Part I, Section 9.1(a).

[17] *See* Initial Brief and Joint Responses of the Indicated PJM Transmission Owners to Paper Hearing Questions at 3 & nn.7-9, Docket Nos. EL25-49, *et al*. (filed Feb. 23, 2026) ("PJM Transmission Owners Initial Paper Hearing Brief").

[18] *See* Show Cause Order at P 38.

[19] *PJM Interconnection, L.L.C.*, 190 FERC ¶ 61,115 at PP 1-5 (2025).

On December 18, 2025, the Commission found the Tariff to be unjust and unreasonable and established a framework under which an Eligible Customer taking transmission service on behalf of Co-Located Load must take: (1) NITS, including interim non-firm service pending completion of the Network Upgrades required for permanent NITS; (2) FCDS; or (3) NFCDS. The Commission also established a paper hearing to determine the just and reasonable rates, terms, and conditions for those services.[20]

The PJM Transmission Owners submitted an initial brief on February 23, 2026, a response to PJM's initial brief on March 25, 2026, and a reply brief on April 24, 2026, addressing the rates and related measures applicable to the new services.[21] On June 18, 2026, the Commission resolved the paper hearing issues and directed further compliance filings by PJM and the PJM Transmission Owners. Among other matters, the Commission addressed the rate treatment for FCDS, NFCDS, and Interim NITS and the imposition of financial penalties for unreserved transmission use.[22] Notably, the Commission accepted the PJM Transmission Owners' proposals with respect to the rates for FCDS and Interim NITS, as well as financial penalties for unreserved use. The Commission, however, required the PJM Transmission Owners to adopt a lower minimum rate or discount for NFCDS below the Firm Contract Demand rate.

On August 17, 2026, PJM and the PJM Transmission Owners submitted partial compliance filings implementing Interim NITS.[23] The PJM Transmission Owners' filing established the Interim NITS rate and made related conforming Tariff revisions.[24] The present filing implements the PJM Transmission Owners' remaining compliance obligations associated with the Co-Located Load Paper Hearing Order and makes the revisions to the August 17, 2026 filing required to integrate the remaining new services and their application to eligible Large Loads.[25]

---

[20] *PJM Interconnection, L.L.C.*, 193 FERC ¶ 61,217 at PP 2, 160, 193-220 (2025) ("December 18 Show Cause Order").

[21] PJM Transmission Owners Initial Paper Hearing Brief; Joint Response of the Indicated PJM Transmission Owners, Docket Nos. EL25-49, *et al*. (filed Mar. 25, 2026); PJM Transmission Owners Reply Brief, Docket Nos. EL25-49, *et al*. (filed Apr. 24, 2026) ("PJM Transmission Owners Reply Brief").

[22] Co-Located Load Paper Hearing Order at PP 398-412, 517, 529.

[23] PJM Transmission Owners Partial Compliance Filing, Docket No. ER26-3537-000 (filed Aug. 17, 2026) ("PJM Transmission Owners August 17 Compliance Filing" or "August 17 Compliance Filing"); PJM Compliance Filing, Docket No. ER26-1479-002 (filed Aug. 17, 2026) ("PJM August 17 Compliance Filing").

[24] Because PJM's companion filing modifies the effective date of certain Tariff provisions that were included in PJM's August 17 Compliance Filing, the PJM Transmission Owners intend to withdraw their August 17 Compliance Filing. Accordingly, the PJM Transmission Owners are including in this section 205 filing the corresponding Tariff revisions previously submitted with the August 17 Compliance Filing, except for the definition of "Co-Located Gross Demand," which is no longer necessary.

[25] *See infra* Section II.B.1 and 2.

### 2. Large Load Show Cause Order and Section 205 Proposal.

On June 18, 2026, the Commission instituted a separate section 206 proceeding concerning the integration of Large Loads in PJM. The Commission preliminarily identified concerns regarding:

1. The application, study, and continuing operational requirements applicable to Eligible Customers seeking transmission service on behalf of Large Loads;

2. Transparency concerning the Network Upgrade costs associated with that service, a *pro forma* CRA to mitigate cost shifting risks, and a mechanism to ensure CRA payments are credited toward the revenue requirement consistent with the Commission's cost-of-service regulations;

3. Transmission-service options for flexible Large Loads; and

4. The rates, terms, and conditions applicable to generation serving electrically proximate Large Load or Co-Located Load.[26]

### 3. Abeyance Request.

The Commission expressly contemplated that PJM and the PJM Transmission Owners could address some or all of the concerns identified in the Show Cause Order through affirmative section 205 filings covering matters within their respective filing rights.[27] On August 14, 2026, the Commission granted the PJM Transmission Owners' requested abeyance to permit the PJM Transmission Owners to develop one or more section 205 filings.[28] The Commission explained that the anticipated PJM Transmission Owner filings would address matters including rates for the new transmission services, *pro forma* CRAs, and financial penalties. It also provided that a respondent's submission of a section 205 filing by November 16, 2026, would suspend that respondent's obligation to answer the Show Cause Order pending further Commission action.[29]

The PJM Transmission Owners submit the present filing following that section 205 path. The proposed Tariff revisions address the Commission's preliminary findings, and the PJM Transmission Owners therefore request that the Commission accept the revisions under section 205 and, as appropriate, resolve, terminate, or continue to hold in abeyance the corresponding aspects of the pending section 206 proceeding. Specifically, the *pro forma* CRA, the application of the new transmission-service rates and financial penalties to eligible Large Loads, and the proposed transparency and customer protection measures address the Show Cause Order's preliminary findings within the PJM Transmission Owners' applicable rate design and cost allocation filing rights. The filing also establishes the cost allocation and cost recovery treatment

---

26 Show Cause Order at PP 35, 41-101.

27 *Id*. at PP 38-39.

28 *PJM Interconnection, L.L.C.*, 196 FERC ¶ 61,129 at P 9 (2026).

29 *Id*. at PP 5, 10.

for the portfolio of transmission reinforcements identified through PJM's separately proposed Fast Energization Process.

## III. DISCUSSION

### A. *Pro Forma* Cost Recovery Agreement and Related Tariff Provisions

The PJM Transmission Owners' proposed *pro forma* CRA addresses the Show Cause Order's preliminary findings that the PJM tariff should include an agreement requiring a minimum contribution towards a transmission owner's revenue requirement to protect against cost shifting if a Large Load does not go into service or ends up taking less transmission service than anticipated.[30] As further detailed in the Blazunas and Hammer Direct Joint Testimony and below, the *pro forma* CRA accomplishes this through imposing on Large Load Customers a financially secured minimum transmission-revenue contribution commitment associated with the amount of firm transmission service requested from PJM on behalf of a Large Load.[31] The CRA is executed after completion of the applicable Transmission Owner's retail interconnection study process and before the Eligible Customer proceeds through PJM's applicable transmission-service process. The Large Load Customer must identify and reflect in the CRA its: (i) anticipated load demand, (ii) proposed schedule for ramping up such demand, if any, and (iii) anticipated dates for each stage of service. Together with the corresponding amount and type of firm transmission service that an Eligible Customer intends to request on the Large Load Customer's behalf, this information forms the Large Load's initial financial commitment and credit support obligations while the customer's transmission service request is processed and studied by PJM.

Following completion of PJM's transmission study and service process, the CRA will be updated to reflect any necessary modifications to the load ramp and the dates on which each scheduled level of service will become effective, based on the outcome of the PJM study process. The resulting information determines the Large Load's "Firm Load Commitment," which serves as the benchmark for the CRA's ongoing financial protections. No less than annually, beginning when the Large Load takes service, the applicable Transmission Owner will calculate the minimum transmission-revenue contribution associated with the Firm Load Commitment, referred to as the Committed Revenue Contribution. The Transmission Owner will compare that amount with qualifying revenues attributable to firm transmission service actually taken to serve the Large Load, referred to as the Actual Revenue Contribution. If the Actual Revenue Contribution is less than the Committed Revenue Contribution for such a period (referred to as a "Measurement Period") the Large Load Customer pays only the difference, referred to as the Shortfall Amount. Credit support secures the Large Load Customer's obligations to pay any Shortfall Amount, and the CRA's early- and partial-termination provisions protect the applicable portion of the remaining

---

30 Show Cause Order at PP 80-81.

31 Blazunas and Hammer Direct Joint Testimony at 32-37.

projected revenue contribution if the transmission request or commitment is withdrawn, or the Large Load is abandoned or terminated, or its capacity is permanently reduced.

### 1. The *Pro Forma* Cost Recovery Agreement and Related Tariff Provisions Balance the Timely Integration of Large Loads With Protection Against Cost Shifting.

The Commission preliminarily found that the Tariff may be unjust and unreasonable because it lacks adequate mechanisms to mitigate the risk of cost shifting when transmission facilities are developed to serve a Large Load that does not materialize or ultimately takes less transmission service than anticipated.[32] In those circumstances, anticipated transmission revenues may not be realized, leaving other transmission customers to bear a greater share of the applicable transmission costs. The Commission, therefore, preliminarily found that the Tariff should include a *pro forma* CRA requiring a minimum contribution toward the relevant Transmission Owner's transmission revenue requirement.[33]

The Commission identified several features such a agreements should contain.[34] The minimum contribution should be based on the level of jurisdictional transmission service, measured in MW, requested on behalf of the Large Load.[35] The agreement should also include Credit Support or other financial security sufficient to secure the required payment obligations.[36] Payments made under the agreement should be credited toward the applicable Transmission Owner's transmission revenue requirement in accordance with the Commission's cost-of-service regulations, with their formula rate treatment identified in an appropriate workpaper.[37]

The Transmission Owners' proposed CRA adopts those core elements and incorporates them into an integrated mechanism that operates over the term of the agreement, which will be a minimum of ten years, with the specific term to be negotiated between the applicable Transmission Owner and counterparties.

The proposal, which includes both minimum revenue contribution and financial security assurances, while providing flexibility to tailor certain aspects of the CRA to the individual Transmission Owner and customer parties, is intended to provide necessary ratepayer protections while promoting timely Large Load integration. The PJM Transmission Owners recognize the need to facilitate speed-to-power for Large Load growth, particularly data centers and other computational loads driving AI advances and other key technologies. They have therefore established a CRA framework under which projects can advance while their final service quantities and timing are determined through the applicable study and service processes. At the same time,

---

32 Show Cause Order at PP 77-81.

33 *Id*. at P 81.

34 *Id*. at PP 82-84.

35 *Id*. at P 83.

36 *Id*.

37 *Id*. at P 84.

as the Commission pointed out, existing transmission customers should not be required to absorb the revenue consequences of speculative or insufficiently developed projects. Such projects may prompt study, planning, engineering, procurement, or construction activity but do not proceed as represented.[38]

The CRA balances those interests by requiring a Large Load Customer to make a meaningful, financially-secured commitment after completing the applicable Transmission Owner's retail interconnection study process and before proceeding through PJM's Fast Energization Process. That requirement helps distinguish projects prepared to proceed from less-developed requests before additional PJM and Transmission Owner resources are devoted to them. This approach recognizes and addresses the Commission's concern that speculative or duplicative requests may delay the study process, distort forecasts, result in unnecessary transmission buildout, and shift costs when the anticipated load does not materialize. The Commission identified meaningful milestones and financial commitments as potential readiness measures that can help ensure that Large Load-related transmissions service requests are more viable and more likely to proceed as planned.[39] The CRA incorporates both measures by tying the Large Load Customer's commitment to defined project milestones and corresponding financial obligations.

The *pro forma* CRA included with this filing will not be the exclusive or presumptive vehicle for protecting against cost shifting among customers. Under the PJM Transmission Owners' proposal, Transmission Owners will be permitted to choose between utilizing the *pro forma* CRA or entering into a separate agreement. Any such separate agreement, in conjunction with applicable federal and state regulatory requirements, must result in minimum transmission service and credit standards, or comparable protections, as determined by the Commission.[40] This flexibility is a key aspect of, and is not severable from, the PJM Transmission Owners' *pro forma* CRA proposal. As discussed further below, the PJM Transmission Owners' proposal also provides transparency to state regulators and other interested parties regarding the costs of transmission facilities being constructed by the Transmission Owner to provide transmission service on behalf of Large Loads. This transparency will provide state commissions and other retail regulators access to information to assist them in allocating some amount of transmission rate costs specifically to Large Load classes of customers within their jurisdictions, if desired. Several PJM Transmission Owners also have existing Large Load cost-recovery or ratepayer-protection mechanisms already approved by their respective state commissions. These provisions appropriately recognize, as the Commission acknowledged in the Show Cause Order,[41] that cost recovery agreements and other ratepayer protection mechanisms have been, and continue to be,

---

38 *Id*. at P 81.

39 *Id*. at PP 56-57, 59.

40 Proposed Tariff, Part VIII, Subpart N, section 441(a)(ii).

41 Show Cause Order at P 69.

utilized at the retail and wholesale levels by utilities within PJM to provide commensurate protections against shifting costs to other customers.[42]

### 2. The CRA Assigns Distinct Responsibilities to the Transmission Owner, Large Load Customer, and Eligible Customer.

The Commission's preliminary finding contemplated a *pro forma* CRA among PJM, the relevant Transmission Owner, and the Eligible Customer taking transmission service on behalf of the Large Load, with the Eligible Customer responsible for the minimum contribution and associated financial security.[43] However, the Commission also acknowledged in the Show Cause Order that Transmission Owners have filed agreements under which minimum contributions to Commission-jurisdictional transmission revenue requirements are guaranteed directly by Large Load Customers, rather than by an Eligible Customer taking transmission service on the Large Load Customer's behalf.[44] In order to best account for each entity's distinct roles in PJM and align financial responsibility with control over the risk addressed by the *pro forma* CRA, the CRA proposed herein is structured as a three-party agreement between the applicable Transmission Owner, the underlying Large Load (referred to in the CRA as the "Large Load Customer"), and the Eligible Customer taking service on behalf of the Large Load Customer.[45]

The CRA assigns each Party the obligations corresponding to its role. The Large Load Customer owns, operates, leases, or otherwise controls the Large Load Facilities and therefore bears the CRA's payment and Credit Support obligations. Those obligations include: (i) providing and maintaining Credit Support;[46] (ii) paying any Shortfall Amount, Early Termination Amount, or Partial Termination Amount;[47] (iii) supplying information concerning the Large Load Facilities and project status;[48] and (iv) remaining responsible for those obligations regardless of a dispute with the Eligible Customer.[49] The Eligible Customer remains the transmission customer. It requests and takes Firm Transmission Service[50] under the Tariff on behalf of the Large Load Customer, pursues the applicable PJM process, and provides or authorizes access to the service, billing, settlement, and allocation information necessary to calculate and verify amounts under the CRA.[51] The Eligible Customer is not responsible for the Large Load Customer's payment or

---

42 Several Transmission Owners in PJM have processes already established and approved by their state commissions.

43 Show Cause Order at PP 77, 80-83.

44 *Id*. at P 82.

45 Proposed Tariff, Part VIII, Subpart N, section 441(a)(i).

46 Proposed *pro forma* CRA, Part IX, Subpart P at Article 6.

47 *Id.* at Article 5.3, 9.

48 *Id.* at Articles 5.6, 13.3, 14.1.

49 *Id.* at Article 15.

50 "Firm Transmission Service" is a new proposed definition that encompasses Network Integration Transmission Service, Firm Point-to-Point Transmission Service, and Firm Contract Demand Transmission Service.

51 Proposed *pro forma* CRA, Part IX, Subpart P at Article 5.6.

Credit Support obligations. The Transmission Owner calculates the Committed Revenue Contribution, Actual Revenue Contribution, Shortfall Amount, Credit Support Requirement, and any applicable termination amount; issues invoices; receives and administers Credit Support; performs required reconciliations; and accounts for and credits collected amounts through its applicable Commission-jurisdictional rate. The Eligible Customer is responsible for information-sharing and administrative functions necessary to implement the CRA, such as providing the Transmission Owner billing, settlement, load and allocation information needed to identify transmission rate revenues associated with the Large Load Customer.[52]

PJM is not a party to the CRA and does not hold or administer CRA Credit Support. The CRA supplements the underlying transmission-service arrangements but does not itself authorize transmission service, determine the amount of service available, or independently require construction of transmission facilities. Those matters remain governed by the Tariff, PJM's study and service processes, the applicable transmission-service agreement, and other relevant agreements.

The proposed *pro forma* CRA's assignment of direct payment and Credit Support obligations to the Large Load Customer, rather than the Eligible Customer, and its exclusion of PJM as a contractual counterparty are just and reasonable and consistent with the cooperative jurisdictional responsibilities of the Commission and the states contemplated by the FPA. This allocation of obligations more closely aligns financial responsibility with control over the risk addressed by the CRA. The anticipated transmission revenue contribution depends principally on whether the Large Load project proceeds, achieves the required readiness, begins taking service at the committed level, and continues operating during the CRA term. The Large Load Customer, as the entity that owns, operates, leases, or otherwise controls the Large Load Facilities, is best positioned to control those related decisions and circumstances. The Eligible Customer, by contrast, may be an intermediary or unaffiliated load-serving entity that requests and takes transmission service on the Large Load Customer's behalf but does not control the Large Load Customer's construction, financing, readiness, demand, or ongoing operation.

Requiring the Eligible Customer to secure the Large Load Customer's revenue commitment could therefore place the financial exposure on an entity that does not control whether the underlying Large Load Customer develops and operates its project as represented and, at a minimum, would require in many cases the implementation and administration of duplicative and overlapping financial obligations. For instance, if the Eligible Customer is an electric distribution company, it would need to have in place and maintain appropriate additional agreements to ensure that any obligations imposed on it would be assigned to the relevant Large Load, and impose adequate security to cover those subsidiary obligations. This structure could be extremely costly (costs that would ultimately be borne by all ratepayers) and, burdensome to administer, particularly for those companies acting as Eligible Customers on behalf of multiple Large Loads. The proposed *pro forma* CRA instead gives the Transmission Owner direct recourse to the real party in interest, namely, the load entity whose interconnection drives the need for the protections underlying the

---

[52] *Id*. at Article 5.6.

CRA, while preserving the Eligible Customer's responsibility for the transmission-service, information-sharing, and administrative functions necessary to implement the arrangement.

This structure is consistent with and respects the jurisdictional boundaries between the Commission and state regulators. The CRA does not eliminate or diminish the requirement that transmission service be taken by an Eligible Customer, or otherwise serve to grant, provide or otherwise convey transmission service under the Tariff.[53] Nor does it establish or govern any terms and conditions of retail service. Rather, the CRA provides a payment and credit support mechanism to ensure that the Large Load Customer's committed transmission-revenue contribution is satisfied. It is the Large Load Customer whose decision to develop and operate the Large Load drives the need for the FERC-jurisdictional transmission service requested on its behalf, and whose commitments inform the amount of service and associated costs. It is therefore appropriate, and jurisdictionally sound, to place the financial risks addressed by the CRA on the Large Load directly.

This approach accords with the Show Cause Order and Commission precedent. As noted above, the Commission recognized existing agreements under which Large Load Customers directly guarantee minimum contributions to Transmission Owners' Commission-jurisdictional transmission revenue requirements. It requested briefing on whether those agreements could satisfy the contemplated CRA requirement where they provide comparable or greater protection, including by avoiding duplicative Credit Support and transaction costs.[54] The Commission has likewise accepted Commission-jurisdictional agreements under which individual Large Load Customers directly assumed financial commitments associated with anticipated transmission revenues, even though those customers did not themselves take transmission service under the Tariff.[55]

### 3. The CRA Establishes and Maintains the Service Commitment on Which its Financial Protections are Based.

The CRA identifies the Large Load Customer's anticipated load demand, proposed load ramp, and anticipated timing for each stage of service, upon which the Large Load Customer's financial commitment will be based.[56] As part of each Transmission Owner's or affiliate's retail load interconnection process, the Large Load customer will identify the amount of load it anticipates adding to the system along with any ramping schedule for bringing that load online over a defined period. Following completion of the applicable Transmission Owner's load interconnection study process, the Parties execute the CRA based on the amount of transmission service that the Eligible Customer will request from PJM on behalf of the Large Load Customer in order to accommodate its anticipated demand, including any associated ramping schedule. Exhibit A to the CRA records that preliminary information, together with the corresponding

---

53 *Id.* at Article 11.3.

54 Show Cause Order at P 82.

55 *See, e.g.*, *Commonwealth Edison Co.*, 194 FERC ¶ 61,109 (2026); *Commonwealth Edison Co.*, 194 FERC ¶ 61,183 (2026).

56 Proposed *pro forma* CRA, Part IX, Subpart P at Article 3.1.

amount and type of Firm Transmission Service that the Eligible Customer intends to request on the Large Load Customer's behalf (the "Initial Load Commitment"), the dates upon which service is estimated to begin, and any expected ramp to the project's full requested load.[57] The Initial Load Commitment is backed by Credit Support while the PJM transmission service study process is pending.

Execution of the CRA and provision of the required Credit Support are conditions to proceeding through the applicable PJM process.[58] This financial commitment provides assurance that the project is real, deters speculative requests, and protects other transmission customers if the Eligible Customer, on behalf of the Large Load Customer, withdraws or abandons the request, the Large Load Customer elects to reduce the amount requested, or the Eligible Customer refuses to execute the resulting Final PJM Agreement.

Following completion of the PJM process, the Eligible Customer enters into the Final PJM Agreement, which identifies the Firm Transmission Service to be taken on behalf of the Large Load Customer. The Transmission Owner will then update the CRA to reflect the outcome of the PJM process.[59] If the Final PJM Agreement determines that Firm Transmission Service will not be available in order to accommodate a Large Load's load ramp schedule as reflected in the Initial Load Commitment, because necessary IRRs will not be in service at the required times, the CRA will be updated accordingly. The resulting new schedule for bringing the Large Load's load online becomes the "Firm Load Commitment." A change to the timing or interim levels of the load ramp based on PJM's determination of when the requested Firm Transmission Service can feasibly be provided does not trigger any financial liability for the Large Load Customer.[60] By contrast, if the Large Load Customer elects to reduce the final amount of Firm Transmission Service requested on its behalf during the PJM process (*e.g.*, by reducing the overall size of its facility), that customer-elected reduction is subject to the CRA's partial-termination provisions and payment by the Large Load Customer of a portion of the expected revenues associated with the Firm Transmission Service that would have been taken to serve its full originally committed load amount (the "Partial Termination Amount").[61]

This approach balances the interests of the Large Load Customer and transmission customers. The Large Load Customer is not charged a termination amount merely because PJM determines that the requested schedule for obtaining firm transmission service based on its planned load ramp is not feasible given the necessary IRRs and their anticipated in-service dates. At the same time, if the Eligible Customer, on behalf of the Large Load Customer, withdraws or abandons the Firm Transmission Service request during the PJM process, or refuses to execute the resulting Final PJM Agreement, the withdrawal, abandonment, or refusal constitutes an early termination

---

57 *Id*. at Article 3.1.

58 Proposed Tariff, Part VIII, Subpart N, section 441(d).

59 Proposed *pro forma* CRA, Part IX, Subpart P at Article 3.2.

60 *Id*. at Article 3.2.

61 *Id*. at Article 9.

and requires the Large Load Customer to pay the applicable Early Termination Amount.[62] A customer-elected reduction in the amount requested constitutes a partial termination and requires payment of the applicable Partial Termination Amount.[63] This appropriately requires the Large Load Customer to make a tangible financial commitment as part of its completion of the Transmission Owner's retail interconnection process, and before entering the PJM process. Doing so discourages speculative and potentially duplicative study requests that would clog the PJM process. It also promotes the efficient use of PJM and Transmission Owner study and planning resources by requiring the Large Load Customer to assume the financial consequences of withdrawing, abandoning, or voluntarily reducing the request after those processes have begun.

To be clear, the CRA does not assign the Large Load Customer the costs of particular IRRs or a project-specific share of the IRR portfolio. The CRA and Schedule 12, which as discussed below establishes the cost allocation for IRRs, serve distinct functions: Schedule 12 governs the allocation and recovery of the revenue requirements associated with IRRs, while the CRA establishes the minimum Firm Transmission Service-related revenue contribution associated with the Large Load Customer's commitment.[64]

#### 4. Credit Support Gives Financial Substance to the Large Load Customer's Commitment.

As discussed above, the proposed *pro forma* CRA commits the Large Load Customer to a transmission-revenue contribution and related payment obligations based on the level of transmission service. To ensure that obligation, the Commission identified credit support as an important component of the contemplated cost recovery agreement.[65] To implement that requirement, the CRA requires the Large Load Customer to provide Credit Support shortly after the Parties execute the agreement.[66] Under proposed Tariff, Part VIII, Subpart N, section 441, execution of a CRA, or a qualifying alternative agreement, and provision of the required security are conditions to proceeding through the applicable PJM Fast Energization Cycle and obtaining Firm Transmission Service.[67]

This sequencing gives financial weight to the Large Load Customer's preliminary commitment before additional studies are performed by PJM and development activity occurs.

---

62 Blazunas and Hammer Direct Joint Testimony at 39-40.

63 *See infra* Section III.A.5 below, which discusses the parameters of partial and early termination, and the associated financial consequences to a Large Load Customer based on when and the circumstances under which it terminates the CRA. *See also* Blazunas and Hammer Direct Joint Testimony at 39-40.

64 As discussed below, the PJM Transmission Owners are committing to provide cost information regarding IRRs in their formula rate templates which will: (1) allow PJM to allocate and invoice the charge to recover the costs of IRRs, (2) assist in satisfying the Commission's findings in the Show Cause Order regarding enhanced transparency, and (3) assist state commissions and other retail regulators if they choose to allocate the costs of IRRs recovered through transmission rates to Large Load customers at the retail level.

65 Show Cause Order at P 83.

66 Blazunas and Hammer Direct Joint Testimony at 37.

67 Proposed Tariff, Part VIII, Subpart N, section 441(a).

The CRA helps cement those Large Load Customers that are prepared to assume the financial consequences of their requested service, while giving customers advance notice through the *pro forma* CRA of the obligations required to proceed. The initial Credit Support Requirement is based on the service amount and timing reflected in the CRA at execution. More specifically, the Initial Credit Support Requirement equals the aggregate projected charges associated with 100 percent of the Initial Load Commitment over the CRA term.[68] Following execution of the Final PJM Agreement, the Transmission Owner recalculates the requirement using 100 percent of the projected charges associated with the updated Firm Load Commitment and remaining Service Dates.[69]

As discussed in the Blazunas and Hammer Direct Joint Testimony, over the term of the CRA, the Large Load Customer's credit support requirement is adjusted to reflect its obligations as those remaining obligations evolve.[70] As each Measurement Period is completed, the revenues attributable to service for the Large Load Customer and any resulting Shortfall Amount are determined.[71] Once the Large Load Customer has satisfied the obligations for that period, the amounts of those obligations are subtracted from the Credit Support calculation.[72] The secured amount therefore declines as the underlying exposure is resolved rather than remaining fixed at its initial level throughout the CRA term. Projected future transmission-service revenues do not reduce Credit Support before those revenues are realized. The Credit Support protects against the failure of those anticipated revenues to materialize, which would be detrimental to other customers. The Credit Support remains as collateral unless and until it is applied to an amount actually due. A draw made only to preserve the value of an expiring or nonconforming letter of credit does not itself constitute payment or revenue. A draw for nonpayment is limited to the amount due and unpaid.[73]

### 5. Early and Partial Termination Payments Protect the Commitment if the Project Exits or the Firm Load Commitment is Reduced.

As further discussed in the Blazunas and Hammer Direct Joint Testimony, Credit Support secures the Large Load Customer's obligations, including amounts payable if the project terminates or the Large Load Customer elects to reduce permanently the amount of Firm Transmission Service requested on its behalf or, after execution of the Final PJM Agreement, the Firm Load Commitment before the end of the CRA term.[74] Before execution of the Final PJM Agreement, withdrawal or abandonment of the Firm Transmission Service request, refusal to

---

68 *See* proposed *pro forma* CRA, Part IX, Subpart P at Exhibit C; *see also* Blazunas and Hammer Direct Joint Testimony at 37.

69 *See* proposed *pro forma* CRA, Part IX, Subpart P at Exhibit C; *see also* Blazunas and Hammer Direct Joint Testimony at 37.

70 Blazunas and Hammer Direct Joint Testimony at 38-39.

71 Proposed *pro forma* CRA, Part IX, Subpart P at Article 5.

72 Blazunas and Hammer Direct Joint Testimony at 37-39.

73 Proposed *pro forma* CRA, Part IX, Subpart P at Article 6.6.

74 *Id.* at Article 9 and Exhibit D; Blazunas and Hammer Direct Joint Testimony at 39-40.

execute the resulting agreement, or a reduction in the requested service may trigger an Early Termination Amount or Partial Termination Amount.[75]

After execution of the Final PJM Agreement, voluntary termination, permanent reduction of the Firm Load Commitment, abandonment or cessation of the project, specified readiness failures, or an uncured default may trigger the corresponding payment obligation.[76] A modification to the timing or interim levels of the load ramp resulting from PJM's determination of when the requested Firm Transmission Service can feasibly be provided does not constitute a Partial Termination. Failure to achieve the readiness necessary to take the applicable Firm Transmission Service within the period specified in the CRA may constitute a Partial Termination or, following the initial Service Date, support termination based on project abandonment or cessation.[77] The Early Termination Amount protects a specified portion of the revenue contribution projected for the remainder of the CRA term:

> **Early Termination Amount = (Applicable Termination Percentage × Present Value of Remaining Projected Committed Revenue Contributions) − Applicable Credits**

The Applicable Termination Percentage increases as the project advances.[78] Under the current proposal, the percentage is 25 percent before execution of the Final PJM Agreement, 50 percent during the first 180 days after execution, 75 percent thereafter until the first Service Date, and 100 percent on and after the first Service Date.[79] This graduated increase in financial obligations gives the initial commitment economic substance, while recognizing that early-stage withdrawal or change in load commitment is likely to have fewer detrimental impacts on other customers and the overall efficiency of the process, as compared to terminations that occur after the end of PJM's process and closer to the Large Load's planned in-service date.[80] It also reflects the increasing reliance that may be placed on the Large Load Customer and its anticipated revenue contribution as Transmission Owners undertake engineering, procurement, construction, and other development activities with respect to the IRRs needed to serve the Large Load Customer and other customers in the applicable PJM study cluster.

The termination provisions serve an important project-readiness function. They are appropriately not limited to the recovery of costs that can be traced to particular transmission facilities or stranded investments. By requiring a Large Load Customer to commit to a meaningful financial stake as the project advances, the termination provisions also discourage speculative or insufficiently developed requests from entering and remaining in the transmission service process. This structure advances the Commission's objective of using meaningful financial commitments

---

75 Proposed *pro forma* CRA, Part IX, Subpart P at Article 9.1.

76 *Id.* at Article 9.

77 *Id.* at Articles 9.2, 9.3.

78 *See* Blazunas and Hammer Direct Joint Testimony at 40-42.

79 Proposed *pro forma* CRA, Part IX, Subpart P at Exhibit D.

80 Blazunas and Hammer Direct Joint Testimony at 41-42.

to improve the viability of Large Load-related transmission service requests and reduce the potential for speculative requests to consume study and planning resources or distort transmission planning assumptions. It also reduces the potential that speculative requests will adversely affect other Large Load-related transmission service requests and their ability to receive service in a timely manner.[81]

Payment of a Partial Termination Amount applies only to the portion of the commitment permanently reduced.[82] Amounts already received or applied to the same prospective exposure, including qualifying Credit Support proceeds and identifiable replacement-load revenues, reduce the termination amount. The termination obligations are therefore protective rather than punitive: they are tied to the remaining projected revenue contribution, adjusted according to the Large Load Customer's stage in the process, and reduced by amounts already recovered or otherwise attributable to the same exposure.

As discussed in Section 10 below, proposed CRA section 9.12 and proposed Tariff, Part VIII, Subpart N, section 441(e) govern the application and distribution of termination amounts collected before the first Service Date.

### 6. Service Dates Determine When the Periodic Revenue Commitment Begins.

If the Large Load Customer proceeds, each portion of the recurring revenue commitment begins on the corresponding Service Date identified in CRA, Exhibit A. For an authorized load ramp included in the CRA, the Committed Revenue Contribution increases as the scheduled stages of the Firm Load Commitment become effective. The CRA also accounts for circumstances in which Firm Transmission Service cannot begin because necessary transmission facilities have not been completed.[83] If the delay is not caused by the Large Load Customer's or Eligible Customer's failure or lack of reasonable diligence, the affected Service Date and corresponding contribution are extended until the service becomes available.[84] If a qualifying transmission-facility delay reaches the threshold specified in the CRA, the Large Load Customer may accept revising the timing to ramp up its load or terminate under the CRA's limited delay provision.[85] The qualifying delay period is excluded when determining the applicable termination milestone so that the Large Load Customer does not move into a higher termination percentage solely because of a delay it did not cause.

---

81 Show Cause Order at P 56.

82 Proposed *pro forma* CRA, Part IX, Subpart P at Exhibit D, Section 5.

83 *Id.* at Article 5.5.

84 *Id.* at Article 5.5.

85 *Id.* at Article 9.6.

### 7. The CRA Establishes a Minimum Revenue Contribution Based on the Firm Load Commitment.

The Early and Partial Termination Amounts discussed above address the remaining projected revenue exposure if the Large Load Customer exits or permanently reduces its Firm Load Commitment. By contrast, if the Large Load Customer proceeds, the Committed Revenue Contribution defines the minimum periodic transmission-revenue contribution required under the CRA once the applicable Service Dates begin.[86] Beginning on the applicable Service Dates, the Transmission Owner determines the revenues that would be associated with Firm Transmission Service corresponding to the Firm Load Commitment and applies the Minimum Commitment Percentage specified in Exhibit A. The resulting amount is the Committed Revenue Contribution:

**Committed Revenue Contribution = Minimum Commitment Percentage × Full Firm Transmission Service Benchmark**[87]

The Minimum Commitment Percentage may vary between 80 and 100 percent, and may change over the CRA term under a schedule identified in Exhibit A.[88] As discussed in the Joint Blazunas and Hammer Direct Joint Testimony, the proposed Minimum Commitment Percentage is reasonable because it establishes "a meaningful minimum revenue commitment while allowing individual Transmission Owners to require a higher commitment where appropriate based on their particular circumstances."[89] Together with the authorized load ramp and applicable Service Dates, this flexibility allows the Committed Revenue Contribution to reflect the Large Load's individual circumstances, including its expected progression and the timing of the associated transmission-revenue exposure. This structure implements the Commission's preliminary view that the minimum contribution should be related to the MW level of jurisdictional transmission service requested on behalf of the Large Load, while accommodating the request's progression toward full service.[90]

### 8. The CRA Recognizes Revenues Actually Produced as a Result of the Transmission Service Provided.

The Committed Revenue Contribution establishes the minimum periodic contribution required under the CRA.[91] For each Measurement Period, the Transmission Owner compares that amount with the Actual Revenue Contribution, which consists of the qualifying revenues attributable to Firm Transmission Service actually taken by the Eligible Customer to serve the Large Load Customer.[92] The Committed Revenue Contribution and the revenues credited against

---

86 *Id.* at Article 5.1.

87 Blazunas and Hammer Direct Joint Testimony at 37-38.

88 *Id*. at 35-37.

89 *Id*. at 36-37.

90 Show Cause Order at P 83.

91 Blazunas and Hammer Direct Joint Testimony at 35-36.

92 Proposed *pro forma* CRA, Part IX, Subpart P at Article 5.2 and Exhibit B.

it are calculated using corresponding categories of transmission charges.[93] This ensures a consistent comparison and gives the Large Load Customer credit for all qualifying revenues corresponding to the charges included in that calculation.

Because the Eligible Customer takes the underlying transmission service, it must provide or authorize access to the billing, settlement, load, and allocation information needed to identify the revenues attributable to the Large Load Customer.[94] That information-sharing obligation allows the Transmission Owner to administer the CRA while preserving the Large Load Customer's separate responsibility for the financial obligations. The CRA also accommodates existing retail arrangements. To the extent the Large Load Customer makes separate payments through a retail tariff or other retail mechanism that reflect the assignment of Firm Transmission Service or related costs to the Large Load Customer, those payments are taken into account in determining the Actual Revenue Contribution, insofar as doing so does not shift costs to other Eligible Customers taking service in the Transmission Owner's Zone.[95] This treatment recognizes qualifying retail payments without permitting the associated transmission costs to be shifted to other customers.

### 9. Under the CRA, the Large Load Customer Pays Only the Resulting Shortfall.

At the end of each Measurement Period, the Transmission Owner compares the qualifying revenues attributable to the Large Load Facilities with the Committed Revenue Contribution:

**Shortfall Amount = Committed Revenue Contribution − Actual Revenue Contribution**

If recognized revenues equal or exceed the committed amount, no Shortfall Amount is due under the CRA.[96] If recognized revenues are lower, the Large Load Customer pays only the difference.[97] The Shortfall Amount is therefore a true-up of the agreed minimum contribution, not a second charge for the same Firm Transmission Service. The Eligible Customer continues to pay the charges imposed under the Tariff for service actually taken, and the qualifying revenues produced by that service are credited against the Committed Revenue Contribution before any CRA payment is calculated.

This mechanism protects other transmission customers by ensuring receipt of the minimum contribution associated with the Large Load commitment.[98] The Large Load Customer receives

---

93 *Id*. at Article 5.1.

94 *Id*. at Article 5.6.

95 *Id*. at Article 5.2.

96 *Id*. at Article 5.3.

97 *See* proposed *pro forma* CRA, Part IX, Subpart P at Article 7; *see also* Blazunas and Hammer Direct Joint Testimony at 32-34.

98 *Id*. at 35-36.

credit for the qualifying revenues actually produced by service to its facilities and does not pay both ordinary transmission-service charges and a duplicative CRA payment for the same contribution. Although the mechanism is principally intended to protect other transmission customers from cost shifting, the CRA includes procedural and substantive safeguards to ensure that the Large Load Customer pays no more than the amount properly due. The Transmission Owner must support any invoiced Shortfall Amount, and the Large Load Customer may review and dispute the calculation.[99] Payment and Credit Support obligations remain in effect during the dispute, but any overpayment or excess draw must be returned after the dispute is resolved.

**10. Pre-Service Date Termination Amounts are Shared Among Affected Transmission Owners, and Collected Amounts are Credited Without Duplicate Recovery.**

The Commission stated that CRA payments should reduce the applicable Transmission Owner's transmission revenue requirement consistent with the Commission's cost-of-service regulations and contemplated a formula rate workpaper showing that treatment.[100] Consistent with that guidance, collected Shortfall Amounts reduce the applicable transmission revenue requirement and remain subject to the Transmission Owner's formula rate protocols and Commission review.[101] Credit Support remains collateral unless and until it is applied to an amount due.

CRA section 9.12 provides that, if an Early Termination Amount or Partial Termination Amount is payable before the first Service Date, the collected amount is first applied to Project Development Costs in accordance with proposed Tariff, Part VIII, Subpart N, section 441(e). This treatment recognizes that facilities needed to serve a Large Load may be cancelled or otherwise abandoned as a result of Early or Partial Termination by one or more Large Load Customers. Moreover, because multiple Transmission Owners may be affected by such IRR cancellations or abandonments resulting from the termination of a Large Load Customer, Early or Partial Termination by a Large Load Customer could result in the cancellation of projects not only by the Transmission Owner that is the signatory to the applicable CRA, but also by other Transmission Owners within PJM.

Proposed Tariff, Part VIII, Subpart N, section 441(e) addresses this situation by providing a mechanism for the distribution of Partial and Early Termination Amounts among the contracting Transmission Owner and other eligible Transmission Owners based on their respective *pro rata* shares of the applicable Eligible Costs, if any, which are derived from costs reported on the applicable Transmission Owner's FERC Form 1.[102] This sharing mechanism prevents the entire

---

99 Proposed *pro forma* CRA, Part IX, Subpart P at Articles 7.4, 7.5.

100 Show Cause Order at P 84.

101 Proposed *pro forma* CRA, Part IX, Subpart P at Article 7.6.

102 Eligible Costs are defined as all expenditures, costs, and cancellation fees incurred or due to commitments made by the third-party Transmission Owner to engineer, design, procure, construct, own, operate, maintain, and service the Interconnection Reliability Reinforcements needed to serve the Eligible Customer taking transmission service on behalf of the Eligible Load or Large Load, but which will no longer be constructed, which (a) are incurred

payment from remaining with the contracting Transmission Owner while other affected Transmission Zones continue to bear costs associated with IRRs no longer needed. Any amount remaining after the application of Termination Amounts to Eligible Costs of the applicable Transmission Owner is credited to the contracting Transmission Owner's transmission revenue requirement to the benefit of other customers in the Zone. If termination occurs on or after the first Service Date, the applicable termination amount is credited to the Transmission Owner's Transmission Revenue Requirement for the Transmission Zone in which the Eligible Customer would have taken Firm Transmission Service. The different treatment reflects the change in the nature of the protected exposure. Before the first Service Date, termination may result in Eligible Costs associated with the cancellation or abandonment of facilities being constructed by Transmission Owners; after service begins, the termination amount solely protects other customers in the amount of the remaining prospective revenue contribution under the CRA, which is tied to the contracting Transmission Owner's zonal transmission revenue requirement. In neither case do Transmission Owners benefit financially from the allocation of Termination Amounts.

The CRA and proposed Tariff provisions contain additional protections against double recovery.[103] Actual revenues reduce periodic Shortfall Amounts; amounts already applied to the same exposure reduce termination obligations; qualifying retail and replacement-load revenues are recognized where appropriate; and collateral is not treated as revenue until applied. In addition, a Transmission Owner may not seek recovery through an abandoned-plant filing or another proceeding for amounts already received through the Tariff, Part VIII, Subpart N, section 441(e) distribution process. Together, these provisions ensure that CRA recoveries follow the associated exposure across affected Transmission Owners without providing duplicative recovery.

### 11. The Proposed *Pro Forma* CRA and Generic Tariff Provisions Provide a Transparent and Flexible Cost Recovery Framework.

Proposed Tariff, Part VIII, Subpart N, sections 441(c) and (d) establish uniform procedures and deadlines for tendering, negotiating, executing, securing, and filing the CRA. Filing the CRA as a *pro forma* agreement gives Large Load Customers and Eligible Customers advance notice of the commitment, Credit Support, shortfall, termination, crediting, and information-sharing obligations that will apply when a Large Load-related transmission service request proceeds through PJM's Fast Energization Process, while permitting the project-specific terms contemplated by the form to reflect differences in service, timing, load ramp, and applicable rates.

As discussed above, the Tariff also permits existing or separate agreements to satisfy the CRA requirement where they provide comparable protection. Proposed section 441(a)(ii) permits a separate Commission-accepted agreement that, together with applicable federal and state requirements, establishes minimum Firm Transmission Service and credit standards or other

---

through the end of the calendar year in which notice of termination was received from the contracting Transmission Owner, and (b) are included in amounts reported in the Transmission Owner's FERC Form 1 covering that calendar year. *See* proposed Tariff, Part VIII, Subpart N, section 441(e)(ii).

[103] *See* Proposed Tariff, Part VIII, Subpart N, section 441(e); *see also* proposed *pro forma* CRA, Part IX, Subpart P at Exhibit D.

comparable protections against cost shifting. Section 441(b) preserves qualifying existing agreements, and section 441(e)(v) requires alternative agreements to contain reasonably comparable termination-payment crediting provisions.

The proposal also expressly preserves qualifying existing agreements.[104] Where a Large Load, including an anticipated load ramp, is already covered by a qualifying existing agreement, that agreement and the commitments reflected in it need not be replaced by the *pro forma* CRA merely because the new CRA framework becomes effective. The grandfathering provision thus preserves arrangements and commitments already in place under the existing framework.

### 12. The Proposed CRA is Just and Reasonable and Not Unduly Discriminatory or Preferential.

The CRA is just and reasonable because it implements the protections identified by the Commission while accommodating the practical requirements of Large Load development.[105] It permits projects to advance through the applicable load interconnection study and transmission service processes while establishing, at appropriate milestones, a defined and financially secured commitment corresponding to the Firm Transmission Service requested on their behalf. This structure supports the timely integration of viable Large Loads without requiring existing transmission customers to fully bear the revenue consequences if a project does not proceed as represented or takes less service than anticipated.

The CRA also assigns responsibilities according to the parties' respective roles. The Large Load Customer assumes the payment and Credit Support obligations associated with the project it controls. The Eligible Customer remains responsible for requesting and taking transmission service and providing the information necessary to administer the agreement. The Transmission Owner calculates and reconciles the applicable amounts, administers Credit Support, and credits collected amounts through its Commission-jurisdictional rate. PJM continues to administer the transmission-service study process. This allocation places each obligation with the entity best positioned to perform it without altering the established responsibilities for authorizing service or planning and constructing transmission facilities.

The Large Load Customer's financial commitment is also adjusted as the project develops. Before completion of PJM's process, the CRA is based on the Initial Load Commitment and secures the consequences of advancing the request. Following execution of the Final PJM Agreement, the commitment is conformed to the amount and timing of Firm Transmission Service established through PJM's process. The Credit Support Requirement is likewise recalculated, but it remains based on 100 percent of the projected full-service benchmark for the remaining term rather than on the Minimum Commitment Percentage or projected future actual revenues. If service begins, the Large Load Customer receives credit for qualifying revenues attributable to Firm Transmission Service actually taken to serve the Large Load Customer and pays only the resulting Shortfall Amount. If the project exits or is permanently reduced, the applicable

---

104 Proposed Tariff, Part VIII, Subpart N, section 441(b).

105 Blazunas and Hammer Direct Joint Testimony at 43.

termination obligation addresses the remaining prospective exposure based on the stage reached by the project and the amounts already recovered.

These protections support efficient transmission development while protecting customers in the precise fashion the Commission suggested in the Show Cause Order.[106] Requiring a defined commitment and Credit Support at identified stages gives PJM and the PJM Transmission Owners a more reliable basis for devoting study, planning, engineering, procurement, and construction resources to Large Load-related transmission service requests. At the same time, conforming the commitment to PJM's final service determination, recognizing qualifying actual and retail revenues, reducing Credit Support as obligations are resolved, and preventing duplicate recovery protect the Large Load Customer against obligations exceeding the exposure addressed by the CRA. Although the amount of Credit Support may exceed the periodic or termination amount ultimately payable because it is calculated using 100 percent of the projected benchmark, Credit Support remains collateral and does not determine or increase the underlying payment obligation.

The filed framework is also not unduly discriminatory or preferential. The *pro forma* CRA establishes the same core commitment, security, shortfall, termination, crediting, and information-sharing requirements for similarly situated Large Loads. Differences in service quantities, load ramps, Service Dates, calculation periods, applicable rates, and Credit Support reflect relevant differences in the service requested, project timing, and the applicable Transmission Owner's rate structure. Existing or separate agreements may substitute for the *pro forma* CRA only where they provide comparable protection against cost shifting, including appropriate service commitments, financial security, and treatment of termination payments.

Taken together, these provisions respond directly to the Commission's concerns while recognizing the scale and pace of Large Load development in PJM. They provide a workable framework for advancing projects prepared to make and secure the commitments on which transmission planning and investment will rely, while protecting existing transmission customers if the anticipated Firm Transmission Service contribution does not materialize. The resulting allocation of obligations is proportionate to the risks addressed, consistent with the parties' respective roles, and reasonably designed to support both Large Load integration and efficient transmission infrastructure development.

---

106 Show Cause Order at PP 81, 83-84.

### B. Transmission Service Rates and Related Charges for Co-Located Load and Large Load

#### 1. The Filing Satisfies the Remaining Co-Located Load Rate Compliance Directives.

##### a. Transmission Services.

The Co-Located Load Paper Hearing Order found the PJM Transmission Owners' rate treatment proposals for FCDS and Interim NITS just and reasonable.[107] However, the Commission rejected the PJM Transmission Owners' proposed NFCDS maximum rate and required a lower maximum rate or nondiscriminatory discounts supported by transparent calculations. Accordingly, the PJM Transmission Owners' filing implements the rate treatments already found just and reasonable for FCDS and Interim NITS through compliance tariff records,[108] and proposes a revised NFCDS discounted rate methodology and related tariff provisions in compliance with the Commission's directives.[109]

The Co-Located Load Paper Hearing Order also found the Tariff unjust and unreasonable because it does not include transmission services that reflect Eligible Customers taking transmission service on behalf of loads with behind-the-meter generation ("BTMG") that are willing and able to limit their energy withdrawals from the transmission system under certain conditions.[110] The Commission directed (i) PJM to revise its Tariff to extend the three new transmission services set forth in the December 18 Show Cause Order to Eligible Customers taking service on behalf of load with BTMG that are willing and able to limit their energy withdrawals from the transmission system under certain conditions, and (ii) the PJM Transmission Owners to reflect this change in their compliance filing.[111] Accordingly, the PJM Transmission Owners acknowledge in this compliance filing the extension of FCDS, NFCDS, and Interim NITS to Eligible Customers taking service on behalf of load with BTMG (*i.e.*, Eligible Load)[112] that includes necessary control technologies and/or protection systems that limit their energy withdrawals from the transmission system under certain conditions.

---

107 Co-Located Load Paper Hearing Order at PP 398, 572.

108 *Id*. at PP 398, 400, 401. As noted above, the PJM Transmission Owners are including with this filing the tariff changes from their August 17 Compliance that are still relevant due to the fact that PJM is requesting an earlier effective date for those provisions. The PJM Transmission Owners intend to withdraw the August 17 Compliance Filing shortly after the instant filing is made.

109 Co-Located Load Paper Hearing Order at PP 400, 401, 412.

110 *Id*. at P 101.

111 *Id*. at PP 101, 412, 572.

112 PJM defines "Eligible Load" in its Tariff as "Co-Located Load or load connected to Behind the Meter Generation." *See* Tariff, Part I (Definition of Eligible Load).

### 2. Financial Penalties for Unreserved Transmission System Use.

In the Co-Located Load Paper Hearing Order, the Commission determined that it is just and reasonable to impose financial penalties on Eligible Customers in any circumstance where the transmission customer uses a transmission service that it has not reserved.[113] The Commission directed the PJM Transmission Owners to effectuate on compliance their proposed penalty framework for financial penalties for Eligible Customers taking one of the three new transmission services that withdraw from the transmission system in excess of their contract demand level (*i.e.*, for unreserved use).[114] The Commission also noted that, on compliance, the PJM Transmission Owners' unreserved use penalties should be distributed to all non-offending transmission customers, not just Eligible Customers taking Interim NITS and FCDS, consistent with Order No. 890.[115] Accordingly, the PJM Transmission Owners' filing implements the financial penalty framework the Commission found just and reasonable, including the distribution of revenues collected from financial penalty charges to Eligible Customers taking NFCDS, in addition to firm customers.[116]

## C. Extension of Transmission Services and Financial Penalties for Unreserved Transmission System use to Eligible Large Load

In the Show Cause Order, the Commission asked PJM to explain whether the Tariff remains just and reasonable if the three new services for Co-Located Load customers (*i.e.*, Interim NITS, FCDS, and NFCDS) are not also made available to Eligible Customers taking service on behalf of flexible and electrically proximate Large Loads.[117]

In its filing on compliance with the Show Cause Order, PJM is extending the same three transmission services to Eligible Customers taking transmission service on behalf of Large Load customers, as it offers to Eligible Customers taking transmission service on behalf of Co-Located Load customers in Docket Nos. EL25-49, *et al.*, with substantially the same requirements for protective systems and operational compliance.[118]

Consistent with this approach, the PJM Transmission Owners propose, pursuant to FPA section 205, to apply to Eligible Customers taking these transmission services on behalf of Large Load customers the same corresponding rate and financial penalty frameworks that apply to Eligible Customers taking transmission service on behalf of Co-Located Load customers,

---

113 Co-Located Load Paper Hearing Order at P 517.

114 *Id*. at PP 517, 529.

115 *Id*. at P 529.

116 *Id.* at PP 517, 529.

117 Show Cause Order at P 87.

118 PJM Interconnection, L.L.C., *Co-Located Load Order Workshop Meeting Materials*, Item 02 (Nov. 11, 2026), https://www.pjm.com/-/media/DotCom/committees-groups/workshops/cllsco/2026/20261112/20261112-item-02---tariff-revisions-part-xi-new-transmission-services-november-11-draft---redline.pdf (Tariff Part XI revisions).

contingent on the Commission accepting the underlying services proposed in PJM's compliance filing.[119] Except for the revised NFCDS discounted-rate methodology and adjustments necessary to conform to PJM's final service design, the proposed rates distinguish among customers based on the transmission service taken, not whether the customer takes that service on behalf of Co-Located Load or another eligible Large Load.

The proposed tariff records provided as part of this filing amend Part XI of the Tariff and the applicable rate schedules to address:

1. FCDS, which is intended for the portion of load that will rely on the transmission system under normal operating conditions and for which Network Upgrades are planned and built;

2. NFCDS, a limited, supplemental service intended to provide as-available transmission capacity;

3. Interim NITS, a non-firm service available while Network Upgrades needed to provide full NITS are being constructed;

4. The treatment of administrative, ancillary-service, redispatch, Schedule 12, and other applicable charges;

5. Revenue credits associated with NFCDS; and

6. Financial penalties and related revenue credits for unreserved transmission use.

### 1. Firm Contract Demand Transmission Service Rates and Charges.

The PJM Transmission Owners' proposed rates for FCDS are identical to those set forth in the Transmission Owners' reply brief in Docket Nos. EL25-49-000, *et al*.[120] The rate for FCDS will be calculated in a manner essentially identical to the existing NITS rates, using each applicable transmission owner's specific methodology for NITS customers.[121] Under this approach, Eligible Customers taking FCDS will pay the same base charge per megawatt ("MW") as NITS customers, except that unlike NITS customers their demand will be their specified firm contract demand equal to the firm contract demand amount (in MW) multiplied by a single zonal rate for both NITS and FCDS customers. The Commission agreed with this approach in the Co-Located Load Paper Hearing Order, finding it just and reasonable to base the Firm Contract Demand rate on zonal NITS rates and underlying NITS revenue requirements because both services provide a similar level of

---

119 Blazunas and Hammer Direct Joint Testimony at 7-8.

120 PJM Transmission Owners Reply Brief at Exhibit No. PTO-0006.

121 PJM Transmission Owners Reply Brief at 18.

firm transmission service and PJM will plan the transmission system to provide both on a firm basis.[122]

For Zones in which NITS rates are determined pursuant to Attachment H formula rates, the monthly demand charge is calculated as follows: MDC = FCDTSA × RTZ/12, where MDC is the monthly demand charge, FCDTSA is the Firm Contract Demand Transmission Service Amount in MW as specified in the Eligible Customer's Service Agreement, and RTZ is the applicable zonal NITS rate stated in dollars per MW-year.[123] For purposes of establishing RTZ under Attachment H, the annual peak of the zone shall include both Network Customer Loads and the FCDS amounts for all Eligible Customers taking FCDS in the zone during the applicable peak period.[124]

Consistent with the Commission's findings in the Co-Located Load Paper Hearing Order, all ancillary services other than regulation and black start will be charged based on the Eligible Customer's contract demand, while regulation and black start services will be assessed on a gross demand basis—reflecting the Commission's determination that all Co-Located Loads rely on those services to be served regardless of the extent to which they withdraw energy from the transmission system.[125] PJM will procure capacity for Firm Contract Demand customers and will plan the transmission system to serve them at their contract demand level.[126] Accordingly, capacity-related charges will be based on the customer's Unforced Capacity Obligation. Eligible Customers will also be responsible for applicable administrative service charges, redispatch costs under Attachment K, and Transmission Enhancement Charges for which they are designated as Responsible Customers under Schedule 12.[127]

Revenue credits from NFCDS revenues will be applied each month to offset gross Firm Contract Demand charges on a *pro rata* basis, consistent with the crediting mechanisms previously approved in PJM's Tariff.[128] FCDS has a minimum one-year term and is subject to PJM's anti-toggling mechanism—which prohibits, for a period of five years, an Eligible Customer from taking NFCDS for any portion of Co-Located Load served by FCDS—and a 42-month termination-notice requirement, consistent with the notice provisions applicable to Network Customers.[129]

---

122 Co-Located Load Paper Hearing Order at P 398.

123 *See* proposed Schedule 20.

124 *See id*.; *see also* PJM Transmission Owners Reply Brief, Exhibit No. PTO-0006 at 6.

125 Co-Located Load Paper Hearing Order at PP 399-400.

126 *Id*. at P 250.

127 Co-Located Load Paper Hearing Order at P 401; PJM Transmission Owners Reply Brief, Exhibit No. PTO-0006 at 3, 7.

128 PJM Transmission Owners Reply Brief, Exhibit No. PTO-0006 at 6-7.

129 Co-Located Load Paper Hearing Order at P 535.

### 2. Non-Firm Contract Demand Transmission Service Rates and Charges.

In the Co-Located Load Paper Hearing Order, the Commission found that the PJM Transmission Owners' original proposal to set the maximum Non-Firm Contract Demand rate equal to the Firm Contract Demand rate had not been shown to be just and reasonable, notwithstanding that it was subject to discount similar to Non-Firm Point-To-Point Service.[130] The Commission concluded that Non-Firm Contract Demand should not be subject to the same maximum rate as Firm Contract Demand.[131] The Commission further directed the PJM Transmission Owners to propose either a lower maximum rate or non-discriminatory discounts, with transparent charge calculations for each individual transmission customer.[132]

In compliance with the Commission's directive, and as supported by the Blazunas and Hammer Direct Joint Testimony, the PJM Transmission Owners are proposing to set the NFCDS rate as a discounted rate established as a function of the zonal FCDS rate and the transmission system load factor for a zone.[133] NFCDS customers will take service and pay their reserved amount of demand based on system availability, and NFCDS will be available for terms ranging from one hour to one month.[134] To ensure against double recovery, all revenues received from NFCDS charges will be credited to NITS, Firm Point-To-Point, and FCDS customers based on their share of the coincident peak load.

The rationale for this approach is that the transmission system is built to a peak driven by firm load. As discussed in the Joint Blazunas and Hammer testimony, the difference between zonal annual energy and zonal annual energy at a 100% load factor represents a proxy for the "excess capacity" for which non-firm load is not responsible.[135] Accordingly, a lower zonal load factor indicates relatively more spare capacity and justifies a higher discount, and vice versa. A simplified example of this rate calculation for a zone is set forth below in Example 2:

**Example 2 – Discounted Non-Firm Contract Demand Transmission Service Rate Calculation**

1 The zonal Firm Contract Demand Rate is $90,000/MW-Year
2 The zonal peak demand is 150,000/MW.
3 The zonal annual energy is 850,000,000 MWh
4 The maximum non-firm contract demand equals $90,000/MW-Year x [Line 3 ÷ (Line 2 x 8,760 hours)] = $90,000/MW-Year x 64.7% Load Factor ≈ $58,219/MW-Year.

---

130 *Id*. at P 402.

131 *Id*.

132 *Id*. at PP 404, 412.

133 Proposed Tariff, Part XI, Subpart C, Section 715 and Proposed Schedule 21; *see also* Blazunas and Hammer Direct Joint Testimony at 9-10.

134 Daily and hourly rates will be distinguished based on on-peak days (Monday–Friday, except for certain holidays) and off-peak days (Saturday and Sunday, including the applicable holidays that fall on a weekday).

135 Blazunas and Hammer Direct Joint Testimony at 10.

5 The discounted NFCD rate has an implied discount of 35.3% relative to the Zonal Firm Contract Demand Rate (*i.e.*, the Maximum NFCD rate).[136]

The PJM Transmission Owners' proposed discounted NFCDS rate is just and reasonable and consistent with cost causation principles, as well as the Commission's directives in the December 18 Show Cause Order and Co-Located Load Paper Hearing Order because it incentivizes efficient use of the transmission system by Eligible Customers seeking to use the transmission system on behalf of Co-Located or Large Load in a more limited manner and aligns the charges for NFCDS with the benefits received.[137] This methodology is also transparent and non-discriminatory, as it relies on publicly available PJM zonal data, such as peak loads and net energy figures from PJM's Long-Term Load Forecast, and applies a consistent calculation across all PJM zones.[138]

### 3. Interim Network Integration Transmission Service.

On August 17, 2026, the PJM Transmission Owners submitted new and revised Tariff records in partial compliance with the Commission's Co-Located Load Order to implement the rate for Interim NITS.[139] The filing was a companion filing to PJM's August 17 Compliance Filing of the Tariff terms and conditions for Interim NITS.[140]

The PJM Transmission Owners propose limited modifications to the language contained in their August 17 Compliance Filing to account for the provision of this service to Eligible Customers taking service on behalf of Large Load customers,[141] as well as to reflect implementation of FCDS and NFCDS.

Interim NITS is a temporary, non-firm transmission service available to an Eligible Customer that has requested NITS but cannot yet reliably receive it because the Network Upgrades necessary to provide permanent NITS are not yet complete.[142] The Commission found that Interim NITS is an optional service, available only to the extent PJM determines—in consultation with the affected Transmission Owner—that some level of interim service can be reliably provided based on the results of appropriate studies.[143] Once the required Network Upgrades are completed and integrated with the PJM transmission system, the Eligible Customer automatically converts to

---

136 *Id*. at 10 (Table 1).

137 December 18 Show Cause Order at PP 199, 214; Co-Located Load Paper Hearing Order at PP 402-407, 412.

138 Blazunas and Hammer Direct Joint Testimony at 10.

139 *See supra* note 23.

140 *Id*.

141 *See supra* notes 24 & 108; Proposed Tariff, Part XI, Subpart A, Section 706.

142 Co-Located Load Paper Hearing Order at P 248.

143 *Id*. at P 574.

Network Customer status and begins taking permanent NITS. Interim NITS may not be combined with FCDS or NFCDS.[144]

As with FCDS, the PJM Transmission Owners' proposed rates for Interim NITS are the same as those applicable to Co-Located Load customers under the PJM Transmission Owners' filings in Docket Nos. EL25-49, *et al*.[145] The monthly demand charge for Interim NITS is calculated as the Eligible Customer's measured demand amount in MW multiplied by the applicable zonal NITS rate established pursuant to Tariff Section 34.1.[146] This is the same rate methodology that applies to permanent NITS customers, consistent with the Commission's finding that Eligible Customers taking Interim NITS should pay the NITS rate.[147] However, because Interim NITS is an interruptible service, Eligible Customers taking Interim NITS service on behalf of Co-Located Loads or Large Loads would not be assessed generation capacity charges because capacity will not be procured on behalf of Interim NITS customers until such time as Network Upgrades are in place to serve them.[148]

Interim NITS customers will be responsible to pay for: (i) applicable administrative service charges under Tariff Schedules 1A, 9, and 10; (ii) ancillary service charges, including regulation charges and black start service charges; and (iii) redispatch costs.[149] The PJM Transmission Owners are not proposing tariff revisions in this filing to implement these charges and costs because the Commission directed PJM to incorporate Tariff revisions in its compliance filing necessary to assess them.[150] Revenue credits from NFCDS revenues will be applied to offset the gross Interim NITS monthly demand charge, consistent with the crediting methodology applicable to other firm and non-firm service customers.[151]

### 4. Financial Penalties for Unreserved Transmission System Use.

As discussed above, the PJM Transmission Owners are filing the financial penalty framework found just and reasonable by the Commission in the Co-Located Load Paper Hearing Order, with a modification to the penalty revenue distribution, that will apply to Eligible Customers taking one of the new transmission services on behalf of not only Co-Located Loads, but also eligible Large Loads as well. Under this PJM Transmission Owners' financial penalty framework, an Eligible Customer would be assessed: (i) a base penalty charge for each hour in

---

144 December 18 Show Cause Order at P 200.

145 *See* PJM Transmission Owners Reply Brief, Exhibit No. PTO-0006 at 1-2.

146 *Id*. at 1.

147 Co-Located Load Paper Hearing Order at P 248.

148 *Id*. at P 248.

149 Co-Located Load Paper Hearing Order at PP 572-573.

150 *See* Co-Located Load Paper Hearing Order at P 573; *see also* PJM Interconnection, L.L.C., *Co-Located Load Order Workshop Meeting Materials*, Item 02 (Nov. 11, 2026), https://www.pjm.com/-/media/DotCom/committees-groups/workshops/cllsco/2026/20261112/20261112-item-02---tariff-revisions-part-xi-new-transmission-services-november-11-draft---redline.pdf (Tariff Part XI revisions)..

151 PJM Transmission Owners Reply Brief, Exhibit No. PTO-0006 at 1.

which the Eligible Customer's reserved service limit is exceeded at the Point of Interconnection during at least one five-minute interval (an "Exceedance Hour"), and (ii) a penalty ratchet when exceedances occur repeatedly.[152] Under the penalty ratchet, penalty charges escalate as the frequency of unreserved transmission use increases.[153] If more than one Exceedance Hour occurs on the same day, an additional daily penalty would apply.[154] If exceedances occur on multiple days within the same week, an additional weekly penalty would apply. If exceedances occur in multiple weeks within the same month, an additional monthly penalty would apply. Finally, if exceedances occur in multiple months within the same year, an additional annual penalty would apply.[155] The Commission agreed with PJM Transmission Owners that progressively increasing the consequences of repeated penalties encourages Eligible Customers to manage their usage consistent with their reserved transmission service limit.[156]

Consistent with the Commission's guidance and Order No. 890,[157] the PJM Transmission Owners are also modifying Schedule 22 to clarify that revenues collected from daily, weekly, and monthly financial penalty charges will be returned on a monthly basis to all non-offending transmission customers (*i.e.*, FCDS, NFCDS, NITS, and Interim NITS customers) that have not been penalized during the month as bill credits, based on the Eligible Customer's *pro rata* share of the Zone's annual peak load based on the most recent 12-month period ending October 31. Revenues collected from annual penalty charges will be returned on an annual basis to all non-offending transmission customers that have not been penalized during the year as bill credit, based on each Eligible Customer's *pro rata* share of the Zone's annual peak load based on the most recent 12-month period ending October 31.

### D. Cost Allocation and Recovery for Interconnection Reliability Reinforcements

PJM's proposed Fast Energization Process would study qualifying generation interconnection and Large Load-related transmission service requests together and identify a portfolio of transmission upgrades—the IRRs—needed to address the combined system impacts of the requests included in each study cycle. PJM's proposal necessitates revisions to the Tariff to establish the basis for allocating the costs of the IRRs that PJM identifies in each study cycle. Accordingly, the PJM Transmission Owners propose revisions to Schedule 12 of the Tariff that would allocate the costs of those IRRs on a portfolio basis using modeled electrical impacts of the generators and Large-Load-related transmission service requests being studied through PJM's Fast

---

152 *Id*. at 16-17 & Exhibit No. PTO-0006 at 4-16.

153 *Id*. at 17 & Exhibit No. PTO-0006 at 7, 10-16.

154 *Id*., Exhibit No. PTO-0006 at 14.

155 *Id*. at 17 & Exhibit No. PTO-0006 at 12-14.

156 Co-Located Load Paper Hearing Order at P 529.

157 *Id*. at P 529; *Preventing Undue Discrimination & Preference in Transmission Serv.*, Order No. 890, 118 FERC ¶ 61,119, at PP 848, 862, *order on reh'g*, Order No. 890-A, 121 FERC ¶ 61,297 (2007), *order on reh'g*, Order No. 890-B, 123 FERC ¶ 61,299 (2008), *order on reh'g*, Order No. 890-C, 126 FERC ¶ 61,228, *order on clarification*, Order No. 890-D, 129 FERC ¶ 61,126 (2009).

Energization process.[158] The IRRs themselves will be included in the transmission rate bases of the Transmission Owners constructing and owning the projects. A new Interconnection Reliability Reinforcement Charge will be implemented to recover the costs from transmission customers external to the Zone(s) in which the IRRs are located, as well as a separate fee to be charged to generators in each cycle to recover and credit back to load customers amounts representing a fair contribution from those generators to offset the costs of the IRRs.

In balancing the need for a cost allocation methodology that assigns costs in a manner roughly commensurate with benefits while also being efficient, practically implementable, and protecting other transmission customers, the PJM Transmission Owners' proposed cost allocation approach is intended and will achieve the same goals as the cost allocation framework the Commission recently approved for Southwest Power Pool, Inc. ("SPP").[159] In particular, as with SPP's cost allocation approach, the PJM Transmission Owners' cost allocation proposal departs from the traditional "but-for" cost assignment model that links specific transmission upgrades with specific requests for service. In the case of SPP, the Commission accepted SPP's GRID-C mechanism for allocating a portion of the costs of transmission facilities to prospective generator interconnection customers through fixed per-MW charges that, when collected, are credited back against load customer cost responsibility.[160]

Although employing different mechanisms due in part to the nature of the Fast Energization process proposed by PJM, which is different than the planning process implemented by SPP,[161] the PJM Transmission Owners' proposal aligns with the same objectives as the SPP cost allocation proposal in departing from the traditional "but for" generator interconnection cost allocation approach. Under the proposed Schedule 12 provisions, PJM, as Transmission Provider, will use power-flow modeling to calculate the relative contributions of the studied generation and Large Load transmission requests to the aggregate transmission system violations on constrained facilities addressed by the IRRs. Those calculations will form the basis of the Interconnection Reliability Reinforcement Charge to Zones with Large Load customers, as well as the separate fee recovered from generators in each study cycle (the "Generator Reliability Reinforcement Fee"). This aggregate approach is tailored to the output of PJM's Fast Energization Process. Because PJM plans to study multiple generation interconnection and Large Load transmission service requests together and identify shared reinforcements addressing multiple system violations, individual IRRs will not correspond to individual service requests.[162] Such a one-to-one mapping would therefore be technically infeasible. Thus, it is necessary to have a method for allocating the

---

158 *See* Blazunas and Hammer Direct Joint Testimony at 11-12.

159 *Sw. Power Pool, Inc.*, 194 FERC ¶ 61,192 at P 52 (2026).

160 *Id.* at PP 88-90 (applying the Commission's "beneficiary pays" cost-causation principle and finding the GRID-C mechanism just and reasonable because it allocates the costs of anticipated network upgrades between prospective generator interconnection customers and load in a manner at least roughly commensurate with benefits).

161 This discussion relates solely to the features of SPP's cost allocation proposal, and is not intended to draw any comparisons between SPP's Consolidated Planning Process and the PJM Fast Energization Process, or address the merits of PJM's Fast Energization Process.

162 Blazunas and Hammer Direct Joint Testimony at 12.

costs of the IRRs that recognizes the integrated and portfolio-based nature of PJM's proposed Fast Energization Process.[163]

The resulting allocation maintains a demonstrable relationship between the studied requests' modeled contributions to the identified system needs. It uses the causal information produced through PJM's study process without attributing individual reinforcements to particular requests in recognition of the fact that the study results do not establish that attribution. This approach is consistent with PJM's existing proportional impact method for allocating costs under its New Service Request process, as well as the governing cost allocation standard. Costs assigned to customers must be "roughly commensurate" with the benefits those customers are expected to receive, but it need not calculate those benefits with exact precision.[164] The PJM Transmission Owners' proposal satisfies that standard by establishing a connection between the studied requests, their modeled contributions to the aggregate system violations, and the costs of the shared IRRs required to address those violations. It thereby achieves a roughly commensurate cost allocation without attempting to impose a customer-by-customer or project-by-project cost assignment that is inconsistent with PJM's Fast Energization study process.[165] That practical approach achieves the same objectives as accepted by the Commission in its recent acceptance of SPP's high impact large load ("HILL") study process and High Impact Large Load Generation Assessment ("HILLGA") framework.[166]

The proposed allocation methodology, while complementing PJM's combined study approach, is submitted as an independent FPA section 205 proposal supported on its own merits. The just and reasonable basis for the proposed Schedule 12 revisions does not depend on Commission acceptance of every feature of PJM's companion filing. Rather, the methodology is just and reasonable and can operate with any accepted study design that identifies a portfolio of transmission solutions and produces the modeled electrical-impact information necessary to allocate the resulting costs, regardless of whether that process is confined to Large Load-related transmission service requests or also includes generator interconnection requests.

### 1. PJM Determines Cost Responsibility for the IRR Portfolio Using Modeled Electrical Impacts.

For each Fast Energization Cycle, PJM will identify the IRRs designated for construction and determine, based on the provisions set forth in the instant PJM Transmission Owner proposal, cost responsibility for the resulting portfolio. To determine cost responsibility, PJM will use power-flow modeling to calculate the proportional impact of each studied service request to the aggregate violations on the constrained facilities requiring mitigation through the IRR portfolio. This approach begins with the calculation by PJM of distribution factors based on the transfer of energy across constrained facilities as identified in the study process. Proportional impacts for

---

163 *See Midcontinent Indep. Sys. Operator, Inc.* 189 FERC ¶ 61, 108 (2024), *order on reh'g*, 191 FERC ¶ 61,231 (2025).

164 *See, e.g.*, *Ill. Com. Comm'n v. FERC*, 576 F.3d 470, 476-77 (7th Cir. 2009).

165 *See, e.g.*, *PJM Interconnection, L.L.C.*, 193 FERC ¶ 61,217 at PP 166-168 (2025).

166 *Sw. Power Pool, Inc.*, 194 FERC ¶ 61,031 (2026) ("SPP HILL Order").

generators and loads are determined by multiplying the associated distribution factors, if they exceed the specified threshold, by the MW capacity for generators or amount of Firm Transmission Service requested by an Eligible Customer on behalf of the applicable Large Load. For MW impacts that exceed a defined impact threshold, such impacts will be converted to proportional MW impacts representing the *pro rata* share of all impacts on the same constrained facility. Then the proportional MW impacts are weighted using values as set forth in the PJM Manuals resulting in weighted proportional MW impacts.[167] As discussed in the Blazunas and Hammer Direct Joint Testimony, weighting is important because the same degree of impact is not necessarily comparable between different facilities.[168] For instance, a 1 MW impact on a 20-mile, 138 kV constrained facility is of significantly less consequence than a 1 MW impact on a 150 mile, 500 kV constrained facility.[169]

These features make the proposed tariff revisions a practical measure of cost causation. The methodology keys each share to the megawatts the customer actually requested, excludes immaterial impacts, and counts only impacts that aggravate a violation. It therefore satisfies the Commission's long-standing requirement that rates "reflect to some degree the costs actually caused by the customer who must pay for them" and that costs be allocated in a manner at least roughly commensurate with the benefits the paying entity receives.[170] Nor does the methodology break new ground. PJM's Tariff already provides that all New Service Requests that contribute to the need for a Network Upgrade receive cost allocation based on each request's contribution to the reliability violation, in accordance with the PJM Manuals.[171] The PJM Transmission Owners' proposal applies that same contribution-based principle, with reasonable modifications to reflect a process that studies generator interconnection and Large Load transmission service requests together and produces a single portfolio of projects to accommodate those requests.[172]

### 2. Aggregate Impacts are Converted into Zonal Cost Responsibility Determinations, With Generator Costs Recovered Through a Levelized Fee.

The PJM Transmission Owners' proposed tariff revisions translate aggregate impact values into cost responsibility for the relevant IRRs. The proportional impacts of Transmission Service Requests are combined on a Zonal basis and assigned to the relevant Transmission Owner Zones, with the entire initial cost responsibility allocated among to those Zones based on their relative

---

167 Blazunas and Hammer Direct Joint Testimony at 18-20 (providing a simple example to illustrate the proposed proportional impact methodology).

168 *Id*. at 16-17.

169 *Id*. at 16-17. For short-circuit constraints, allocation turns on each customer's contributing fault current impact on the circuit breaker's interrupting rating. *See* proposed Schedule 12, Section (f)(2)(B) and Blazunas and Hammer Direct Joint Testimony at 21-22.

170 *See, e.g.*, *Midwest ISO Transmission Owners v. FERC*, 373 F.3d 1361, 1368 (D.C. Cir. 2004); *Ill. Com. Comm'n v. FERC*, 576 F.3d 470, 476 (7th Cir. 2009).

171 Show Cause Order at P 22.

172 Blazunas and Hammer Direct Joint Testimony at 17.

weighted impacts.[173] The costs associated with the IRRs are included in the rate base of the Transmission Owners that will construct and own those facilities. The allocations to other Zones are recovered through the Interconnection Reliability Reinforcement Charge, which is discussed further below. The proposed tariff revisions also make these assignments public. The Transmission Provider will complete the cost responsibility analysis before Transmission Service Agreements and Generator Interconnection Agreements are executed and before seeking PJM Board approval of the reinforcements through their inclusion in the RTEP, and it will post the resulting assignments on the PJM website within 30 days of completing the analysis.[174] That posting requirement responds to, in part, the Commission's concern that, without sufficient transparency, stakeholders may lack visibility into the transmission upgrades, and their associated costs, driven by large load additions.[175]

The portion of reinforcement costs representing the relative contribution of generators in the applicable Fast Energization Process cycle is charged separately to the generators through Generator Reliability Reinforcement Fees.[176] The Generator Reliability Reinforcement Fee translates each generator's allocated share of reinforcement costs into a levelized payment obligation that is collected by PJM and credited to transmission customers in the relevant Zones that have been assigned cost responsibility for the IRRs.[177] As explained above, each generator's allocated share is determined using a distribution factor-based methodology comparable to PJM's existing proportional impact allocation methodology. Thus, each generator's base contribution to the overall costs of the applicable portfolio of IRRs is derived using a Commission-endorsed approach to determining relative benefits.

The assessment of a separate fee to generators is just and reasonable. The Show Cause Order was explicit that the Commission did not intend to alter or question existing cost allocation methods.[178] Consistent with this finding, the PJM Transmission Owners' proposal preserves the foundational approach of including transmission system enhancements in Transmission Owners' rate bases used to determine rates for transmission service, while providing appropriate ratepayer protections including the CRA and the additional mechanisms discussed below. In PJM, load pays for transmission service. However, the PJM Transmission Owners recognize that PJM's combined study approach will consider impacts associated with generator interconnection requests, and thus, a contribution from generators to offset the costs of IRRs is appropriate. Assessing a separate charge to generators, in the form of the proposed Generator Reliability Reinforcement Fee, provides a means to ensure an appropriate financial contribution from generators, while preserving

---

173 Proposed Schedule 12, Sections (f)(2)(C)(2), (f)(4), and (f)(6).

174 *Id*. at Section (f)(2)(D).

175 Show Cause Order at PP 71, 74-76.

176 Proposed Schedule 12, Sections (f)(2)(C)(2) and (f)(4).

177 *See id*. at Section (f)(6); *see also* Blazunas and Hammer Direct Joint Testimony at 23-24.

178 Show Cause Order at P 81.

the rate base treatment of IRRs consistent with longstanding cost allocation and recovery methods in PJM.[179]

The PJM Transmission Owners propose to recover Generator Reliability Reinforcement Fees in a manner that balances several related goals: (i) maintaining consistency with PJM's proposal to identify IRRs on a portfolio basis, taking into account all applicable generator interconnection and Large Load transmission service requests; (ii) providing an ongoing stream of credits to transmission customers that extends over a significant portion of the expected life of most transmission projects; (iii) recognizing generators' finite operational lives and particular financing needs, while avoiding unduly long-term cost responsibility obligations that could discourage needed generation development in the PJM region; and (iv) providing generators with upfront cost certainty and commercially reasonable payment terms that avoid creating disincentives for generators to locate and build in PJM.

To balance these considerations, each Generator Interconnection Customer will be assessed the applicable Generator Reliability Reinforcement Fee by PJM beginning on the earlier of the calendar year in which its facility achieves Commercial Operation or three years after the Commercial Operation date specified in its original Generator Interconnection Agreement, and the fee will continue for 15 years from that date.[180] The Transmission Provider will calculate the fee on a levelized basis by applying the generator's allocated percentage of the total portfolio of IRRs to the total estimated gross plant of those IRRs and multiplying the resulting amount by a capital recovery factor built from the Annual Carrying Charge Component.[181] This Annual Carrying Charge Component is the same across all Generator Reliability Reinforcement Fees calculated within each cycle. It is calculated based on the Transmission Owners' Commission-accepted cost of capital: specifically, it is the weighted average of the Weighted Average Cost of Capital, drawn from the Attachment H formula rates of each Transmission Owner with reinforcements in the applicable Fast Energization Process study cycle that includes the Generator Interconnection Customer, weighted by that Transmission Owner's share of the overall IRR portfolio from the applicable study cycle.[182]

PJM will invoice one-twelfth of the annual Generator Reliability Reinforcement Fee monthly and credit the amounts collected to Firm Transmission Customers.[183] Each Zone will receive credits in proportion to its share of the annual revenue requirement for the reinforcements allocated to Firm Transmission Customers, and each Zone's credits will be distributed among its Firm Transmission Customers based on their *pro rata* share of the Zone's annual peak load for the

---

179 Blazunas and Hammer Direct Joint Testimony at 23-25.

180 Proposed Schedule 12, Section (f)(6)(A).

181 *See* proposed Schedule 12, Section (f)(6)(B); *see also* Blazunas and Hammer Direct Joint Testimony at 23-25.

182 Proposed Schedule 12, Section (f)(6)(B).

183 *Id*. at Section (f)(6)(C)-(D).

most recent 12 months ending October 31, appearing as a reduction to the gross monthly rate for Firm Transmission Service.[184]

This approach achieves a just and reasonable balance among the goals described above. First, the 15-year recovery period recognizes the portfolio nature of the IRRs while ensuring that credits flow back to transmission customers for a substantial portion of the expected lifespan of a transmission portfolio.[185] Tying the commencement of the fee to the generator's Commercial Operation Date, with a reasonable allowance for timing changes, also appropriately accommodates differences between the timing of generator development and the placement of the associated transmission reinforcements in service. In some instances, a generator may begin paying the fee before all transmission facilities in the associated IRR portfolio enter service, providing a relative benefit to transmission customers; in others, the generator may begin making payments after certain transmission facilities have entered service. Across the portfolio, however, it is reasonable to expect these timing differences to roughly balance out.

The Commission recently accepted a similarly pragmatic balancing approach in SPP, where it approved an expedited process for generators serving HILL that relies on standardized financial requirements rather than attempting to calibrate each requirement precisely to the costs or risks attributable to each individual generator.[186] The Commission found those requirements just and reasonable because, among other things, the more stringent financial commitments and other eligibility requirements would encourage commercially ready projects.[187] The PJM Transmission Owners' approach is, if anything, more tailored: each Generator Reliability Reinforcement Fee begins with the generator's modeled proportional contribution to the violations addressed by the applicable IRR portfolio and converts that impact into an administrable, levelized payment obligation. Because the fee will be determined upfront based on the results of the PJM system impact study, generators will have certainty as to their costs before making a final commitment to move forward and execute an interconnection agreement. Moreover, by limiting the recovery period to 15 years, rather than extending it over the full expected life of the IRRs, the proposal avoids imposing commercially unreasonable payment terms that could render otherwise viable generation projects unfinanceable. That combination of cost certainty and reasonable payment terms is particularly appropriate given the well-documented challenges associated with attracting and installing adequate generating capacity in PJM.[188]

---

184 *See* i*d*. at Section (f)(6)(D); *see also* Blazunas and Hammer Direct Joint Testimony at 23-24.

185 *Id.* at 24-25.

186 *See* SPP HILL Order at PP 64-66; *see also id.* (Rosner, Comm'r, concurring at PP 1, 3) (describing SPP's HILL and HILLGA proposal as "pragmatic" and observing that, although the "mechanics" of SPP's and PJM's approaches are distinct, "the practical outcome is similar").

187 *See id.* at PP 64-65, 67; *see also id.* at P 66 n.127 (explaining that, under FPA section 205, SPP "need not show that its proposal is the most just and reasonable among all possible alternatives so long as it demonstrates that the proposal is just and reasonable") (citing *Cities of Bethany v. FERC*, 727 F.2d 1131, 1136 (D.C. Cir. 1984)).

188 Blazunas and Hammer Direct Joint Testimony at 24.

### 3. Allocations to Transmission Customers Are Recovered Through a Dedicated, Formula-Based Charge and Credited to Avoid Double Recovery.

The PJM Transmission Owners' proposal establishes the Interconnection Reliability Reinforcement Charge, which recovers each Transmission Owner's annual transmission revenue requirement for the reinforcements it constructs and owns.[189] The Transmission Provider assesses the charge to Firm Transmission Customers in each Zone based on the cost responsibility assignments determined through the proportional impact methodology described above.[190] The charge rests on existing, Commission-accepted rates: each Transmission Owner's revenue requirement for a reinforcement is determined under the formula rate in effect for its NITS and FCDS.[191] The charge is recalculated annually to reflect revised billing determinants and posted by October 31 for the following calendar year, and charges to Point-To-Point customers are calculated monthly under Tariff, Part II, section 25.[192] The Transmission Provider collects the charge monthly, in addition to all other transmission charges, and remits the revenues to the Transmission Owners that own the relevant IRRs.[193] Importantly, application of the Interconnection Reliability Reinforcement Charge ensures that IRR costs are allocated only to those Zones containing service requests by an Eligible Customer on behalf of the applicable Large Load in a given cluster. Zones with no Large Loads in a cluster will not be allocated any IRR costs.

As discussed in the Blazunas and Hammer Direct Joint Testimony, this dedicated charge applies for 15 years after a reinforcement enters service.[194] Beginning with the next full calendar year after the fifteenth year, the Transmission Provider assigns and recovers the remaining costs under sections (a) through (e) of Schedule 12.[195] This transition is reasonable. It confines cost responsibility to those Zones containing Large Load and generators whose modeled impacts contribute to the need for reinforcements for a reasonable period that roughly corresponds with when it would be expected that some generators would be removed from service or otherwise retire, as well as the expectation of significant changes to the topology and use of the transmission system. This 15-year period is also intended to account for what may be a transition or removal of certain Large Load facilities and thus their transmission service requests. Although these timelines are, of course, inherently uncertain, the PJM Transmission Owners submit that 15 years is a reasonable estimate of when these various factors are likely to result in significant broadening of benefits to customers throughout PJM, rather than just the customers in the Zones in which

---

189 *Id*. at 25-29.

190 Proposed Schedule 12, Section (f)(3).

191 *Id.* at Section (f)(3)(A).

192 Proposed Schedule 12, Section (f)(3)(B)-(C).

193 *Id.* at Section (f)(4)(A)-(B).

194 Blazunas and Hammer Direct Joint Testimony at 27-29.

195 Proposed Schedule 12, Section (f)(3).

specific Large Loads are located.[196] This mechanism also accounts for the fact that, after over a 15-year period, broader dynamics of system use and benefit will evolve as economic patterns shift and technology changes, resulting in reliance by, and greater benefits to, loads other than the original large loads which gave rise to the upgrades.[197] These shifts in benefits warrant application of the existing Transmission Enhancement Charge cost allocation methodologies, *i.e.*, Solution-based DFAX and, in the case of Regional Facilities, Load Ratio Share.[198]

The proposal also ensures that no customer pays twice for the same facilities. Because each Transmission Owner's Firm Transmission Service rates under Attachment H already reflect its total cost of providing jurisdictional transmission service, including reinforcement costs, revenues from the Interconnection Reliability Reinforcement Charge are credited to Firm Transmission Customers in the Zone, and to Firm Point-To-Point customers delivering into the Zone, in proportion to their Demand Charges and Reserved Capacity, net of any applicable incentives.[199] This is precisely the crediting mechanism the Show Cause Order contemplated.[200] It also mirrors the Commission's reasoning in the Co-Located Load Paper Hearing Order, where the Commission explained that revenues from NFCDS will be credited against, and thus offset, the transmission revenue requirement on which firm transmission rates are based.[201]

**4. Transparency and Direct Wholesale Customer Commitments.**

In addition to the basic cost allocation and rate design features discussed above, the PJM Transmission Owners are committing to make, on compliance, necessary changes to their formula rate templates to: (1) provide transparency to state regulators and other interested parties regarding the costs of transmission facilities being constructed by the Transmission Owner to provide transmission service to Large Loads; and (2) adopt a mechanism designed to protect wholesale transmission customers not regulated at the retail level (*e.g.*, municipals, cooperatives, and other applicable load-serving entities) from having to bear excessive large-load-related transmission upgrade costs.[202]

With respect to transparency commitments, the Schedule 12 reporting requirements make the portfolio allocation results reviewable. Following completion of the portfolio analysis, PJM will post the resulting cost responsibility assignments on its website. Moreover, each applicable Transmission Owner also commits to make, within 120 days of a Commission order accepting this filing, a compliance filing to include any necessary additional provisions in its formula rate template to identify each transmission project such as IRRs that the Transmission Owner is constructing for purposes of providing transmission service to Large Load, along with a calculation

196 *Id*. at 27-29 and Exhibit No. PTO-0003.

197 *Id*. at 28-29 and Exhibit No. PTO-0003.

198 *Id*. at 26-27.

199 Proposed Schedule 12, Section (f)(5).

200 Show Cause Order at PP 3, 35.

201 Co-Located Load Paper Hearing Order at P 403.

202 Blazunas and Hammer Direct Joint Testimony at 29-31.

of the annual revenue requirement associated with such projects.[203] This information will be substantially similar to information that the PJM Transmission Owners already provide in their formula rate templates with respect to projects planned through PJM's RTEP that are allocated regionally through Transmission Enhancement Charges ("TEC"). These additions will serve three purposes. First, they will allow PJM to allocate and invoice Interconnection Reliability Reinforcement Charges, which as discussed above will be the mechanism whereby PJM collects amounts allocated to Responsible Customers in Zones outside of the Zones in which the IRRs are constructed. Second, in conjunction with the cost responsibility assignments posted by PJM, they will satisfy the Commission's preliminary findings in the Show Cause Order with respect to providing transparency regarding the costs associated with transmission upgrades driven by Large Load additions.[204] Third, by providing this level of cost transparency, state commissions and other retail regulators will have access to information to assist them if they choose to allocate some amount of transmission rate costs specifically to Large Load customers in their jurisdiction.[205]

Additionally, each applicable PJM Transmission Owner commits to include in the above-referenced compliance filing a surcharge/crediting mechanism designed to protect direct wholesale transmission customers in its zone, where applicable, from having to bear disproportionate large-load-related system upgrade costs.[206] These wholesale customers would include municipal utilities and electric cooperatives that are not regulated by states and, therefore, cannot be insulated by state action against bearing a potentially disproportionate amount of costs associated with reinforcements necessary to provide transmission service to Large Load. The purpose of this commitment, and resulting mechanisms, is to ensure that wholesale customers are protected from having to bear a share of Large Load-related costs in a situation where there are no Large Loads, or relatively fewer Large Loads, in their service areas requesting service in a given PJM study cycle. Where a wholesale customer has Large Load customers that request and are granted transmission service through PJM, this mechanism would result in both credits and surcharges, since the wholesale customer should bear the cost responsibilities of the upgrades that come out of a particular cycle at PJM.

The PJM Transmission Owners have deliberately avoided specifying a single mechanism for implementing this commitment due to the need for flexibility so that Transmission Owners can design and propose wholesale customer protection mechanisms that are consistent with their own individual circumstances, including any applicable retail allocation or charge mechanisms.[207] One potential approach involves a surcharge/credit approach pursuant to which a Transmission Owner would calculate, in addition to its total NITS revenue requirement, a revenue requirement specific

---

203 Information regarding all transmission projects, including IRRs, Supplemental Projects, and RTEP projects, will continue to be posted and maintained on the project status and cost allocation page of PJM's website, located at: https://www.pjm.com/planning/m/project-construction.

204 Show Cause Order at P 66.

205 This information will be provided by each individual Transmission Owner based on the IRRs it is constructing, which will assist in facilitating retail regulators within multi-Transmission Owner Zones to allocate costs relevant to retail customers within their states.

206 Blazunas and Hammer Direct Joint Testimony at 29-30.

207 *Id.* at 30-31.

to large load-driven upgrades. Using that information, a credit would be calculated and provided to wholesale transmission customers to the extent they do not have Large Load customers, or relatively fewer Large Load customers, driving the upgrades in a specific cluster, based on their *pro rata* share of overall NITS load. The credit would be funded by the large loads (specifically, the Electric Distribution Company/Load Serving Entity representing those Large Loads) with relatively greater Large Load customers in a cluster through a surcharge to those entities. Regardless, the PJM Transmission Owners commit to include their proposed direct wholesale customer protection mechanisms in the compliance filings.

### 5. Schedule 12, Section (f) Produces Just and Reasonable Rates and is not Unduly Discriminatory or Preferential.

The proposed tariff revisions in Schedule 12, Section (f) satisfy the just and reasonable standard of FPA section 205 because they align cost responsibility with cost causation and benefits at every step. The Commission identified the central risk in this proceeding as the shifting of large load-driven transmission costs onto "other transmission customers that neither caused the need for nor benefit commensurately from those Network Upgrades."[208] The Commission further observed that, when Network Upgrade costs are rolled into a Transmission Owner's revenue requirement, transmission customers other than the Eligible Customer may bear a portion of those costs.[209] As discussed above, the PJM Transmission Owners' proposal addresses these concerns through a combination of the proportional impact methodology, 15-year cost allocation transition mechanism, and the assessment and crediting of the Interconnection Reliability Reinforcement and Generator Reliability Recovery Fees. These provisions will work in tandem with the proposed CRA or similar agreements to protect against the risk of shifting costs to transmission customers for facilities from which they receive no benefit.[210]

The resulting rates are also cost-based and verifiable. Every input to the charge and the fee, from the revenue requirement to the cost of capital, comes from Transmission Owner formula rates already on file with the Commission, and annual recalculation and public posting keep the charges current and transparent.[211] The Commission therefore has a clear basis on which to find that proposed Schedule 12, Section (f) yields just and reasonable rates.

Section (f) appropriately distinguishes between generation and Large Load-related transmission service requests while providing a consistent basis for measuring their respective contributions to the need for IRRs. Requests included in the same Cycle are evaluated using the same distribution factor-based methodology, thresholds, and weighting rules, ensuring that their relative electrical impacts are measured on a consistent basis.[212] That common measurement does not, however, equate generation and Large Load customers for rate design purposes. Rather, the

---

208 Show Cause Order at P 81.

209 *Id*. at P 61.

210 Proposed Schedule 12, Sections (f)(1), (f)(2)(C), (f)(3), (f)(5).

211 *Id.* at Sections (f)(2)(D), (f)(3)(A)-(B).

212 *Id*. at Section (f)(2)(A)-(C).

proposed tariff provisions assign and recover the resulting costs consistent with longstanding rate structures while accounting for the portfolio nature of IRRs that will be identified in PJM's Fast Energization Process: IRRs will be rolled into Zonal transmission rates and recovered from transmission customers through the Interconnection Reliability Reinforcement Charge, while Generator Interconnection Customers bear a fair share of IRR costs through the Generator Reliability Reinforcement Fee.[213] The proposal thus distinguishes between generation and load where their differing circumstances warrant different rate treatment, while applying a consistent cost causation methodology to determine their respective contributions to the IRRs.

Section (f) also resolves a potential source of discrimination the Commission identified in the Co-Located Load Paper Hearing Order. There, the Commission found that the lack of clear tariff provisions led to disparate treatment because Transmission Owners took different approaches and created the risk that costs would not be allocated consistent with cost causation principles.[214] Section (f) adopts a uniform rule applied across the PJM region. At the same time, Section (f) confines itself to Commission-jurisdictional transmission rates, which the Commission has found are directly affected by the costs of upgrades needed to serve Large Loads,[215] and it leaves undisturbed state ratepayer protections such as state-jurisdictional Large Load tariffs.[216]

For these reasons, the Commission should find that proposed revisions to Section (f) of Schedule 12 are just and reasonable and not unduly discriminatory or preferential and they satisfy the Show Cause Order's directives regarding cost transparency, mitigation of cost shifting among transmission customers, and the crediting of Large Load payments toward transmission revenue requirements.

## IV. EFFECTIVE DATE AND IMPLEMENTATION

The PJM Transmission Owners understand that PJM intends to request an effective date of March 16, 2027 for the proposed revisions to Parts I, III, VI, VII, IX, XI, Attachment F-3, Attachment F-3A, Attachment F-4, and certain parts of Part VIII to the Tariff. For the remaining Part VIII revisions associated with the Fast Energization Process, PJM intends to request an indeterminate effective date of 12/31/9998, rather than the effective date requested in its August 17 Compliance Filing (for which PJM requested a March 16, 2027 effective date). The PJM Transmission Owners further understand that PJM intends to request a 60-day comment period for its companion filing.

Accordingly, given the interrelated nature of the filings, the PJM Transmission Owners request an effective date of March 16, 2027 for their proposed revisions to Tariff, Part XI and Schedules 20, 21, and 22, and an effective date of 12/31/9998 for the proposed *pro forma* CRA (Part IX, Subpart P); Tariff, Part VIII, Subpart N, section 441; and Schedule 12 revisions proposed

---

213 *Id.* at Sections (f)(2)(C)(1)-(2), (f)(4), and (f)(6).

214 Co-Located Load Paper Hearing Order at P 59.

215 Show Cause Order at P 68.

216 *Id*. at n.175.

in this filing. The PJM Transmission Owners also request that the Commission establish the same comment date for the instant filing that it establishes for PJM's filing.

To the extent that implementation of a particular provision proposed by the PJM Transmission Owners depends on a service, process, definition, or study output proposed in PJM's companion filing, the PJM Transmission Owners request coordinated implementation of the corresponding provisions. Such coordination would be limited to provisions that are operational dependent on PJM's proposal and would not affect the independent basis for accepting the remaining PJM Transmission Owner provisions under section 205.

If the Commission modifies or rejects a provision in PJM's companion filing on which an otherwise acceptable PJM Transmission Owner provision depends, the PJM Transmission Owners request leave to submit any limited conforming revisions necessary to implement the Commission's determinations.

## V. ADDITIONAL FILING INFORMATION

### A. Request for Waiver.

To the extent necessary, the PJM Transmission Owners request waiver of the requirement to submit the cost of service data required by 18 C.F.R. § 35.13. Moreover, the information submitted with this filing substantially complies with the requirements of Part 35 of the Commission's regulations applicable to filings of this type. The PJM Transmission Owners request waiver of any applicable requirement of Part 35 for which a waiver is not specifically requested, as necessary, in order to permit this filing to become effective as proposed.

### B. Documents Submitted With This Filing.

The PJM Transmission Owners submit the following materials:

1. Attachment A: Clean Tariff Records
2. Attachment B: Marked Tariff Records
3. Exhibit No. PTO-0001: Direct Joint Testimony of Peter Blazunas and Hanhan Hammer
4. Exhibit No. PTO-0002: Professional Backgrounds and Experience
5. Exhibit No. PTO-0003: Support for 15-year Allocation Period

### C. Communications.

Communications regarding this filing should be addressed to the following individuals, whose names should be entered on the official service list maintained by the Secretary for this proceeding:

Pulin Shah
Vice President, Transmission Development
EXELON CORPORATION
2301 Market Street
Philadelphia, PA 19103
Pulin.Shah@exeloncorp.com
*Chair of the Transmission Owners Agreement Administrative Committee*

Michael Kunselman
Richard P. Sparling
Jonathan A. Namazi
Margaret Smilowitz
Davis Wright Tremaine LLP
1301 K Street NW
Suite 500 East
Washington, DC 20005
michaelkunselman@dwt.com
ricksparling@dwt.com
jonathannamazi@dwt.com
margaretsmilowitz@dwt.com

Alejandro Bautista
Assistant General Counsel
EXELON CORPORATION
2301 Market Street
Philadelphia, PA 19103
Alejandro.Bautista@exeloncorp.com

### D. Service.

PJM has served a copy of this filing on all PJM Members and on all state utility regulatory commissions in the PJM Region by posting this filing electronically. In accordance with the Commission's regulations,[217] PJM will post a copy of this filing to the FERC filings section of its internet site, https://www.pjm.com/library/filing-order, and will send an e-mail on the same date as this filing to all PJM Members and all state utility regulatory commissions in the PJM Region,[218] alerting them that this filing has been made by PJM and is available by following such link. If the document is not immediately available by using the referenced link, the document will be available through the referenced link within 24 hours of the filing. Also, a copy of this filing will be available on the Commission's eLibrary website located at the following link: http://www.ferc.gov/docs-filing/elibrary.asp in accordance with the Commission's regulations and Order No. 714.

---

217 *See* 18 C.F.R §§ 35.2(e) and 385.2010(f)(3).

218 PJM already maintains, updates, and regularly uses e-mail lists for all PJM members and affected state commissions.

## VI. CONCLUSION

For the reasons stated herein, the PJM Transmission Owners respectfully request that the Commission accept the Tariff revisions without hearing, modification or condition.

Respectfully submitted,

*/s/ Michael Kunselman*
Michael Kunselman
Richard P. Sparling
Jonathan A. Namazi
Margaret Smilowitz
Davis Wright Tremaine LLP
1301 K Street NW
Suite 500 East
Washington, DC 20005

*Attorneys for The FirstEnergy Transmission Companies*

*On behalf of the PJM Transmission Owners*

# Attachment A

# Revisions to the
# PJM Open Access Transmission Tariff

# (Clean Format)

**Definitions – R - S**

**Ramping Capability:**

"Ramping Capability" shall mean the sustained rate of change of generator output, in megawatts per minute.

**Real-time Congestion Price:**

"Real-time Congestion Price" shall mean the Congestion Price resulting from the Office of the Interconnection's dispatch of the PJM Interchange Energy Market in the Operating Day.

**Real-time Loss Price:**

"Real-time Loss Price" shall mean the Loss Price resulting from the Office of the Interconnection's dispatch of the PJM Interchange Energy Market in the Operating Day.

**Real-time Energy Market:**

"Real-time Energy Market" shall mean the purchase or sale of energy and payment of Transmission Congestion Charges for quantity deviations from the Day-ahead Energy Market in the Operating Day.

**Real-time Offer:**

"Real-time Offer" shall mean a new offer or an update to a Market Seller's existing cost-based or market-based offer for a clock hour, submitted for use after the close of the Day-ahead Energy Market.

**Real-time Prices:**

"Real-time Prices" shall mean the Locational Marginal Prices resulting from the Office of the Interconnection's dispatch of the PJM Interchange Energy Market in the Operating Day.

**Real-time Settlement Interval:**

"Real-time Settlement Interval" shall mean the interval used by settlements, which shall be every five minutes.

**Real-time System Energy Price:**

"Real-time System Energy Price" shall mean the System Energy Price resulting from the Office of the Interconnection's dispatch of the PJM Interchange Energy Market in the Operating Day.

**Reasonable Efforts:**

"Reasonable Efforts" shall mean, with respect to any action required to be made, attempted, or taken by an Interconnection Party or by a Construction Party under Tariff, Part IV or Part VI, an Interconnection Service Agreement, or a Construction Service Agreement, such efforts as are timely and consistent with Good Utility Practice and with efforts that such party would undertake for the protection of its own interests.

**Receiving Party:**

"Receiving Party" shall mean the entity receiving the capacity and energy transmitted by the Transmission Provider to Point(s) of Delivery.

**Referral:**

"Referral" shall mean a formal report of the Market Monitoring Unit to the Commission for investigation of behavior of a Market Participant, of behavior of PJM, or of a market design flaw, pursuant to Tariff, Attachment M, section IV.I.

**Reference Resource:**

"Reference Resource" shall mean a combustion turbine generating station, configured with a single General Electric Frame 7HA turbine with evaporative cooling, Selective Catalytic Reduction technology all CONE Areas, dual fuel capability, and a heat rate of 9.134 Mmbtu/ MWh.

**Regional Entity:**

"Regional Entity" shall have the same meaning specified in the Operating Agreement.

**Regional Transmission Expansion Plan:**

"Regional Transmission Expansion Plan" shall mean the plan prepared by the Office of the Interconnection pursuant to Operating Agreement, Schedule 6 for the enhancement and expansion of the Transmission System in order to meet the demands for firm transmission service in the PJM Region.

**Regional Transmission Group (RTG):**

"Regional Transmission Group" or "RTG" shall mean a voluntary organization of transmission owners, transmission users and other entities approved by the Commission to efficiently coordinate transmission planning (and expansion), operation and use on a regional (and interregional) basis.

**Regulation:**

"Regulation" shall mean the capability of a specific generation resource or Demand Resource with appropriate telecommunications, control and response capability to separately increase and

decrease its output or adjust load in response to a regulating control signal, in accordance with the specifications in the PJM Manuals. Regulation is inclusive of Regulation-Down Service and Regulation-Up Service.

**Regulation-Down Requirement:**

"Regulation-Down Requirement" shall mean the required megawatts of performance-adjusted Regulation-Down Service capability to be maintained in a Regulation Zone. The Regulation-Down Requirement is defined as a set megawatt value by hour in accordance with the PJM Manuals, and can increase to account for additional operational uncertainty.

**Regulation-Down Service**

"Regulation-Down Service" shall mean the capability of a specific generation resource or Demand Resource with appropriate telecommunications and response capability to increase and decrease its output in the downward range from a set point or adjust load in response to a regulating-down control signal, in accordance with the specification in the PJM Manuals.

**Regulation-Up Requirement:**

"Regulation-Up Requirement" shall mean the required megawatts of performance-adjusted Regulation-Up Service capability to be maintained in a Regulation Zone. The Regulation-Up Requirement is defined as a set megawatt value by hour in accordance with the PJM Manuals, and can increase to account for additional operational uncertainty.

**Regulation-Up Service**

"Regulation-Up Service" shall mean the capability of a specific generation resource or Demand Resource with appropriate telecommunications and response capability to increase and decrease its output in the upward range from a set point or adjust load in response to a regulating-up control signal, in accordance with the specification in the PJM Manuals.

**Regulation Zone:**

"Regulation Zone" shall mean any of those one or more geographic areas, each consisting of a combination of one or more Control Zone(s) as designated by the Office of the Interconnection in the PJM Manuals, relevant to provision of, and requirements for, regulation service.

**Relevant Electric Retail Regulatory Authority:**

"Relevant Electric Retail Regulatory Authority" shall mean an entity that has jurisdiction over and establishes prices and policies for competition for providers of retail electric service to end-customers, such as the city council for a municipal utility, the governing board of a cooperative utility, the state public utility commission or any other such entity.

**Reliability Assurance Agreement or PJM Reliability Assurance Agreement:**

"Reliability Assurance Agreement" or "PJM Reliability Assurance Agreement" shall mean that certain Reliability Assurance Agreement Among Load Serving Entities in the PJM Region, on file with FERC as PJM Interconnection L.L.C. Rate Schedule FERC No. 44, and as amended from time to time thereafter.

**Reliability Pricing Model Auction:**

"Reliability Pricing Model Auction" or "RPM Auction" shall mean the Base Residual Auction or any Incremental Auction, or, for the 2016/2017 and 2017/2018 Delivery Years, any Capacity Performance Transition Incremental Auction.

**Required Transmission Enhancements:**

"Regional Transmission Enhancements" shall mean enhancements and expansions of the Transmission System that (1) a Regional Transmission Expansion Plan developed pursuant to Operating Agreement, Schedule 6 or (2) any joint planning or coordination agreement between PJM and another region or transmission planning authority set forth in Tariff, Schedule 12-Appendix B ("Appendix B Agreement") designates one or more of the Transmission Owner(s) to construct and own or finance. Required Transmission Enhancements shall also include enhancements and expansions of facilities in another region or planning authority that meet the definition of transmission facilities pursuant to FERC's Uniform System of Accounts or have been classified as transmission facilities in a ruling by FERC addressing such facilities constructed pursuant to an Appendix B Agreement cost responsibility for which has been assigned at least in part to PJM pursuant to such Appendix B Agreement.

**Reserved Capacity:**

"Reserved Capacity" shall mean the maximum amount of capacity and energy that the Transmission Provider agrees to transmit for the Transmission Customer over the Transmission Provider's Transmission System between the Point(s) of Receipt and the Point(s) of Delivery under Tariff, Part II. Reserved Capacity shall be expressed in terms of whole megawatts on a sixty (60) minute interval (commencing on the clock hour) basis.

**Reserve Penalty Factor:**

"Reserve Penalty Factor" shall mean the cost, in $/MWh, associated with being unable to meet a specific reserve requirement in a Reserve Zone or Reserve Sub-zone. A Reserve Penalty Factor will be defined for each reserve requirement in a Reserve Zone or Reserve Sub-zone.

**Reserve Sub-zone:**

"Reserve Sub-zone" shall mean any of those geographic areas wholly contained within a Reserve Zone, consisting of a combination of a portion of one or more Control Zone(s) as designated by the Office of the Interconnection in the PJM Manuals, relevant to provision of, and requirements for, reserve service.

**Reserve Zone:**

"Reserve Zone" shall mean any of those geographic areas consisting of a combination of one or more Control Zone(s), as designated by the Office of the Interconnection in the PJM Manuals, relevant to provision of, and requirements for, reserve service.

**Residual Auction Revenue Rights:**

"Residual Auction Revenue Rights" shall mean incremental stage 1 Auction Revenue Rights created within a Planning Period by an increase in transmission system capability, including the return to service of existing transmission capability, that was not modeled pursuant to Operating Agreement, Schedule 1, section 7.5 and the parallel provisions of Tariff, Attachment K-Appendix, section 7.5 in compliance with Operating Agreement, Schedule 1, section 7.4.2 (h) and the parallel provisions of Tariff, Attachment K-Appendix, section 7.4.2(h), and, if modeled, would have increased the amount of stage 1 Auction Revenue Rights allocated pursuant to Operating Agreement, Schedule 1, section 7.4.2 and the parallel provisions of Tariff, Attachment K-Appendix, section 7.4.2; provided that, the foregoing notwithstanding, Residual Auction Revenue Rights shall exclude: 1) Incremental Auction Revenue Rights allocated pursuant to Tariff, Part VI; and 2) Auction Revenue Rights allocated to entities that are assigned cost responsibility pursuant to Operating Agreement, Schedule 6 for transmission upgrades that create such rights.

**Residual Metered Load:**

"Residual Metered Load" shall mean all load remaining in an electric distribution company's fully metered franchise area(s) or service territory(ies) after all nodally priced load of entities serving load in such area(s) or territory(ies) has been carved out.

**Resource Substitution Charge:**

"Resource Substitution Charge" shall mean a charge assessed on Capacity Market Buyers in an Incremental Auction to recover the cost of replacement Capacity Resources.

**Responsible Customer:**

"Responsible Customer" shall mean customers using Interim Network Integration Transmission Service, Firm Contract Demand Transmission Service, Non-Firm Contract Demand Transmission Service, Point-to-Point Transmission Service and/or Network Integration Transmission Service and Merchant Transmission Facility owners, which are assigned cost responsibility for Transmission Enhancement Charges as determined pursuant to Tariff, Schedule 12.

**Revenue Data for Settlements:**

"Revenue Data for Settlements" shall mean energy quantities used in accounting and billing as determined pursuant to Tariff, Attachment K-Appendix and the corresponding provisions of Operating Agreement, Schedule 1.

**RPM Seller Credit:**

"RPM Seller Credit" shall mean an additional form of Unsecured Credit defined in Tariff, Attachment Q, section IV.

**Scheduled Incremental Auctions:**

"Scheduled Incremental Auctions" shall refer to the First, Second, or Third Incremental Auction.

**Schedule of Work:**

"Schedule of Work" shall mean that schedule attached to the Interconnection Construction Service Agreement setting forth the timing of work to be performed by the Constructing Entity pursuant to the Interconnection Construction Service Agreement, based upon the Facilities Study and subject to modification, as required, in accordance with Transmission Provider's scope change process for interconnection projects set forth in the PJM Manuals.

**Scope of Work:**

"Scope of Work" shall mean that scope of the work attached as a schedule to the Interconnection Construction Service Agreement and to be performed by the Constructing Entity(ies) pursuant to the Interconnection Construction Service Agreement, provided that such Scope of Work may be modified, as required, in accordance with Transmission Provider's scope change process for interconnection projects set forth in the PJM Manuals.

**Seasonal Capacity Performance Resource:**

"Seasonal Capacity Performance Resource" shall have the same meaning specified in Tariff, Attachment DD, section 5.5A.

**Seasonal Facility Rating:**

"Seasonal Facility Rating" shall mean a Transmission Facility Rating that:

(a) Applies to a specified season, where seasons are defined by the Office of the Interconnection to include not fewer than four seasons in each year, and to reasonably reflect portions of the year where expected high temperatures are relatively consistent.

(b) Reflects an up-to-date forecast of ambient air temperature across the relevant season over which the rating applies.

(c) Is evaluated annually, if not more frequently, for each season in the future for which Transmission Service can be requested

**Secondary Reserve:**

"Secondary Reserve" shall mean the reserve capability of generation resources that can be converted fully into energy or Economic Load Response Participant resources whose demand can be reduced within 30 minutes (less the capability of such resources to provide Primary Reserve), from the request of the Office of the Interconnection, regardless of whether the equipment providing the reserve is electrically synchronized to the Transmission System or not.

**Secondary Systems:**

"Secondary Systems" shall mean control or power circuits that operate below 600 volts, AC or DC, including, but not limited to, any hardware, control or protective devices, cables, conductors, electric raceways, secondary equipment panels, transducers, batteries, chargers, and voltage and current transformers.

**Second Incremental Auction:**

"Second Incremental Auction" shall mean an Incremental Auction conducted ten months before the Delivery Year to which it relates**.**

**Security:**

"Security" shall mean the security provided by the New Service Customer pursuant to Tariff, section 212.4 or Tariff, Part VI, section 213.4 to secure the New Service Customer's responsibility for Costs under the Interconnection Service Agreement or Upgrade Construction Service Agreement and Tariff, Part VI, section 217.

**Segment:**
"Segment" shall have the same meaning as described in Operating Agreement, Schedule 1, section 3.2.3(e).

**Self-Supply:**

"Self-Supply" shall mean Capacity Resources secured by a Load-Serving Entity, by ownership or contract, outside a Reliability Pricing Model Auction, and used to meet obligations under this Attachment or the Reliability Assurance Agreement through submission in a Base Residual Auction or an Incremental Auction of a Sell Offer indicating such Market Seller's intent that such Capacity Resource be Self-Supply. Self-Supply may be either committed regardless of clearing price or submitted as a Sell Offer with a price bid. A Load Serving Entity's Sell Offer with a price bid for an owned or contracted Capacity Resource shall not be deemed "Self-Supply," unless it is designated as Self-Supply and used by the LSE to meet obligations under this Attachment or the Reliability Assurance Agreement.

**Self-Supply Entity:**

"Self-Supply Entity" shall mean the following types of Load Serving Entity that operate under long-standing business models: single customer entity, public power entity, or vertically integrated utility, where "vertically integrated utility" means a utility that owns generation, includes such generation in its regulated rates, and earns a regulated return on its investment in such generation or receives any cost recovery for such generation through bilateral contracts; "single customer entity" means a Load Serving Entity that serves at retail only customers that are under common control with such Load Serving Entity, where such control means holding 51% or more of the voting securities or voting interests of the Load Serving Entity and all its retail customers; and "public power entity" means cooperative and municipal utilities, including public power supply entities comprised of either or both of the same and rural electric cooperatives, and joint action agencies.

**Self-Supply Seller:**

"Self-Supply Seller" shall mean, for purposes of evaluating Buyer-Side Market Power, the following types of Load Serving Entities that operate under long-standing business models: vertically integrated utility or public power entity, where "vertically integrated utility" means a utility that owns generation, includes such generation in its state-regulated rates, and earns a state-regulated return on its investment in such generation; and "public power entity" means electric cooperatives that are either rate regulated by the state or have their long-term resource plan approved or otherwise reviewed and accepted by a Relevant Electric Retail Regulatory Authority and municipal utilities or joint action agencies that are subject to direct regulation by a Relevant Electric Retail Regulatory Authority.

**Sell Offer:**

"Sell Offer" shall mean an offer to sell Capacity Resources in a Base Residual Auction, Incremental Auction, or Reliability Backstop Auction.

**Service Agreement:**

"Service Agreement" shall mean the initial agreement and any amendments or supplements thereto entered into by the Transmission Customer and the Transmission Provider for service under the Tariff.

**Service Commencement Date:**

"Service Commencement Date" shall mean the date the Transmission Provider begins to provide service pursuant to the terms of an executed Service Agreement, or the date the Transmission Provider begins to provide service in accordance with Tariff, Part II, section 15.3 or Tariff, Part III, section 29.1.

**Short-Term Firm Point-To-Point Transmission Service:**

"Short-Term Firm Point-To-Point Transmission Service" shall mean Firm Point-To-Point Transmission Service under Tariff, Part II with a term of less than one year.

**Short-term Project:**

"Short-term Project" shall have the same meaning provided in the Operating Agreement.

**Short-Term Resource Procurement Target:**

"Short-Term Resource Procurement Target" shall mean, for Delivery Years through May 31, 2018, as to the PJM Region, for purposes of the Base Residual Auction, 2.5% of the PJM Region Reliability Requirement determined for such Base Residual Auction, for purposes of the First Incremental Auction, 2% of the of the PJM Region Reliability Requirement as calculated at the time of the Base Residual Auction; and, for purposes of the Second Incremental Auction, 1.5% of the of the PJM Region Reliability Requirement as calculated at the time of the Base Residual Auction; and, as to any Zone, an allocation of the PJM Region Short-Term Resource Procurement Target based on the Preliminary Zonal Forecast Peak Load, reduced by the amount of load served under the FRR Alternative. For any LDA, the LDA Short-Term Resource Procurement Target shall be the sum of the Short-Term Resource Procurement Targets of all Zones in the LDA.

**Short-Term Resource Procurement Target Applicable Share:**

"Short-Term Resource Procurement Target Applicable Share" shall mean, for Delivery Years through May 31, 2018: (i) for the PJM Region, as to the First and Second Incremental Auctions, 0.2 times the Short-Term Resource Procurement Target used in the Base Residual Auction and, as to the Third Incremental Auction for the PJM Region, 0.6 times such target; and (ii) for an LDA, as to the First and Second Incremental Auctions, 0.2 times the Short-Term Resource Procurement Target used in the Base Residual Auction for such LDA and, as to the Third Incremental Auction, 0.6 times such target.

**Site:**

"Site" shall mean all of the real property, including but not limited to any leased real property and easements, on which the Customer Facility is situated and/or on which the Customer Interconnection Facilities are to be located.

**Small Commercial Customer:**

"Small Commercial Customer," as used in RAA, Schedule 6 and Tariff, Attachment DD-1, shall mean a commercial retail electric end-use customer of an electric distribution company that participates in a mass market demand response program under the jurisdiction of a RERRA and satisfies the definition of a "small commercial customer" under the terms of the applicable RERRA's program, provided that the customer has an annual peak demand no greater than 100kW.

**Small Generation Resource:**

"Small Generation Resource" shall mean an Interconnection Customer's device of 20 MW or less for the production and/or storage for later injection of electricity identified in an Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities. This term shall include Energy Storage Resources and/or other devices for storage for later injection of energy.

**Small Inverter Facility:**

"Small Inverter Facility" shall mean an Energy Resource that is a certified small inverter-based facility no larger than 10 kW.

**Small Inverter ISA:**

"Small Inverter ISA" shall mean an agreement among Transmission Provider, Interconnection Customer, and Interconnected Transmission Owner regarding interconnection of a Small Inverter Facility under Tariff, Part IV, section 112B.

**Special Member:**

"Special Member" shall mean an entity that satisfies the requirements of Operating Agreement, Schedule 1, section 1.5A.02, and the parallel provisions of Tariff, Attachment K-Appendix, section 1.5A.02, or the special membership provisions established under the Emergency Load Response and Pre-Emergency Load Response Programs.

**Spot Market Backup:**

"Spot Market Backup" shall mean the purchase of energy from, or the delivery of energy to, the PJM Interchange Energy Market in quantities sufficient to complete the delivery or receipt obligations of a bilateral contract that has been curtailed or interrupted for any reason.

**Spot Market Energy:**

"Spot Market Energy" shall mean energy bought or sold by Market Participants through the PJM Interchange Energy Market at System Energy Prices determined as specified in Operating Agreement, Schedule 1, section 2, and the parallel provisions of Tariff, Attachment K-Appendix, section 2.

**Start Additional Labor Costs:**

"Start Additional Labor Costs" shall mean additional labor costs for startup required above normal station manning levels.

**Start Fuel:**

For units without a soak process, “Start Fuel” shall consist of fuel consumed from first fire of the start process to first breaker closing, plus any fuel expended from last breaker opening to shutdown.

For units with a soak process, “Start Fuel” is fuel consumed from first fire of the start process (initial reactor criticality for nuclear units) to dispatchable output (including auxiliary boiler fuel), plus any fuel expended from last breaker opening to shutdown, excluding normal plant heating/auxiliary equipment fuel requirements. Start Fuel included for each temperature state from breaker closure to dispatchable output shall not exceed the unit specific soak time period reviewed and approved as part of the unit-specific parameter process detailed in Tariff, Attachment K-Appendix, section 6.6(c) or the defaults below:

- Cold Soak Time = 0.73 * unit specific Minimum Run Time (in hours)
- Intermediate Soak Time = 0.61 * unit specific Minimum Run Time (in hours)
- Hot Soak Time = 0.43 * unit specific Minimum Run Time (in hours)

**Start-Up Costs:**

“Start-Up Costs” shall consist primarily of the cost of fuel, as determined by the unit’s start heat input (adjusted by the performance factor) times the fuel cost. It also includes operating costs, Maintenance Adders, emissions allowances/adders, and station service cost. Start-Up Costs can vary with the unit offline time being categorized in three unit temperature conditions: hot, intermediate and cold.

For units with a steam turbine and a soak process (nuclear, steam, and combined cycle), “Start Fuel” is fuel consumed from first fire of start process (initial reactor criticality for nuclear units): Start-Up Costs shall mean the net unit costs from PJM’s notification to the level at which the unit can follow PJM’s dispatch, and from last breaker open to shutdown.

For units without a steam turbine and no soak process (engines, combustion turbines, Intermittent Resources, and Energy Storage Resources): Start-Up Costs shall mean the unit costs from PJM’s notification to first breaker close and from last breaker open to shutdown.

**State:**

“State” shall mean the District of Columbia and any State or Commonwealth of the United States.

**State Commission:**

**“**State Commission**”** shall mean any state regulatory agency having jurisdiction over retail electricity sales in any State in the PJM Region.

**State Estimator:**

"State Estimator" shall mean the computer model of power flows specified in Operating Agreement, Schedule 1, section 2.3 and the parallel provisions of Tariff, Attachment K-Appendix, section 2.3.

**State Subsidy:**

"State Subsidy" shall mean a direct or indirect payment, concession, rebate, subsidy, non-bypassable consumer charge, or other financial benefit that is as a result of any action, mandated process, or sponsored process of a state government, a political subdivision or agency of a state, or an electric cooperative formed pursuant to state law, and that

(1) is derived from or connected to the procurement of (a) electricity or electric generation capacity sold at wholesale in interstate commerce, or (b) an attribute of the generation process for electricity or electric generation capacity sold at wholesale in interstate commerce; or

(2) will support the construction, development, or operation of a new or existing Capacity Resource; or

(3) could have the effect of allowing the unit to clear in any PJM capacity auction.

Notwithstanding the foregoing, State Subsidy shall not include (a) payments, concessions, rebates, subsidies, or incentives designed to incent, or participation in a program, contract or other arrangement that utilizes criteria designed to incent or promote, general industrial development in an area or designed to incent siting facilities in that county or locality rather than another county or locality; (b) state action that imposes a tax or assesses a charge utilizing the parameters of a regional program on a given set of resources notwithstanding the tax or cost having indirect benefits on resources not subject to the tax or cost (e.g., Regional Greenhouse Gas Initiative); (c) any indirect benefits to a Capacity Resource as a result of any transmission project approved as part of the Regional Transmission Expansion Plan; (d) any contract, legally enforceable obligation, or rate pursuant to the Public Utility Regulatory Policies Act or any other state-administered federal regulatory program (e.g., the Cross-State Air Pollution Rule); (e) any revenues from the sale or allocation, either direct or indirect, to an Entity Providing Supply Services to Default Retail Service Provider where such entity's obligations was awarded through a state default procurement auction that was subject to independent oversight by a consultant or manager who certifies that the auction was conducted through a non-discriminatory and competitive bidding process, subject to the below condition, and provided further that nothing herein would exempt a Capacity Resource that would otherwise be subject to the minimum offer price rule pursuant to this Tariff; (f) any revenues for providing capacity as part of an FRR Capacity Plan or through bilateral transactions with FRR Entities; or (g) any voluntary and arm's length bilateral transaction (including but not limited to those reported pursuant to Tariff, Attachment DD, section 4.6), such as a power purchase agreement or other similar contract where the buyer is a Self-Supply Entity and the transaction is (1) a short term transaction (one-year or less) or (2) a long-term transaction that is the result of a competitive process that was not fuel-specific and is not used for the purpose of supporting uneconomic construction, development, or operation of the subject Capacity Resource, provided however that if the Self-Supply Entity is responsible for offering the Capacity Resource into an RPM Auction, the specified amount of installed capacity purchased by such Self-Supply Entity shall be considered to receive a State Subsidy in the same manner, under the same conditions, and to the same extent as any other Capacity Resource of a Self-Supply Entity. For purposes of subsection (e) of this

definition, a state default procurement auction that has been certified to be a result of a non-discriminatory and competitive bidding process shall:

(i) have no conditions based on the ownership (except supplier diversity requirements or limits), location (except to meet PJM deliverability requirements), affiliation, fuel type, technology, or emissions of any resources or supply (except state-mandated renewable portfolio standards for which Capacity Resources are separately subject to the minimum offer price rule or eligible for an exemption);

(ii) result in contracts between an Entity Providing Supply Services to Default Retail Service Provider and the electric distribution company for a retail default generation supply product and none of those contracts require that the retail obligation be sourced from any specific Capacity Resource or resource type as set forth in subsection (i) above; and

(iii) establish market-based compensation for a retail default generation supply product that retail customers can avoid paying for by obtaining supply from a competitive retail supplier of their choice.

**State of Charge:**

"State of Charge" shall mean the quantity of physical energy stored in an Energy Storage Resource Model Participant or in the storage component of a Hybrid Resource in proportion to its maximum State of Charge capability. State of Charge is quantified as defined in the PJM Manuals.

**State of Charge Management:**

"State of Charge Management" shall mean the control of State of Charge of an Energy Storage Resource Market Participant or Hybrid Resource using minimum and maximum discharge (and, as applicable, charge) limits, changes in operating mode (as applicable), discharging (and, as applicable, charging) offer curves, and self-scheduling of non-dispatchable sales (and, as applicable, purchases) of energy in the PJM markets. State of Charge Management shall not interfere with the obligation of a Market Seller of an Energy Storage Resource Model Participant or of a Hybrid Resource to follow PJM dispatch, consistent with all other resources.

**Station Power:**

"Station Power" shall mean energy used for operating the electric equipment on the site of a generation facility located in the PJM Region or for the heating, lighting, air-conditioning and office equipment needs of buildings on the site of such a generation facility that are used in the operation, maintenance, or repair of the facility. Station Power does not include any energy (i) used to power synchronous condensers; (ii) used for pumping at a pumped storage facility; (iii) used in association with restoration or black start service; or (iv) that is Direct Charging Energy.

**Sub-Annual Resource Constraint:**

"Sub-Annual Resource Constraint" shall mean, for the 2017/2018 Delivery Year and for FRR Capacity Plans the 2017/2018 and 2018/2019 Delivery Years, for the PJM Region or for each LDA for which the Office of the Interconnection is required under Tariff, Attachment DD, section 5.10(a) to establish a separate VRR Curve for a Delivery Year, a limit on the total amount of Unforced Capacity that can be committed as Limited Demand Resources and Extended Summer Demand Resources for the 2017/2018 Delivery Year in the PJM Region or in such LDA, calculated as the Sub-Annual Resource Reliability Target for the PJM Region or for such LDA, respectively, minus the Short-Term Resource Procurement Target for the PJM Region or for such LDA, respectively.

**Sub-Annual Resource Price Decrement:**

"Sub-Annual Resource Price Decrement" shall mean, for the 2017/2018 Delivery Year, a difference between the clearing price for Extended Summer Demand Resources and the clearing price for Annual Resources, representing the cost to procure additional Annual Resources out of merit order when the Sub-Annual Resource Constraint is binding.

**Sub-Annual Resource Reliability Target:**

"Sub-Annual Reliability Target" for the PJM Region or an LDA, shall mean the maximum amount of the combination of Extended Summer Demand Resources and Limited Demand Resources in Unforced Capacity determined by PJM to be consistent with the maintenance of reliability, stated in Unforced Capacity, that shall be used to calculate the Minimum Annual Resource Requirement for Delivery Years through May 31, 2017 and the Sub-Annual Resource Constraint for the 2017/2018 and 2018/2019 Delivery Years. As more fully set forth in the PJM Manuals, PJM calculates the Sub-Annual Resource Reliability Target, by first determining a reference annual loss of load expectation ("LOLE") assuming no Demand Resources. The calculation for the unconstrained portion of the PJM Region uses a daily distribution of loads under a range of weather scenarios (based on the most recent load forecast and iteratively shifting the load distributions to result in the Installed Reserve Margin established for the Delivery Year in question) and a weekly capacity distribution (based on the cumulative capacity availability distributions developed for the Installed Reserve Margin study for the Delivery Year in question). The calculation for each relevant LDA uses a daily distribution of loads under a range of weather scenarios (based on the most recent load forecast for the Delivery Year in question) and a weekly capacity distribution (based on the cumulative capacity availability distributions developed for the Capacity Emergency Transfer Objective study for the Delivery Year in question). For the relevant LDA calculation, the weekly capacity distributions are adjusted to reflect the Capacity Emergency Transfer Limit for the Delivery Year in question.

For both the PJM Region and LDA analyses, PJM then models the commitment of varying amounts of DR (displacing otherwise committed generation) as interruptible from May 1 through October 31 and unavailable from November 1 through April 30 and calculates the LOLE at each DR level. The Extended Summer DR Reliability Target is the DR amount, stated as a percentage of the unrestricted peak load, that produces no more than a ten percent increase in the LOLE, compared to the reference value. The Sub-Annual Resource Reliability Target shall be expressed as a percentage of the forecasted peak load of the PJM Region or such LDA and is

converted to Unforced Capacity by multiplying [the reliability target percentage] times [the Forecast Pool Requirement] times [the DR Factor] times [the forecasted peak load of the PJM Region or such LDA, reduced by the amount of load served under the FRR Alternative].

**Sub-meter:**

"Sub-meter" shall mean a metering point for electricity consumption that does not include all electricity consumption for the end-use customer as defined by the electric distribution company account number. PJM shall only accept sub-meter load data from end-use customers for measurement and verification of Regulation service as set forth in the Economic Load Response rules and PJM Manuals.

**Summer-Period Capacity Performance Resource:**

"Summer-Period Capacity Performance Resource" shall have the same meaning specified in Tariff, Attachment DD, section 5.5A.

**Surplus Interconnection Customer:**

"Surplus Interconnection Customer" shall mean either an Interconnection Customer whose Generating Facility is already interconnected to the PJM Transmission System or one of its affiliates, or an unaffiliated entity that submits a Surplus Interconnection Request to utilize Surplus Interconnection Service within the Transmission System in the PJM Region. A Surplus Interconnection Customer is not a New Service Customer.

**Surplus Interconnection Request:**

"Surplus Interconnection Request" shall mean a request submitted by a Surplus Interconnection Customer, pursuant to Tariff, Attachment RR, to utilize Surplus Interconnection Service within the Transmission System in the PJM Region. A Surplus Interconnection Request is not a New Service Request.

**Surplus Interconnection Service:**

"Surplus Interconnection Service" shall mean any unneeded portion of Interconnection Service established in an Interconnection Service Agreement, such that if Surplus Interconnection Service is utilized, the total amount of Interconnection Service at the Point of Interconnection would remain the same.

**Switching and Tagging Rules:**

"Switching and Tagging Rules" shall mean the switching and tagging procedures of Interconnected Transmission Owners and Interconnection Customer as they may be amended from time to time.

**Synchronized Reserve:**

"Synchronized Reserve" shall mean the reserve capability of generation resources that can be converted fully into energy or Economic Load Response Participant resources whose demand can be reduced within ten minutes from the request of the Office of the Interconnection dispatcher, and is provided by equipment that is electrically synchronized to the Transmission System.

**Synchronized Reserve Event:**

"Synchronized Reserve Event" shall mean a request from the Office of the Interconnection to generation resources and/or Economic Load Response Participant resources able, assigned or self-scheduled to provide Synchronized Reserve in one or more specified Reserve Zones or Reserve Sub-zones, within ten minutes, to increase the energy output or reduce load by the amount of assigned or self-scheduled Synchronized Reserve capability.

**Synchronized Reserve Requirement:**

"Synchronized Reserve Requirement" shall mean the megawatts required to be maintained in a Reserve Zone or Reserve Sub-zone as Synchronized Reserve, absent any increase to account for additional reserves scheduled to address operational uncertainty. The Synchronized Reserve Requirement is calculated in accordance with the PJM Manuals. This requirement can only be satisfied by Synchronized Reserve resources.

**System Condition:**

"System Condition" shall mean a specified condition on the Transmission Provider's system or on a neighboring system, such as a constrained transmission element or flowgate, that may trigger Curtailment of Long-Term Firm Point-to-Point Transmission Service using the curtailment priority pursuant to Tariff, Part II, section 13.6. Such conditions must be identified in the Transmission Customer's Service Agreement.

**System Energy Price:**

"System Energy Price" shall mean the energy component of the Locational Marginal Price, which is the price at which the Market Seller has offered to supply an additional increment of energy from a resource, calculated as specified in Operating Agreement, Schedule 1, section 2 and the parallel provisions of Tariff, Attachment K-Appendix, section 2.

**System Impact Study:**

"System Impact Study" shall mean an assessment by the Transmission Provider of (i) the adequacy of the Transmission System to accommodate a Completed Application, an Interconnection Request or an Upgrade Request, (ii) whether any additional costs may be incurred in order to provide such transmission service or to accommodate an Interconnection Request, and (iii) with respect to an Interconnection Request, an estimated date that an Interconnection Customer's Customer Facility can be interconnected with the Transmission

System and an estimate of the Interconnection Customer's cost responsibility for the interconnection; and (iv) with respect to an Upgrade Request, the estimated cost of the requested system upgrades or expansion, or of the cost of the system upgrades or expansion, necessary to provide the requested incremental rights.

**System Protection Facilities:**

"System Protection Facilities" shall refer to the equipment required to protect (i) the Transmission System, other delivery systems and/or other generating systems connected to the Transmission System from faults or other electrical disturbance occurring at or on the Customer Facility, and (ii) the Customer Facility from faults or other electrical system disturbance occurring on the Transmission System or on other delivery systems and/or other generating systems to which the Transmission System is directly or indirectly connected. System Protection Facilities shall include such protective and regulating devices as are identified in the Applicable Technical Requirements and Standards or that are required by Applicable Laws and Regulations or other Applicable Standards, or as are otherwise necessary to protect personnel and equipment and to minimize deleterious effects to the Transmission System arising from the Customer Facility.

**Tariff, Part VIII, Subpart A, section 400**
**Definitions F**

**Facilities Study:**

"Facilities Study" shall be an engineering study conducted by the Transmission Provider (in coordination with the affected Transmission Owner(s)) to: (1) determine the required modifications to the Transmission Provider's Transmission System necessary to implement the conclusions of the System Impact Studies; and (2) complete any additional studies or analyses documented in the System Impact Studies or required by PJM Manuals, and determine the required modifications to the Transmission Provider's Transmission System based on the conclusions of such additional studies.

**Federal Power Act:**

"Federal Power Act" shall mean the Federal Power Act, as amended, 16 U.S.C. §§ 791a, et seq.

**FERC or Commission:**

"FERC" or "Commission" shall mean the Federal Energy Regulatory Commission or any successor federal agency, commission or department exercising jurisdiction over the Tariff, Operating Agreement and Reliability Assurance Agreement.

**Final Agreement Negotiation Phase:**

"Final Agreement Negotiation Phase" shall mean the phase set forth in Tariff, Part VIII, Subpart D, section 411 to tender, negotiate, and execute any service agreement in Tariff, Part IX.

**Firm Transmission Service:**

"Firm Transmission Service" shall mean any or a combination of Network Integration Transmission Service, Firm Point-To-Point Transmission Service, or Firm Contract Demand Transmission Service taken by an Eligible Customer.

**Tariff, Part VIII, Subpart N**

**COST RECOVERY PROTECTION AND AGREEMENT**

**Tariff, Part VIII, Subpart N, section 441**
**Cost Recovery Protection for Firm Transmission Service**

**(a) Cost Recovery Assurances:** With respect to Eligible Customers that intend to request any form of Firm Transmission Service from Transmission Provider on behalf of an Eligible Load or Large Load, a Transmission Owner shall either:

(i) Enter into a Cost Recovery Agreement in the form found in Tariff, Part IX, Subpart P with the applicable Eligible Customer and Eligible Load or Large Load. The Transmission Owner counterparty shall be the Transmission Owner that owns the transmission facilities with which the Eligible Load or Large Load will interconnect. In the case of an Eligible Load or Large Load that will not directly interconnect with a Transmission Owner, the Transmission Owner counterparty shall be the Transmission Owner to which the applicable Eligible Customer is connected and from whom the Eligible Customer intends to take Firm Transmission Service. The purpose of the Cost Recovery Agreement is to ensure the Eligible Customer takes a minimum level of Firm Transmission Service on behalf of the Eligible Load or Large Load based on the committed load level and the applicable rate for the Firm Transmission Service, or, if not, the Eligible Load or Large Load shall be required to make a shortfall payment representing any difference between the committed minimum level of service and the actual level of service taken.

(ii) Enter into, subject to FERC acceptance, a separate agreement between at least the Transmission Owner and an Eligible Load or Large Load to prevent cost shifting among transmission customers. Such separate agreement will be determined to adequately prevent cost shifts if such agreement, in conjunction with relevant federal and state regulatory requirements, including applicable retail service tariffs, results in minimum Firm Transmission Service and credit standards, or other comparable protections.

An Eligible Customer and/or Eligible Load or Large Load will be required to enter into and execute a Cost Recovery Agreement or an agreement that meets the standards set forth in subsection (a)(ii) in order to proceed past the Soft Close Date associated with the applicable PJM Fast Energization Cycle, and obtain any form of Firm Transmission Service from the Transmission Provider.

**(b) Preservation of Legacy Treatment:** No Cost Recovery Agreement or separate agreement under subsection (a) above shall be required with respect to Eligible Load or Large Loads covered by existing agreements that meet the criteria set forth in subsection (a)(ii) that have already been filed and are pending acceptance, or that have been accepted by FERC. Any agreement entered into prior to the effective date of this subsection not filed with FERC will not be required to be filed and accepted by FERC; provided, however, in any complaint filed pursuant to Section 206 of the Federal Power Act in which it is claimed that such agreement is not just and reasonable or is unduly discriminatory within the meaning of the Federal Power Act, such agreement shall not be determined to be unjust and unreasonable or unduly discriminatory if it meets the standard set forth in subsection (a)(ii).

**(c) Tender and Negotiation of Cost Recovery Agreement:** As applicable, consistent with subsections (a) and (b) above, Transmission Owner shall tender a draft of the Cost Recovery

Agreement to Eligible Customer and Eligible Load or Large Load within 30 days of the completion of the Transmission Owner's retail load interconnection study.

Upon receipt of the draft Cost Recovery Agreement, Eligible Customer, as well as the Eligible Load or Large Load, shall provide the Transmission Owner with any written comments on the draft Cost Recovery Agreement within seven (7) days. The parties will conduct further negotiations as required, with such negotiations to be completed within twenty-five (25) days of the Transmission Owner's tender of the draft Cost Recovery Agreement.

**(d) Execution and Filing of Cost Recovery Agreement:** Not later than ten (10) days after the end of the negotiation period set forth in subsection (c) above, Eligible Customer and the Eligible Load or Large Load shall (i) execute the Cost Recovery Agreement and return it to Transmission Owner; and (ii) provide the Credit Support specified in the Cost Recovery Agreement.

If the Eligible Load or Large Load fails to execute the Cost Recovery Agreement or provide the required Credit Support in the specified time period, Eligible Customer shall not be permitted to proceed through the applicable Fast Energization Cycle.

The Transmission Owner shall file any executed Cost Recovery Agreement, if required, with FERC within twenty-one (21) days of the other parties executing the Cost Recovery Agreement.

**(e) Crediting of Termination Amounts:** If the effective date of an Early Termination or Partial Termination, as defined in a Cost Recovery Agreement, occurs prior to the first Service Date specified in such agreement, and the Eligible Load or Large Load that is a party to that agreement is required to make a termination payment, as applicable, such termination payment or other amounts received pursuant to such obligation, including any security drawn on by Transmission Owner, shall be divided amongst the pool of Transmission Owners constructing facilities needed to provide the related transmission service, but which will no longer be constructed, including the Transmission Owner that is a party to the Cost Recovery Agreement, as follows:

(i) Within thirty (30) days of such termination, the Transmission Owner that is party to the Cost Recovery Agreement (referred to herein as the "contracting Transmission Owner") shall notify all other Transmission Owners that have been designated to construct and own Interconnection Reliability Reinforcements necessary to provide Firm Transmission Service to an Eligible Customer on behalf of the terminating Eligible Load or Large Load (referred to herein as the "third party Transmission Owners") of such termination. For purposes of this subsection, third party Transmission Owners shall include all Transmission Owners designated to construct and own Interconnection Reliability Reinforcements identified in the PJM Fast Energization Cycle in which the terminating Eligible Load or Large Load was studied, and for which the contracting Transmission Owner's Zone received a cost responsibility share.

(ii) Each third-party Transmission Owner shall, within thirty (30) days of the deadline for filings its FERC Form 1 that includes all Eligible Costs, provide an account of such Eligible Costs to the contracting Transmission Owner. For purposes of this subsection "Eligible Costs" consist of all expenditures, costs, and cancellation fees incurred or due to commitments made by the third-party Transmission Owner to engineer, design, procure, construct, own, operate,

maintain, and service the Interconnection Reliability Reinforcements needed to serve the Eligible Customer taking transmission service on behalf of the Eligible Load or Large Load, but which will no longer be constructed, which (a) are incurred through the end of the calendar year in which notice of termination was received from the contracting Transmission Owner, and (b) are included in amounts reported in the Transmission Owner's FERC Form 1 covering that calendar year.

Any failure by a third-party Transmission Owner to provide such information within the timeframe above shall bar said Transmission Owner from receiving a portion of amounts paid by Eligible Load or Large Load as set forth below.

(iii) Within thirty (30) days of (a) receiving all Transmission Owner accountings in accordance with subsection (ii) above, and (b) receipt of termination amounts from the Eligible Load or Large Load that is party to the Cost Recovery Agreement, the contracting Transmission Owner shall divide such termination amounts among itself and the pool of third-party Transmission Owners based on each Transmission Owner's *pro rata* share of the total amount of applicable expenditures, costs and cancellation fees, and disburse such amounts to the third-party Transmission Owners accordingly.

For purposes of determining these *pro rata* shares, the contracting Transmission Owner shall be permitted to include Eligible Costs associated not only with its applicable Interconnection Reliability Reinforcements but also any other transmission facilities, including Supplemental Projects and Direct Connection Facilities, that it was constructing in order to provide interconnection or transmission service to the Eligible Load or Large Load, or Eligible Customer taking transmission service on behalf of the Eligible Load or Large Load.

To the extent that additional termination funds are received or collected from the Eligible Load or Large Load after an initial distribution is made under this subsection, contracting Transmission Owner will make additional disbursements using the same methodology within fifteen (15) days of receipt of such amounts.

(iv) Nothing in this subsection (e) is intended or shall be interpreted to prevent any Transmission Owner from seeking cost recovery through an abandoned plant recovery filing made with FERC or through any other proceeding, except insofar as the Transmission Owner has received amounts pursuant to the process set forth in this subsection (e), it shall be prohibited from requesting recovery of such amounts in any future proceeding.

(v) To the extent a Transmission Owner elects to satisfy its obligation under subsection (a) above through a separate agreement as described in subsection (a)(ii), it shall include in such separate agreement reasonably comparable termination payment crediting provisions as set forth in this subsection (e), as determined by FERC.

(vi) Any disputes under this subsection (e) shall be subject to the dispute resolution procedure set forth in Schedule 5 of the Operating Agreement.

**Tariff, Part IX, Subpart P**

**FORM OF**
**COST RECOVERY AGREEMENT**

**COST RECOVERY AGREEMENT**

**Between**

**[TRANSMISSION OWNER]**
**Transmission Owner**

**and**

**[LARGE LOAD CUSTOMER]**

**Large Load Customer**

**and**

**[ELIGIBLE CUSTOMER]**
**Eligible Customer**

## COST RECOVERY AGREEMENT

This Cost Recovery Agreement ("Agreement" or "**CRA**") is made and entered into as of [Insert Date] by and among [Transmission Owner], a [State and Entity Type] ("**Transmission Owner**") and [Large Load Customer], a [State and Entity Type] ("Large Load Customer"), and [Eligible Customer], a [State and Entity Type] ("**Eligible Customer**"). Transmission Owner, Eligible Customer, and Large Load Customer are referred to individually as a "Party" and collectively as the "Parties."

Large Load Customer will be responsible for all payment and Credit Support obligations assigned to Large Load Customer under this CRA. Eligible Customer will remain responsible for the transmission-service, information-sharing, and administrative obligations expressly assigned to Eligible Customer under this CRA.

### RECITALS

**WHEREAS**, Large Load Customer intends to construct, maintain, and operate new or modified facilities located at or near [Facility Address] that will constitute a Large Load (the "**Large Load Facilities**"), with an anticipated initial service date of [Date] (the "Commercial Operation Date");

**WHEREAS**, Large Load Customer has completed retail interconnection studies conducted by Transmission Owner and/or one or more of its affiliates;

**WHEREAS**, following completion of the applicable Transmission Owner's interconnection study process, the Parties are entering into this CRA based on the Initial Load Commitment, proposed load ramp, and anticipated Service Dates identified in Exhibit A;

**WHEREAS**, Eligible Customer intends to request Network Integration Transmission Service ("NITS"), Firm Point-to-Point Transmission Service, or Firm Contract Demand Transmission Service ("FCDS") under the PJM Open Access Transmission Tariff ("PJM Tariff") on behalf of the Large Load Customer to serve the Large Load Facilities , each of which constitutes "Firm Transmission Service" under this CRA;

**WHEREAS**, Exhibit A identifies the initial amount and type of Firm Transmission Service to be requested by Eligible Customer on behalf of Large Load Customer, together with the load ramp and anticipated Service Dates;

**WHEREAS**, following completion of the applicable application and study process to obtain the Firm Transmission Service, Exhibit A and the related calculations under this CRA will be updated to reflect the type, amount, and timing of Firm Transmission Service established in the Final PJM Agreement;

**WHEREAS**, in reliance on the Firm Load Commitment and in accordance with the PJM Tariff and other applicable agreements, the Transmission Owner intends to construct, own,

operate, maintain, service, and recover the costs associated with transmission facilities necessary to serve the Large Load Facilities;

**WHEREAS**, this CRA establishes the payment and Credit Support obligations described herein and allocates the financial risk arising if Firm Transmission Service-related revenues attributable to service actually taken for the Large Load Facilities are less than the Committed Revenue Contribution.

**NOW**, **THEREFORE**, in consideration of the premises and the mutual covenants and undertakings set forth herein, the receipt and sufficiency of which are acknowledged, the Parties, intending to be legally bound, agree as follows:

## ARTICLE 1
## DEFINITIONS

### 1.0 Defined Terms

Capitalized terms used in this CRA have the meanings set forth below. Capitalized terms used but not defined in this CRA have the meanings set forth in the PJM Tariff.

(a) "Actual Revenue Contribution" means, for each Measurement Period, the Firm Transmission Service-related revenues attributable to Firm Transmission Service actually taken by Eligible Customer to serve the Large Load Facilities, as calculated in accordance with Section 5.2 and Exhibit B.

(b) "Agreement" or "CRA" means this Cost Recovery Agreement, including its Exhibits and any amendments that become effective in accordance with this CRA and applicable law.

(c) "Applicable Credits" means the amounts identified in Article 9 and Exhibit D, Section 4, that are deducted in calculating the Early Termination Amount or Partial Termination Amount, without duplication.

(d) "Applicable Firm Transmission Service Rate" means, for each Measurement Period, the Transmission Owner's rate or rates then in effect under the PJM Tariff for the applicable Firm Transmission Service in the applicable Transmission Zone, as used to calculate the charges corresponding to the Firm Load Commitment.

(e) "Applicable Termination Percentage" means the percentage set forth in Exhibit D for the period in which the termination or Partial Termination becomes effective.

(f) "Business Day" means any day other than a Saturday, Sunday, or holiday recognized by the North American Electric Reliability Corporation.

(g) "Commercial Operation Date" means the anticipated initial service date for the Large Load Facilities identified in Exhibit A.

(h) "Committed Revenue Contribution" means, for each Measurement Period, the contractually required portion of the Full Firm Transmission Service Benchmark, calculated by applying the Minimum Commitment Percentage in accordance with Section 5.1 and Exhibit B.

(i) "Credit Support" means the financial security that Large Load Customer is required to provide and maintain under Section 6.1 to secure Large Load Customer's payment and other financial obligations under this CRA.

(j) "Credit Support Requirement" means the amount of Credit Support that Large Load Customer is required to cause to be provided and maintained, as calculated in accordance with Section 6.5 and Exhibit C based on the aggregate Projected Full Firm Transmission Service Benchmarks for all Measurement Periods remaining in the Term, including any portion of the applicable Measurement Period that remains incomplete. Before the recalculation required under Section 3.2, the Credit Support Requirement shall be the Initial Credit Support Requirement.

(k) "Effective Date" means the date on which this CRA becomes effective as set forth in Section 4.1.

(l) "Early Termination Amount" means the amount payable by Large Load Customer upon a termination of this CRA for which an Early Termination Amount is required under Article 9, as calculated in accordance with Exhibit D.

(m) "Early Termination Offset Amount" means the Firm Transmission Service-related revenues received by Transmission Owner during the period corresponding to the remaining fixed period from incremental replacement load served at the same Point of Delivery, to the extent those revenues correspond to the revenue exposure included in the Early Termination Amount or Partial Termination Amount, as determined in accordance with Section 9.9.

(n) "Eligible Customer" means the Person identified as Eligible Customer in the preamble to this CRA, which is an Eligible Customer under the PJM Tariff and the entity responsible for taking Firm Transmission Service on behalf of Large Load Customer to serve the Large Load Facilities. Eligible Customer is responsible only for the obligations expressly assigned to Eligible Customer under this CRA and is not responsible for Large Load Customer's payment or Credit Support obligations.

(o) "FERC" means the Federal Energy Regulatory Commission or any successor agency.

(p) "Final PJM Agreement" means the final Transmission Service Agreement or other agreement executed under the PJM Tariff that identifies the Firm Transmission Service to be taken by Eligible Customer on behalf of Large Load Customer.

(q) "Firm Load Commitment" means the amount of firm load identified in Exhibit A, together with the corresponding level of Firm Transmission Service that Eligible Customer has committed to take on behalf of Large Load Customer and any associated load-ramp milestones and Service Dates.

(r) "Firm Transmission Service" means NITS, Firm Point-to-Point Transmission Service, or FCDS, as applicable, requested or taken by Eligible Customer under the PJM Tariff on behalf of Large Load Customer to serve the Large Load Facilities.

(s) "Full Firm Transmission Service Benchmark" means, for each Measurement Period, the charges that would apply under the Applicable Firm Transmission Service Rate and applicable billing determinants if Eligible Customer took Firm Transmission Service corresponding to the Firm Load Commitment scheduled to apply during that Measurement Period, as calculated in accordance with Section 5.1 and Exhibit B.

(t) "Force Majeure" has the meaning set forth in Article 12.

(u) "FCDS" means Firm Contract Demand Transmission Service under the PJM Tariff.

(v) "Initial Load Commitment" means the initial amount of Firm Transmission Service to be requested by Eligible Customer on behalf of Large Load Customer, together with the proposed load ramp and anticipated Service Dates identified in Exhibit A at execution of this CRA.

(w) "Initial Credit Support Requirement" means the amount of Credit Support identified in Exhibit C at execution by the Parties of this CRA based on the Initial Load Commitment, anticipated Service Dates, and aggregate Projected Full Firm Transmission Service Benchmarks for the Term, calculated in accordance with the methodology specified in Exhibit C.

(x) "Large Load" shall mean end-use customer(s) load that has a cumulative peak load of 50 megawatts or greater at a single electrical site behind one or more points of interconnection, where for configurations involving multiple affiliated load facilities or multiple points of interconnection with affiliated load facilities behind them, all affiliated load facilities within a one-mile radius will be considered a single electrical site as further described in the PJM Manuals.

(y) "Large Load Customer" means the Person identified in Exhibit A that owns, operates, leases, or otherwise controls the Large Load Facilities and on whose behalf Eligible Customer takes Firm Transmission Service to serve the Large Load Facilities. Large Load Customer is a Party to this CRA and is directly responsible for the payment and Credit Support obligations assigned to Large Load Customer under this CRA.

(z) "Large Load Facilities" means the new or modified facilities identified in Exhibit A that constitute the Large Load.

(aa) "Measurement Period" means each period, not to exceed one year, corresponding to Transmission Owner's applicable formula rate cycle, or portion thereof, beginning on the first Service Date and continuing through the end of the Term, as specified in Exhibit A.

(bb) "Minimum Commitment Percentage" means the percentage specified in Exhibit A that is applied to the Full Firm Transmission Service Benchmark to calculate the Committed Revenue Contribution, which percentage shall be no less than 80% and no greater than 100%, per the schedule set forth in Exhibit A below.

(cc) "MW" means megawatts.

(dd) "NITS" means Network Integration Transmission Service provided pursuant to the PJM Tariff, Part III.

(ee) "Partial Termination Amount" means the amount payable by Large Load Customer upon a permanent reduction of a specified portion of the Firm Load Commitment under Section 9.2, as calculated in accordance with Section 9.8 and Exhibit D.

(ff) "Person" means an individual, corporation, limited liability company, partnership, association, trust, governmental authority, or other legal entity.

(gg) "PJM" means PJM Interconnection, L.L.C. or its successor.

(hh) "PJM Tariff" means the PJM Open Access Transmission Tariff, as accepted by FERC and effective from time to time.

(ii) "Projected Committed Revenue Contributions" means the aggregate amounts projected to constitute Committed Revenue Contributions during the applicable period, calculated by applying the Minimum Commitment Percentage to the Projected Full Firm Transmission Service Benchmark for each applicable Measurement Period.

(jj) "Project Development Costs" means all expenditures, costs, and cancellation fees incurred, or due to commitments made by the Transmission Owner or other transmission owners to engineer, design, procure, construct, own, operate, maintain, and service the necessary transmission facilities needed to serve the Large Load Customer that are intended to be placed into transmission rate base and recovered through transmission rates.

(kk) "Projected Full Firm Transmission Service Benchmark" means, for each applicable Measurement Period, 100% of the Firm Transmission Service-related charges projected to apply if Eligible Customer takes Firm Transmission Service corresponding to the Initial Load Commitment or Firm Load Commitment, as applicable, calculated in accordance with Exhibit C.

(ll) "Service Date" means (i) before execution of the Final PJM Agreement, each anticipated date identified in Exhibit A on which the Initial Load Commitment, or a portion thereof, is expected to become effective; and (ii) after execution of the Final PJM Agreement, each date identified in Exhibit A as updated pursuant to Section 3.2 on which the Firm Load Commitment, or a specified portion thereof under an applicable load ramp, is scheduled to become effective..

(mm) "Shortfall Amount" means, for each Measurement Period, the amount, if any, by which the Committed Revenue Contribution exceeds the Actual Revenue Contribution, as calculated in accordance with Section 5.3 and Exhibit B.

(nn) "Term" has the meaning set forth in Section 4.2.

(oo) "Transmission Owner" means the PJM Transmission Owner identified in the preamble to this CRA.

(pp) "Transmission System" shall mean the facilities controlled or operated by PJM that are used to provide transmission service under Part II and Part III of the PJM Tariff.

(qq) "Transmission Zone" means the transmission zone identified in Exhibit A in which the Large Load Facilities are located.

## ARTICLE 2
## RECITALS

### 2.1 Recitals

The statements set forth in the recitals above are hereby incorporated herein into the terms and conditions of this CRA as if fully set forth herein.

## ARTICLE 3
## FIRM LOAD COMMITMENT

### 3.1 Initial Load Commitment and Firm Load Commitment

At execution of this CRA, the Initial Load Commitment shall be established using the amount and type of Firm Transmission Service that Eligible Customer intends to request from PJM on behalf of Large Load Customer through the applicable application and study process, together with the proposed load ramp and anticipated Service Dates identified in Exhibit A.

Following execution of the Final PJM Agreement, the Firm Load Commitment applicable during each Measurement Period shall be the amount and type of Firm Transmission Service that the Eligible Customer takes on behalf of the Large Load during each Measurement Period, as set forth in Exhibit A. This amount shall be based on the amount of load for the Large Load scheduled to be in service during each Measurement Period, or the amount of Firm Transmission Service that the Eligible Customer has contracted for on behalf of the Large Load.

If Exhibit A establishes a load ramp, consistent with the amount of Firm Transmission Service that the Eligible Customer has contracted for on behalf of the Large Load, each scheduled load level becomes part of the Firm Load Commitment on the applicable Service Date.

Except as expressly provided in this CRA, Eligible Customer's failure to begin taking Firm Transmission Service to serve the Large Load Facilities, take Firm Transmission Service corresponding to a scheduled load level, or maintain that level of Firm Transmission Service does not reduce or defer the Firm Load Commitment or the Committed Revenue Contribution, or excuse Large Load Customer from any payment or Credit Support obligation under this CRA.

### 3.2 Post-Final PJM Agreement Update and Subsequent Modification

Within thirty (30) days after execution of the Final PJM Agreement, Transmission Owner shall update Exhibit A to reflect the Firm Transmission Service, load ramp, and Service Dates established through or consistent with the Final PJM Agreement. Transmission Owner shall also update the Applicable Firm Transmission Service Rate, Projected Committed Revenue Contributions, Projected Full Firm Transmission Service Benchmarks, Credit Support Requirement, the applicable schedules in Exhibits A and C, and the calculations under Exhibit B using the information then available.

The information reflected in the Final PJM Agreement shall control over the corresponding preliminary information included in Exhibit A at execution. If the Final PJM Agreement establishes less Firm Transmission Service than the Initial Load Commitment, the Firm Load Commitment shall be reduced accordingly. A reduction required by this paragraph shall not constitute a Partial Termination and shall not result in a Partial Termination Amount.

An update required by this Section shall become effective without further agreement of the Parties and shall not constitute an amendment to this CRA. Transmission Owner shall provide the updated Exhibits and reasonable supporting calculations to Eligible Customer and Large Load Customer.

After the update required by this Section, a further modification to the Firm Load Commitment or a Service Date shall become effective only if the Parties execute any amendment required under this CRA and the amendment receives any required PJM or FERC acceptance or approval. A customer-requested reduction remains subject to Article 9.

### 3.3 No Transmission Owner Obligation

Except as otherwise explicitly provided herein, nothing in this Agreement shall constitute an obligation on the part of Transmission Owner to provide any service to any Party or place into service any transmission facilities by any specific date or dates.

## ARTICLE 4
## EFFECTIVE DATE AND TERM

### 4.1 Effective Date

This CRA will become effective on the later of : (1) the date executed by all Parties, or (2) the date accepted or approved by FERC, if such acceptance or approval is required, or (3) on such other date as FERC may establish in an order accepting or approving the CRA (the "Effective Date").

## 4.2 Term

Unless terminated earlier in accordance with this CRA, the term of this CRA (the "Term") shall commence on the Effective Date and continue until the later of: (i) the date that is at least ten (10) years after the first Service Date as specified in Exhibit A; and (ii) the date on which all outstanding obligations under this CRA have been satisfied.

# ARTICLE 5
# REVENUE CONTRIBUTIONS AND SHORTFALL AMOUNT

## 5.1 Committed Revenue Contribution

For each Measurement Period during the Term, Transmission Owner shall calculate the Committed Revenue Contribution in accordance with this Section and Exhibit B, using the applicable rates, billing determinants, and other information available in accordance with the PJM Tariff. The Committed Revenue Contribution shall equal the Minimum Commitment Percentage multiplied by the Firm Transmission Service-related charges that would apply if Eligible Customer took Firm Transmission Service corresponding to the Firm Load Commitment applicable during the Measurement Period.

The calculation shall use:

(a) the Firm Load Commitment that applies during each Measurement Period;

(b) the Applicable Firm Transmission Service Rate and the generally applicable billing determinants under the PJM Tariff; and

(c) the portion of the Measurement Period during which each scheduled Firm Load Commitment amount and Applicable Firm Transmission Service Rate applies.

If more than one Firm Load Commitment amount or Applicable Firm Transmission Service Rate applies during a Measurement Period, Transmission Owner shall calculate separately the amount applicable to each portion of the Measurement Period and aggregate those amounts to determine the Committed Revenue Contribution for the applicable Measurement Period.
Eligible Customer shall be responsible for timely payment of charges for Firm Transmission Service in a given calendar year on a monthly basis in accordance with the PJM Tariff.

## 5.2 Actual Revenue Contribution

For each Measurement Period during the Term, Transmission Owner shall calculate the Actual Revenue Contribution attributable to Firm Transmission Service actually taken to serve the Large Load Facilities in accordance with Exhibit B. To the extent that the Large Load Customer has made separate payments through a retail tariff or other retail mechanism that reflect the assignment of Firm Transmission Service or related costs to the Large Load Customer, such

payments shall be taken into account in determining its Actual Revenue Contribution, insofar as doing so does not result in costs being shifted to other Eligible Customers taking service in the Transmission Owner's Zone. To the extent that the applicable Firm Transmission Service methodology calculates charges using an assigned Network Service Peak Load contribution or another allocated billing determinant, the Actual Revenue Contribution shall be calculated using the billing determinant assigned to the Large Load Facilities for the applicable Measurement Period and the same categories of rates used to calculate the Committed Revenue Contribution.

## 5.3 Shortfall Amount

For each Measurement Period, the Shortfall Amount shall equal the amount, if any, by which the Committed Revenue Contribution exceeds the Actual Revenue Contribution in accordance with Exhibit B.

Large Load Customer shall pay each Shortfall Amount in accordance with Article 7.

## 5.4 Separate Measurement Periods

Each Measurement Period shall be calculated independently.

## 5.5 Commencement of Committed Revenue Contribution

The determination of the Committed Revenue Contribution and any corresponding Shortfall Amounts shall begin on the corresponding Service Date, as set forth in Exhibit A, regardless of whether: (i) Eligible Customer has begun taking the corresponding level of Firm Transmission Service; (ii) the amount of Firm Transmission Service taken by Eligible Customer corresponds to the load level scheduled to apply on that Service Date; or (iii) the Large Load Facilities are operating at a lower load level than the one scheduled to apply on that Service Date.

Notwithstanding the foregoing, if Eligible Customer cannot begin taking the applicable Firm Transmission Service on a Service Date solely because the necessary transmission facilities have not been completed, and such delay was not caused in whole or in part by Large Load Customer's or Eligible Customer's failure or lack of reasonable diligence in satisfying its obligations under this CRA or under any other binding agreement, tariff, regulatory order, or other legal requirement, the Service Date and commencement of the corresponding Committed Revenue Contribution shall be extended on a day-for-day basis until the Firm Transmission Service becomes available. Large Load Customer's obligations include, without limitation (a) construction, testing, commissioning and readiness of any facilities being constructed by Large Load Customer, and (b) prompt and reasonable responses to Transmission Owner's or Transmission Owners' affiliate(s)' requests for information, approvals, or other communications necessary for Transmission Owner's or Transmission Owners' affiliate(s)' work.

## 5.6 Access to Information

Eligible Customer shall provide, or authorize access to, the service, billing, settlement, and allocation information from PJM or any other entity reasonably necessary for Transmission Owner to calculate the Actual Revenue Contribution, Shortfall Amount, or any other calculation

required under this Agreement.

## ARTICLE 6
## CREDIT SUPPORT

### 6.1 Obligation to Post and Maintain Credit Support

In accordance with Tariff, Part VIII, Subpart N, section 441(d), Large Load Customer shall, at its own expense, cause Credit Support equal to the Initial Credit Support Requirement identified in Exhibit C to be provided in favor of Transmission Owner not later than ten (10) days after the end of the negotiation period specified in Tariff, Part VIII, Subpart N, section 441(c).

If Large Load Customer fails to provide the required Credit Support within that period, the consequences specified in Tariff, Part VIII, Subpart N, section 441(d) shall apply.

Within five (5) Business Days after receipt of the post-PJM recalculation required under Section 3.2, Large Load Customer shall cause the Credit Support to be increased, reduced, amended, or replaced as necessary to equal the recalculated Credit Support Requirement.

The Credit Support shall secure Large Load Customer's payment and other financial obligations under this CRA and shall at all times equal or exceed the Credit Support Requirement set forth in Exhibit C, subject to any reduction or treatment of prior draws expressly provided in this CRA.

The Credit Support Requirement shall be based on 100% of the Projected Full Firm Transmission Service Benchmarks for the applicable remaining Measurement Periods and shall not be reduced by the Minimum Commitment Percentage.

Large Load Customer shall cause the Credit Support to be maintained throughout the Term and thereafter until:

(a) all Shortfall Amounts and other amounts due under this CRA have been paid;
(b) the final reconciliation required under this CRA has been completed; and
(c) Transmission Owner has no remaining right to draw on the Credit Support under this CRA.

### 6.2 Form of Credit Support

Credit Support shall be a Letter of Credit in the form specified in Exhibit C and related attachments to Exhibit C.

### 6.3 Replacement of Credit Support

Large Load Customer shall cause compliant replacement Credit Support to be provided within five (5) Business Days after notice from Transmission Owner if: (i) the issuer ceases to satisfy the requirements of Exhibit C; (ii) the Credit Support ceases to satisfy this Article 6; (iii) the Credit Support will expire or terminate before Large Load Customer's obligation to maintain Credit Support ends; or (iv) the issuer gives notice of nonrenewal.

Replacement Credit Support provided under this Section shall be in an amount equal to the then-applicable Credit Support Requirement, as determined under Section 6.5 and Exhibit C as of the replacement date to reflect any completed Measurement Period that has been excluded from the Credit Support Requirement in accordance with Section 6.5, less the amount of any cash security then held by Transmission Owner and legally available to secure the same obligations.

## 6.4 Preservation Draw

If Large Load Customer fails to cause timely replacement Credit Support to be provided under Section 6.3, Transmission Owner may draw the lesser of: (i) the full amount then available under the existing Credit Support; and (ii) the then-applicable Credit Support Requirement, less any cash security then held by Transmission Owner and legally available to secure the same obligations. Transmission Owner may hold the proceeds as cash security for Large Load Customer's obligations under this CRA.

A preservation draw does not constitute payment of an obligation unless and until Transmission Owner applies the proceeds to an amount due under this CRA.

Transmission Owner shall release cash security held under this Section after Large Load Customer causes compliant replacement Credit Support to be provided, except to the extent the cash has been applied to an amount due.

## 6.5 Adjustment of Credit Support Requirement

The Credit Support Requirement for each applicable period shall be calculated in accordance with Exhibit C.

Transmission Owner shall also recalculate the Credit Support Requirement following the update required under Section 3.2. That recalculation shall replace the Initial Credit Support Requirement and shall reflect the Firm Load Commitment, Service Dates, Applicable Firm Transmission Service Rate, Projected Full Firm Transmission Service Benchmarks, and other information established following the Final PJM Agreement.

Transmission Owner shall recalculate the Credit Support Requirement after completion of each Measurement Period and upon any other recalculation event specified in Exhibit C. The recalculated Credit Support Requirement shall equal the aggregate Projected Full Firm Transmission Service Benchmarks for the Measurement Periods remaining in the Term, including any incomplete portion of the applicable Measurement Period. A completed Measurement Period shall be excluded from the Credit Support Requirement only after: (i) the Committed Revenue Contribution, Actual Revenue Contribution, and any resulting Shortfall Amount for that Measurement Period have been finally calculated; and (ii) Large Load Customer has paid all amounts due for that Measurement Period.

If the Credit Support Requirement increases, Large Load Customer shall cause the Credit Support to be increased to the recalculated Credit Support Requirement within five (5) Business Days after receipt of the calculation.

If the Credit Support Requirement decreases, Transmission Owner shall authorize a corresponding reduction within five (5) Business Days of a request by the financial institution issuing the Credit Support for such authorization, provided that no payment default or other Event of Default exists and the remaining Credit Support, together with any cash security held by Transmission Owner, will equal or exceed the adjusted Credit Support Requirement.

Actual Revenue Contributions for a completed Measurement Period shall be used to determine the Shortfall Amount for that completed Measurement Period but shall not reduce the Projected Full Firm Transmission Service Benchmarks used to calculate the Credit Support Requirement for future Measurement Periods.

## 6.6 Draws for Unpaid Amounts

Except for a preservation draw under Section 6.4, Transmission Owner may draw on Credit Support only after: (i) Transmission Owner has issued an invoice identifying an amount due under this CRA and the basis for that amount; and (ii) Large Load Customer has failed to pay the invoiced amount within the payment period specified in Article 7.

A draw shall not exceed the amount due and unpaid.

Transmission Owner shall apply the proceeds of a draw to the unpaid amount for which the draw was made. Proceeds applied to a Shortfall Amount shall be credited in accordance with Section 7.6, and proceeds applied to an Early Termination Amount or Partial Termination Amount shall be applied and credited in accordance with Section 9.12. Large Load Customer's payment default shall be cured to the extent Transmission Owner receives and applies proceeds sufficient to satisfy the unpaid amount.

## 6.7 Replenishment

Following a draw applied to satisfy an unpaid amount, Large Load Customer shall cause the Credit Support to be restored to the applicable Credit Support Requirement within five (5) Business Days after notice from Transmission Owner.

## 6.8 Release of Credit Support

Transmission Owner shall release the remaining Credit Support within ninety (90) days after the latest of: (i) expiration or termination of the Term; (ii) completion of all calculations, invoices, and reconciliations required under this CRA; (iii) payment of all undisputed amounts determined to be due under this CRA; or (iv) resolution of any pending dispute that could result in an additional amount payable by Large Load Customer .

Transmission Owner shall provide release or cancellation documentation relating to Credit Support to Large Load Customer, with a copy to Eligible Customer.

# ARTICLE 7

## INVOICING AND PAYMENT

### 7.1 Determination and Invoice

After the end of each Measurement Period, Transmission Owner shall calculate the Committed Revenue Contribution, Actual Revenue Contribution, and resulting Shortfall Amount in accordance with Article 5 and Exhibit B.

If a Shortfall Amount exists, Transmission Owner shall inform the other Parties and issue an invoice to Large Load Customer for the Shortfall Amount within sixty (60) days after the end of the applicable Measurement Period. Transmission Owner shall provide Eligible Customer with a copy of the invoice.

### 7.2 Payment

Large Load Customer shall timely pay all amounts invoiced and due under this CRA by no later than thirty (30) days after the date of receipt of the applicable invoice. Any payment made after thirty (30) days, including any draw made by a Transmission Owner pursuant to Sections 6.6 and 7.3 below shall include interest at the FERC rate set forth in 18 CFR Section 35.19.

### 7.3 Draw on Credit Support

If Large Load Customer fails to timely pay an invoiced amount, Transmission Owner may draw on the Credit Support for the unpaid amount in accordance with Section 6.6.

### 7.4 Review of Supporting Documentation

Upon Large Load Customer's timely request, Transmission Owner and if applicable, Eligible Customer, shall provide documentation reasonably necessary to enable Large Load Customer to verify the accuracy of an invoice, subject to applicable confidentiality requirements. For purposes of this section, a request shall be considered timely if made no more than five (5) Business Days after the date of receipt of the applicable invoice.

Eligible Customer shall provide or authorize access to any service, billing, settlement, or allocation information reasonably necessary to support that review.

A request under this section shall not act to defer or extend the date on which payment is due under Section 7.2.

### 7.5 Disputed Amounts

Large Load Customer shall timely pay each invoiced amount notwithstanding any dispute, and Transmission Owner's right to draw on Credit Support shall not be suspended by the dispute. If the final resolution determines that Large Load Customer paid, or Transmission Owner drew, more than the amount properly due, Transmission Owner shall promptly return the excess amount. Any dispute must be made by no later than the date payment is due and conform to the

requirements set forth in Section 15.1 below.

### 7.6 Crediting of Shortfall Amounts

All Shortfall Amounts collected by Transmission Owner shall be credited against the Transmission Revenue Requirement of the Transmission Owner for the Transmission Zone in which the Eligible Customer is taking Firm Transmission Service. Transmission Owner shall account for and credit all amounts received under this CRA in accordance with this Section 7.6, Section 9.12, as applicable, the PJM Tariff, and its applicable FERC-jurisdictional rate. Transmission Owner's calculation, collection, accounting, and crediting of Shortfall Amounts shall be reflected in, and remain subject to review under, Transmission Owner's applicable FERC-jurisdictional formula rate and related protocols.

## ARTICLE 8
## DEFAULT AND REMEDIES

### 8.1 Events of Default

Each of the following constitutes an "Event of Default" by the applicable Party:

(a) failure by Large Load Customer to cause the initial Credit Support to be timely provided in the amount and form required under this CRA;

(b) failure by Large Load Customer to cause to be timely provided replacement or additional Credit Support required under Article 6;

(c) failure by Large Load Customer to cause Credit Support to be replenished when required under Section 6.7;

(d) a material misrepresentation by a Party concerning the Firm Load Commitment, Actual Revenue Contribution, Credit Support, or another material matter under this CRA;

(e) assignment or attempted assignment of this CRA by a Party in violation of Article 10;

(f) repudiation of this CRA by a Party;

(g) failure by Eligible Customer to take any PJM Tariff action expressly required of Eligible Customer under this CRA or a default by Eligible Customer under any PJM agreement relating to the provision of Firm Transmission Service; or

(h) failure by Eligible Customer or Large Load Customer to take an action expressly required under this CRA to request, pursue, or complete the applicable PJM process; or

(i) a default by Large Load Customer under any agreement with Transmission Owner or its Affiliates relating to the Large Load Facilities, including any failure to comply with any retail service tariffs, retail agreements, or other retail obligations that would prevent the Large Load Customer from meeting its obligations under this CRA;

(j) the bankruptcy or insolvency of Large Load Customer; or

(k) any other material breach by a Party that remains uncured after the applicable period provided in Section 8.2.

### 8.2 Notice and Cure

Except as otherwise expressly provided in this CRA, Transmission Owner shall provide the Defaulting Party with written notice of an Event of Default describing the default in reasonable detail.

The Defaulting Party shall have: (i) five (5) Business Days after receipt of notice to cure a Credit Support default; and (ii) fifteen (15) days after receipt of notice to cure any other curable Event of Default.

**8.3 Remedies**

Following an Event of Default that has not been timely cured, the non-Defaulting Party or Parties may, in their sole discretion:

(a) if Transmission Owner is a non-Defaulting Party, draw on Credit Support in accordance with this CRA;
(b) recover any amount due and unpaid under this CRA;
(c) require specific performance of Large Load Customer's obligation to cause Credit Support to be provided or maintained;
(d) exercise any right or remedy available under the PJM Tariff to the extent applicable to that Party;
(e) terminate this CRA only as expressly permitted under Article 9; and
(f) exercise any other right or remedy available under applicable law.

Transmission Owner shall credit all payments and Credit Support proceeds against the obligation for which they were received and shall not obtain duplicative recovery of the same amount.

**8.4 Effect of Credit Support Draw**

Receipt and application of Credit Support proceeds sufficient to satisfy an unpaid amount shall cure the applicable payment default to the extent of the proceeds received and applied.

## ARTICLE 9
## EARLY AND PARTIAL TERMINATION

**9.1 Termination or Reduction by Large Load Customer; Withdrawal from PJM Process**

Before execution of the Final PJM Agreement, Eligible Customer's withdrawal or abandonment of the request for Firm Transmission Service from the applicable PJM process on behalf of Large Load Customer, or refusal to execute the Final PJM Agreement shall constitute an early termination of this CRA by Large Load Customer. Large Load Customer shall pay the Early Termination Amount calculated under Section 9.7 and Exhibit D. Termination under this paragraph shall become effective upon the applicable withdrawal, abandonment, or refusal and shall not be subject to the 120-day notice period below.

After execution of the Final PJM Agreement, Large Load Customer may terminate this CRA before expiration of the Term by providing Transmission Owner and Eligible Customer with at least 120 days' prior written notice. Notwithstanding the foregoing, termination shall not become effective unless and until (a) the Large Load Customer has paid in full the applicable Early Termination Amount or Partial Termination Amount, as determined pursuant to this CRA, or (b)

if such amount remains unpaid, the Transmission Owner has drawn on the Credit Support and recovered the full amount of such unpaid Early Termination Amount or Partial Termination Amount.

Large Load Customer shall pay the Early Termination Amount calculated under Section 9.7 and Exhibit D.

Large Load Customer's obligation to pay the Early Termination Amount shall survive termination and remain secured by Credit Support until paid in full.

## 9.2 Partial Termination

Before execution of the Final PJM Agreement, a reduction by Large Load Customer or Eligible Customer in the amount of Firm Transmission Service requested through the PJM process shall constitute a Partial Termination.

Large Load Customer may permanently reduce a specified portion of the Firm Load Commitment by providing Transmission Owner and Eligible Customer with at least 120 days' prior written notice and paying the Partial Termination Amount calculated under Section 9.8 and Exhibit D.

A Partial Termination shall become effective only after: (i) PJM has approved, directed, or otherwise recognized the reduction to the extent required under the PJM Tariff; (ii) the Parties have executed an amendment to Exhibit A; and (iii) the amendment has become effective under applicable FERC requirements.

If the Large Load Facilities have not achieved the state of readiness necessary to take Firm Transmission Service corresponding to the applicable Firm Load Commitment by 120 days after each Service Date, such occurrence will constitute a Partial Termination.

## 9.3 Project Abandonment or Cessation

Each Party shall notify the other Parties within five (5) Business Days after becoming aware that:

(a) the Large Load Customer has determined that it will not construct or complete the Large Load Facilities or proceed with the applicable request for Firm Transmission Service;

(b) the Large Load Facilities have not achieved the state of readiness necessary to take Firm Transmission Service by 120 days after the initial Service Date;

(c) the Large Load Customer intends to permanently cease operations at the Large Load Facilities; or

(d) Eligible Customer intends to permanently cease taking Firm Transmission Service to serve the Large Load Facilities.

Upon notice or occurrence of an event described in this Section, Transmission Owner may terminate this CRA upon thirty (30) days' written notice to the other Parties, and Large Load Customer shall pay the Early Termination Amount. Large Load Customer's obligation to pay

the Early Termination Amount shall survive termination and remain secured by Credit Support until paid in full.

## 9.4 Termination for Default

Transmission Owner may terminate this CRA upon written notice to other Parties if a Party:

(a) commits an Event of Default that is not capable of cure; or

(b) fails to cure an Event of Default within the applicable period under Article 8.

Upon termination, Large Load Customer shall pay:

(a) all Shortfall Amounts and other amounts accrued through the termination date;

(b) the Early Termination Amount; and

(c) any other amount due under this CRA, subject to the prohibition against duplicative recovery.

Transmission Owner may apply Credit Support or cash security to those amounts in accordance with Articles 6, 7 and 9.

## 9.5 Termination by Mutual Agreement

The Parties may terminate this CRA by mutual written agreement, subject to applicable FERC requirements.

Any such agreement shall specify the treatment of the Early Termination Amount, any outstanding Shortfall Amounts, and the remaining Credit Support provided by Large Load Customer.

## 9.6 Termination Due to Transmission Facility-Related Delay

If any extension of a Service Date or Committed Revenue Contribution under the second paragraph of Section 5.5 results in a forecasted or actual extension of [Insert number of months] months or more to either the first Service Date or any subsequent Service Date, Large Load Customer may, at its option, either (1) terminate this CRA; or (2) accept the timing and resulting adjustment to the applicable Service Date(s).

If Large Load Customer elects to terminate this CRA pursuant to this Section 9.6, Large Load Customer shall be responsible for paying an Early Termination Amount calculated pursuant to Exhibit D. However, for purposes of determining the Applicable Termination Percentage under Exhibit D the number of days in any forecasted or actual extension to the Service Date or Committed Revenue Contribution shall not be counted.

To invoke this termination right, Large Load Customer must provide written notice to Transmission Owner and Eligible Customer within 60 days of receipt of notice that any forecasted or actual extension will equal or exceed [Insert number of months] months. Moreover, Large Load Customer will not be permitted to invoke this termination right if the delay is caused in whole or part by Large Load Customer's failure or lack of reasonable

diligence in meeting its obligations under this Agreement or any other binding agreement, tariff, regulatory order or other legal requirement, as set forth in Section 5.5.

## 9.7 Early Termination Amount

The "Early Termination Amount" shall be calculated in accordance with Exhibit D.

## 9.8 Partial Termination Amount

The "Partial Termination Amount" shall be calculated in accordance with Exhibit D. After the Partial Termination becomes effective, the Committed Revenue Contribution and Credit Support Requirement shall be calculated using the remaining Firm Load Commitment, provided that the Credit Support Requirement shall continue to be based on 100% of the Projected Full Firm Transmission Service Benchmarks corresponding to that remaining Firm Load Commitment.

## 9.9 Early Termination Offset Amount

If the Early Termination Offset Amount is quantifiable when Transmission Owner issues the termination invoice, it shall be included as an Applicable Credit.

If the offset becomes quantifiable afterward, Transmission Owner shall reflect it in a subsequent reconciliation and promptly return any resulting excess payment to Large Load Customer.

Nothing in this Section requires Transmission Owner to market the Point of Delivery, solicit replacement load, modify its transmission planning or service processes, or enter into a service arrangement with another Person.

## 9.10 Invoice and Payment

Transmission Owner shall promptly invoice Large Load Customer for the Early Termination Amount or Partial Termination Amount and provide reasonable substantiation of the calculation. For the avoidance of doubt, in the event that the Large Load Customer fails to timely pay an invoice for the Early Termination Amount or Partial Termination Amount, the Transmission Owner shall be permitted to draw on the Credit Support for the unpaid amount.

## 9.11 Effect of Termination

Any full termination of this CRA for any reason shall result in (i) before execution of the Final PJM Agreement, withdrawal or cancellation of the applicable request for Firm Transmission Service; and (ii) after execution of the Final PJM Agreement, cancellation of the Firm Transmission Service taken by Eligible Customer on behalf of Large Load Customer and the related Transmission Service Agreement, except where FERC has accepted a replacement or substitute agreement that contains terms reasonably comparable to this CRA pursuant to PJM Tariff, Part VIII, Section 438(b).

A Partial Termination shall result in the corresponding reduction of the request for Firm Transmission Service or the Firm Transmission Service, as applicable.

For avoidance of doubt, termination of this CRA and related cancellation of Firm Transmission Service shall not prohibit Large Load Customer from seeking Firm Transmission Service in the future.

### 9.12 Crediting of Termination Amount

If the effective date of an Early Termination or Partial Termination occurs prior to the first Service Date and the Large Load Customer is required to pay an Early Termination Amount or Partial Termination Amount, as applicable, such amount shall first be applied to the Project Development Costs as of the effective date of such termination in accordance with PJM Tariff, Part VIII, Subpart N, section 441(e). Any remaining amounts from the applicable Termination Amount shall be credited to the Transmission Owner's Transmission Revenue Requirement for the Transmission Zone in which the Eligible Customer would have taken Transmission Service. For the avoidance of doubt, if Transmission Owner allocates any of the applicable Termination Amount to the Project Development Costs, such amount shall not be recovered in Transmission rates.

If the effective date of an Early Termination or Partial Termination occurs on or after the first Service Date and the Large Load Customer is required to pay an Early Termination Amount or Partial Termination Amount, as applicable, such amount shall be credited to the Transmission Owner's Transmission Revenue Requirement for the Transmission Zone in which the Eligible Customer would have taken Firm Transmission Service.

## ARTICLE 10
## ASSIGNMENT

### 10.1 Assignment by Eligible Customer

Eligible Customer may not assign or transfer this CRA, or any right or obligation arising under this CRA, in whole or in part, without the prior written consent of Transmission Owner and Large Load Customer, which consent shall not be unreasonably withheld, conditioned, or delayed.

Notwithstanding the foregoing, Eligible Customer may assign its rights and obligations under this CRA to an Affiliate without Transmission Owner's prior written consent, if:

(a) Eligible Customer provides the other Parties with prior written notice of the proposed assignment;

(b) the proposed assignee is an Eligible Customer under the PJM Tariff and is authorized to take Firm Transmission Service on behalf of the Large Load Customer;

(c) the proposed assignee assumes in writing all obligations of Eligible Customer under this CRA;

(d) the assignment has received any acceptance, approval, or recognition required from PJM or FERC; and

(e) all disputes between Transmission Owner and existing Eligible Customer as to invoice outstanding have been reconciled.

An assignment by Eligible Customer shall not change Large Load Customer's status or release, reduce, or otherwise modify Large Load Customer's obligations under this CRA.

An assignment shall not become effective until all applicable requirements of this Section have been satisfied.

**10.2 Effect of Assignment**

Except as expressly provided in a written assignment agreement accepted by Transmission Owner and Large Load Customer, an assignment shall not release the assigning Eligible Customer from: (i) any breach or Event of Default occurring before the effective date of assignment; (ii) any obligation arising from information, service, or conduct occurring before the effective date of assignment but calculated or invoiced afterward; or (iii) any obligation that expressly survives assignment.

After the effective date of a permitted assignment, the assignee shall be treated as the Eligible Customer for purposes of this CRA and shall perform all obligations assigned to Eligible Customer under this CRA on and after the effective date of assignment.

**10.3 Assignment by Large Load Customer**

Large Load Customer may not assign or transfer this CRA or any right or obligation arising under this CRA, in whole or in part, without the prior written consent of Transmission Owner and Eligible Customer, which consent shall not be unreasonably withheld, conditioned, or delayed.

An assignment by Large Load Customer shall not become effective unless:

(a) the proposed assignee assumes in writing all obligations of Large Load Customer under this CRA;

(b) compliant replacement Credit Support is provided that directly secures the proposed assignee's obligations under this CRA;

(c) the assignment is documented through a written amendment or assignment executed by the applicable Parties;

(d) the assignment has received any acceptance, approval, or recognition required from PJM or FERC; and

(e) All disputes between Transmission Owner and existing Large Load Customer as to invoice outstanding have been reconciled.

A transfer of ownership, operation, leasehold rights, or control of the Large Load Facilities does not, by itself, assign this CRA or release Large Load Customer from its obligations under this CRA.

**10.4 Assignment by Transmission Owner**

Transmission Owner may assign this CRA, in whole or in part, without the other Parties' consent: (i) to a successor to all or substantially all of the transmission assets or obligations relevant to this CRA; (ii) in connection with a merger, consolidation, reorganization, or other corporate transaction; (iii) to an Affiliate that assumes Transmission Owner's obligations under

this CRA; or (iv) as required or authorized by the PJM Tariff, FERC, or another governmental authority with jurisdiction.

Transmission Owner shall provide the other Parties with written notice of the assignment.

Any other assignment by Transmission Owner requires the prior written consent of the other Parties, which consent shall not be unreasonably withheld, conditioned, or delayed.

## ARTICLE 11
## REGULATORY PROVISIONS

### 11.1 Regulatory Effectiveness

This CRA shall be submitted, reported, designated, posted, or filed only to the extent required by the PJM Tariff, a FERC order, regulation, or applicable law.

Completion of project-specific information, dates, amounts, percentages, schedules, and other elections expressly contemplated by the FERC-accepted form of CRA shall not constitute a nonconforming term or condition.

Updates to Exhibits A and C and calculations under Exhibit B required under Section 3.2 are expressly contemplated by this CRA and shall not constitute nonconforming terms or amendments, except to the extent a further filing with or acceptance by FERC is required.

### 11.2 Required FERC Filing

If this CRA is required to be filed with FERC under the PJM Tariff, a FERC order, or applicable law, Transmission Owner shall submit this CRA for acceptance under Section 205 of the Federal Power Act in accordance with PJM Tariff, Part VIII, Subpart N.

Transmission Owner shall take the lead in preparing and prosecuting the filing and shall use reasonable efforts to obtain FERC's acceptance of this CRA.

Each Party shall reasonably cooperate in connection with the filing and refrain from taking a position inconsistent with the acceptance of this CRA, except as required by applicable law or expressly permitted under this CRA.

Each Party shall bear its own costs incurred in connection with the filing unless the Parties otherwise agree in writing.

### 11.3 Relationship to Other Tariffs and Agreements

Nothing in this CRA shall be construed to grant, provide, guarantee, or otherwise convey transmission service under the PJM Tariff, distribution or retail service under state-regulated tariffs or agreements, or any other service or rate, term or condition of such service, except as expressly provided herein.

Nothing in this CRA limits any obligation under the PJM Tariff or another applicable agreement to pay study costs, directly assigned facility costs, Network Upgrade costs, or other costs associated with transmission service.

## ARTICLE 12
## FORCE MAJEURE

### 12.1 Definition and Scope of Force Majeure

"Force Majeure" means an event or circumstance that:

(a) physically and directly impacts the Large Load Facilities, new transmission facilities, or modifications to existing transmission facilities, and/or
(b) prevents the Affected Party from performing its obligations under this CRA,

which event or circumstance (i) could not have been reasonably anticipated as of the Effective Date and (ii) which is not within the reasonable control of, or the result of negligence or misconduct by, the Affected Party, and (iii) which the Affected Party is unable to overcome or avoid or cause to be avoided, by the exercise of reasonable care. Subject to meeting the requirements of the prior sentence, Force Majeure events shall include, but not be limited to, acts of God; fire; flood; earthquake; war; explosions; labor disputes; lightning; hurricanes; tornadoes; pandemics or epidemics; riots; or acts of terrorism that affect one or more Parties. With respect to a Party's obligation to make payments hereunder, Force Majeure will be only an event or act that on any day disables the banking system through which a Party makes such payments. Nothing herein shall be construed so as to require a Party to settle any strike or labor dispute in which it may be involved. Economic hardship of any Party shall not constitute a Force Majeure under this CRA, even if that economic hardship is caused by an event or condition that would have been a Force Majeure event if it has physically and directly impacted the Large Load Facilities, new transmission facilities, or modifications to existing transmission facilities.

No event affecting only the Large Load Customer, the Large Load Facilities, or the amount of Firm Transmission Service taken to serve the Large Load Facilities shall constitute Force Majeure with respect to Large Load Customer's payment or Credit Support obligations under this CRA.

The Party claiming Force Majeure bears the burden of establishing that the event satisfies every requirement of this Section.

If a Party is rendered unable, wholly or in part, by Force Majeure to carry out its obligations with respect to this CRA (the "Affected Party"), then the obligations of the Affected Party will, to the extent they are affected by such Force Majeure event, be suspended during the period of time that the Force Majeure event renders the Affected Party unable, wholly or in part, to carry out its obligations. The Affected Party will not be liable for breach of this CRA due to a Force Majeure event nor shall the Affected Party be liable to the other Parties for, or on account of, any loss, damage, injury, or expense resulting from, or arising out of such Force Majeure event. The Affected Party must give written notice and full particulars of such Force Majeure event as soon

as practical after the occurrence of the Force Majeure event. If a Force Majeure event continues for over 180 days in the aggregate during any 12 month period, the Parties will meet and in good faith attempt to renegotiate the terms and conditions of this CRA to address and account for the Force Majeure event. If the Parties are thereafter unable to mutually agree in writing on an amendment to this CRA to address issues arising out of the Force Majeure event, Transmission Owner or Large Load Customer may terminate this CRA upon ten (10) days' written notice to the other Parties, subject to Section 12.2, Article 9, and any obligations that accrued or survive under this CRA.

**12.2 Termination Due to Force Majeure**

In the event that Large Load Customer terminates this Agreement pursuant to Section 12, the Large Load Customer shall remain obligated to pay the Early Termination Amount. However, if the Transmission Owner terminates this Agreement pursuant to Section 12, Large Load Customer shall not be required to pay the Early Termination Amount.

**12.3 Effect of Force Majeure**

If a Party is prevented by Force Majeure from performing an obligation under this CRA, that obligation shall be suspended only: (i) to the extent performance is physically impossible because of the Force Majeure; (ii) for the period during which performance remains physically impossible; and (iii) while the affected Party complies with Section 12.4.

The affected Party shall not be in breach of this CRA solely because it fails to perform an obligation properly suspended under this Section.

Force Majeure does not:

(a) excuse or delay an obligation to pay an amount due under this CRA, except solely to the extent expressly provided in Section 12.1;

(b) excuse or delay Large Load Customer's obligation to cause Credit Support to be provided, maintained, increased, renewed, replaced, or replenished;

(c) except for an extension of a Service Date expressly permitted under Section 5.5, reduce, defer, or otherwise modify the Firm Load Commitment, any Service Date, or the Minimum Commitment Percentage;

(d) reduce or defer the calculation of the Committed Revenue Contribution, Actual Revenue Contribution, Shortfall Amount, Early Termination Amount, or Partial Termination Amount;

(e) excuse Eligible Customer's failure to take Firm Transmission Service corresponding to the Firm Load Commitment;

(f) require Transmission Owner to release or reduce Credit Support;

(g) prevent Transmission Owner from issuing an invoice, completing a calculation or reconciliation, or drawing on Credit Support in accordance with this CRA;

(h) excuse any obligation that arose before the Force Majeure began; or

(i) affect the application of Article 9 to any abandonment, permanent cessation, permanent reduction, or termination associated with the Force Majeure.

For the avoidance of doubt, a Force Majeure affecting the Large Load Customer, the Large Load

Facilities, or the amount of Firm Transmission Service taken to serve the Large Load Facilities shall not reduce, defer, or otherwise modify Large Load Customer's payment or Credit Support obligations under this CRA. If circumstances associated with a Force Majeure result in abandonment, permanent cessation, permanent reduction, or termination, Article 9 shall govern the availability, effectiveness, and financial consequences of that abandonment, cessation, reduction, or termination.

### 12.4 Notice

A Party claiming Force Majeure shall provide the other Parties with written notice as soon as reasonably practicable after becoming aware of the event.

Failure to provide timely notice shall not prevent an event from qualifying as Force Majeure, but the affected Party shall not be excused from performance to the extent the delay in notice materially prejudices another Party.

## ARTICLE 13
## REPRESENTATIONS AND WARRANTIES

### 13.1 Mutual Representations and Warranties

Each Party represents and warrants to the other Parties, as of the date it executes this CRA and as of the Effective Date, that:

(a) it is duly organized, validly existing, and in good standing under the laws of its jurisdiction of organization, to the extent such concepts apply;

(b) it has the power and authority to execute, deliver, and perform this CRA;

(c) its execution by the Parties, delivery, and performance of this CRA have been duly authorized by all necessary organizational action;

(d) the individual executing this CRA on its behalf has authority to bind it;

(e) this CRA constitutes its legal, valid, and binding obligation, enforceable against it in accordance with its terms, subject to applicable bankruptcy, insolvency, reorganization, moratorium, and similar laws affecting creditors' rights generally and to general principles of equity;

(f) its execution by the Parties, delivery, and performance of this CRA do not violate its organizational documents, applicable law, or any agreement binding on it in a manner that would materially impair its performance under this CRA; and

(g) except for any acceptance, approval, filing, or other action expressly contemplated by this CRA, the PJM Tariff, or applicable law, no consent or approval is required for its execution by the Parties, delivery, or performance of this CRA that has not been obtained or will not be obtained when required.

### 13.2 Eligible Customer Representations and Warranties

Eligible Customer represents and warrants to the other Parties, as of the date it executes this CRA and as of the Effective Date, that:

(a) it is an Eligible Customer under the PJM Tariff;

(b) it is authorized under the PJM Tariff and applicable law to take Firm Transmission

Service on behalf of the Large Load Customer to serve the Large Load Facilities;
(c) it has obtained, or will obtain when required, all authority, consent, and information necessary to perform its obligations under this CRA;
(d) all information provided by or on behalf of Eligible Customer for purposes of calculating the Actual Revenue Contribution, Shortfall Amount, Credit Support Requirement, Early Termination Amount, or Partial Termination Amount is and shall be materially accurate and complete;
(e) it has not relied on any representation or warranty by Transmission Owner concerning whether the Large Load Facilities shall be constructed, completed, achieve commercial operation, operate at any load level, or remain economically viable;
(f) it will provide or authorize access to the service, billing, settlement, and allocation information reasonably necessary to administer this CRA;
(g) Eligible Customer's obligations under this CRA are limited to the transmission-service, information-sharing, cooperation, and administrative obligations expressly assigned to Eligible Customer and do not include Large Load Customer's payment or Credit Support obligations;
(h) Eligible Customer shall timely perform its expressly assigned obligations notwithstanding any dispute with Large Load Customer;
(i) it has agreed to request and pursue the Firm Transmission Service initially identified in Exhibit A on behalf of Large Load Customer through the applicable PJM process; and
(j) neither the failure of the Large Load Customer to perform nor a dispute between Eligible Customer and the Large Load Customer will excuse Eligible Customer's performance under this CRA.

**13.3 Large Load Customer Representations and Warranties**

Large Load Customer represents and warrants to the other Parties, as of the date it executes this CRA and as of the Effective Date, that:

(a) it owns, operates, leases, or otherwise controls the Large Load Facilities;
(b) the information it provides concerning the Large Load Facilities, Firm Load Commitment, Service Dates, load ramp, construction status, anticipated operations, and cessation or reduction of operations, and any other information required by or necessary to administer this CRA is and shall be materially accurate and complete;
(c) it has not relied on any representation or warranty by Transmission Owner concerning whether the Large Load Facilities will be constructed, completed, achieve commercial operation, operate at any load level, or remain economically viable;
(d) its payment and Credit Support obligations under this CRA are direct obligations to Transmission Owner and do not depend on the performance of Eligible Customer or any other Person;
(e) Credit Support provided under Article 6 directly secures Large Load Customer's obligations under this CRA and, to Large Load Customer's knowledge, is valid and enforceable in accordance with its terms;
(f) it has designated Eligible Customer to request and take Firm Transmission Service on its behalf and has obtained Eligible Customer's agreement to participate in the applicable PJM process; and

(g) Large Load Customer has not created or permitted any undisclosed lien, competing claim, restriction, or other interest that would materially impair Transmission Owner's rights in the Credit Support.

## 13.4 Transmission Owner Representations and Warranties

Transmission Owner represents and warrants to the other Parties, as of the date it executes this CRA and as of the Effective Date, that: (i) it is a PJM Transmission Owner; (ii) it is authorized to enter into this CRA and receive amounts and Credit Support payable or provided under this CRA, subject to the PJM Tariff and applicable FERC requirements.

# ARTICLE 14
# CONFIDENTIALITY

## 14.1 Confidential Information

For purposes of this Article, "Confidential Information" means nonpublic commercial, financial, operational, technical, customer-specific, or proprietary information disclosed by or on behalf of one Party to another Party in connection with this CRA, whether disclosed orally, electronically, or in writing, including nonpublic information concerning:

(a) the Large Load Customer or the Large Load Facilities;

(b) the Firm Load Commitment, Service Dates, anticipated or actual load, or operating status of the Large Load Facilities;

(c) Firm Transmission Service taken to serve the Large Load Facilities;

(d) the calculation of the Actual Revenue Contribution, Shortfall Amount, Credit Support Requirement, Early Termination Amount, or Partial Termination Amount;

(e) Credit Support, the financial condition of Large Load Customer , and communications with an issuer; and

(f) any invoice, supporting documentation, or other information exchanged in administering this CRA.

Information shall constitute Confidential Information only if: (i) it is identified as confidential when disclosed; or (ii) its nature or the circumstances of disclosure would reasonably indicate that it is confidential.

## 14.2 Exclusions

Confidential Information does not include information that the receiving Party can demonstrate: (i) is or becomes publicly available other than through a breach of this CRA; (ii) was lawfully known to the receiving Party without a confidentiality restriction before disclosure by the disclosing Party; (iii) is lawfully received from another Person without a confidentiality restriction and without breach of an obligation owed to the disclosing Party; (iv) is independently developed by or for the receiving Party without use of or reliance on the Confidential Information; or (v) is approved for disclosure by the disclosing Party in writing.

## 14.3 Use and Protection of Confidential Information

A Party receiving Confidential Information shall: (i) use the Confidential Information only as reasonably necessary to perform, administer, enforce, or exercise its rights under this CRA; (ii) protect the Confidential Information using at least the same degree of care that it uses to protect its own confidential information of a similar nature, but in no event less than reasonable care; (iii) disclose the Confidential Information only as permitted under this Article; and (iv) promptly notify the disclosing Party upon becoming aware of an unauthorized use or disclosure of the Confidential Information.

The receiving Party may disclose Confidential Information to its Affiliates, employees, officers, directors, attorneys, accountants, auditors, consultants, insurers, lenders, issuers of Credit Support, and other representatives that have a need to know the Confidential Information and are subject to confidentiality obligations or professional duties of confidentiality.

**14.4 Tariff and Regulatory Requirements**

Confidential Information shall be protected and disclosed in accordance with: (i) applicable FERC regulations and orders; (ii) applicable state law and any applicable retail-service tariff; (iii) any protective order or confidentiality agreement binding on the Parties; and (iv) this Article.

**14.5 Permitted Regulatory and Administrative Disclosures**

A Party may disclose Confidential Information to the extent reasonably necessary: (i) to comply with the PJM Tariff, a FERC order, applicable law, legal process, or a request or requirement of a governmental authority with jurisdiction; (ii) to prepare, submit, support, or prosecute a filing, report, audit, formula-rate update, rate proceeding, tariff proceeding, or other regulatory submission; (iii) to administer a service request, study, billing determination, settlement, calculation, reconciliation, or Credit Support requirement relating to this CRA; (iv) to enforce this CRA or resolve a dispute arising under it; (v) to provide information to PJM reasonably necessary for Tariff administration, study, billing, settlement, or other administrative purposes relating to the Firm Transmission Service or this CRA; (vi) to provide information to an applicable state regulatory authority to the extent reasonably necessary in connection with retail service, retail Credit Support, or another state-jurisdictional arrangement relating to the Large Load Facilities; or (vii) with the written consent of the disclosing Party.

With respect to disclosures identified in clauses (i)-(vi), the Party making the disclosure shall notify the other Party so that such Party may seek a protective order or such other relief as such Party may deem appropriate under the circumstances. The Party making the disclosure may disclose only that portion of the Confidential Information which such Party is required to disclose.

**14.6 No Limitation on Required Information Sharing**

Eligible Customer may not withhold information reasonably required to calculate, verify, invoice, reconcile, or dispute an amount under this CRA solely because the information is

confidential.

Large Load Customer may not withhold facility, project, load-ramp, operational, Credit Support, or other information within its possession or control that is reasonably required to administer this CRA solely because the information is confidential.

Transmission Owner's receipt or use of such information shall remain subject to this Article and any other applicable confidentiality requirement.

### 14.7 Survival

The obligations under this Article shall survive expiration or termination of this CRA for five (5) years; provided that (i) information constituting a trade secret shall remain protected for so long as it qualifies as a trade secret under applicable law; and (ii) information protected for a longer period under applicable law, the PJM Tariff, a regulatory order, or a binding confidentiality agreement shall remain protected for that longer period.

## ARTICLE 15
## DISPUTE RESOLUTION

### 15.1 Notice of Dispute

A Party disputing an invoice, calculation, Credit Support Requirement, or other matter arising under this CRA shall provide the other Parties with written notice. The disputing Party shall provide available supporting information reasonably necessary for the other Parties to evaluate the dispute. A notice under this Section shall not excuse or delay performance except as expressly provided in this CRA. Notwithstanding the foregoing and for the avoidance of doubt, the Large Load Customer is not entitled to dispute resolution for its breach of Section 6.1.

### 15.2 Good-Faith Negotiation

Within ten (10) Business Days after receipt of a notice under Section 15.1, representatives of the Parties with responsibility for administering this CRA shall meet or confer and attempt in good faith to resolve the dispute.

If a Party does not request or participate in the Dispute resolution set forth in this Article 15 within 10 Business Days following the delivered date of the written request initiating the process, such Party waives any further right to this Dispute resolution process. The Dispute resolution process set forth in this Article 15 shall, in any event, be concluded within 30 days following the delivered date of the written request initiating the process or such longer period as the Parties may mutually agree. Thereafter, any Party may exercise all remedies available at law or in equity under this CRA, including the initiation of court proceedings.

### 15.3 Continuation of Performance

While a dispute remains pending:

(a) each Party shall continue performing its obligations under this CRA to the maximum extent practicable;
(b) Large Load Customer shall timely pay each invoiced amount in accordance with Section 7.2, notwithstanding the dispute;
(c) Large Load Customer shall continue to cause Credit Support to be provided, maintained, increased, renewed, replaced, and replenished as required under Article 6;
(d) Transmission Owner may exercise its rights with respect to Credit Support in accordance with Articles 6 and 7; and
(e) no Party shall take action inconsistent with a final and binding determination resolving the dispute.

Payment or performance during a dispute shall not waive the paying or performing Party's position or right to seek return of an overpayment or other appropriate relief.

### 15.4 No Suspension of Credit Support Rights

The initiation or pendency of a dispute shall not: (i) prevent Transmission Owner from making a preservation draw under Section 6.4; (ii) suspend Transmission Owner's right to draw on Credit Support for an invoiced amount not timely paid; (iii) relieve Large Load Customer of its obligation to cause compliant Credit Support to be maintained; or (iv) extend the expiration, nonrenewal, replacement, or replenishment deadline applicable to Credit Support.

If the final resolution of a dispute determines that Large Load Customer paid, or Transmission Owner drew, more than the amount properly due, Transmission Owner shall return the excess to Large Load Customer or, if applicable, restore the excess Credit Support in accordance with Section 6.5.

If a Party receiving a written request to initiate the dispute-resolution process does not participate in that process within 10 Business Days after delivery of the written request, that Party waives its right to require completion of the informal dispute-resolution process before another Party pursues available remedies. The dispute resolution process set forth in this Article 15 shall, in any event, be concluded within 30 days following the delivered date of the written request initiating the process or such longer period as the Parties may mutually agree.

Thereafter, any Party may exercise all remedies available at law or in equity under this CRA, including the initiation of court proceedings.

## ARTICLE 16
## NOTICES

### 16.1 General Notices

All notices, demands, and other formal communications required or permitted under this CRA shall be in writing, and delivered to the applicable contacts identified in Section 16.2.

### 16.2 Notice Contacts

**Eligible Customer**
[Eligible Customer Name]
[Address]
[City, State ZIP Code]
Attention: [Name or Title]
Email: [Email Address]

With a copy to:
[Legal Department or Counsel]
[Address]
[City, State ZIP Code]
Attention: [Name or Title]
Email: [Email Address]

**Large Load Customer,**

**[Large Load Customer Name]**
**[Address]**
**[City, State ZIP Code]**
**Attention: [Name or Title]**
**Email: [Email Address]**

**With a copy to:**
**[Legal Department or Counsel]**
**[Address]**
**[City, State ZIP Code]**
**Attention: [Name or Title]**
**Email: [Email Address]**

**Transmission Owner**
[Transmission Owner Name]
[Address]
[City, State ZIP Code]
Attention: [Name or Title]
Email: [Email Address]
With a copy to:
[Legal Department or Counsel]
[Address]
[City, State ZIP Code]
Attention: [Name or Title]
Email: [Email Address]

Delivery of a copy shall not be required for a notice to become effective unless expressly stated

otherwise in this CRA.

## 16.3 Credit Support Notices

All notices, demands, and communications concerning the issuance, amendment, increase, reduction, renewal, replacement, nonrenewal, expiration, disqualification, transfer, draw, or release of Credit Support shall also be delivered to the following designated Credit Support contacts:

**Transmission Owner Credit Contact**
[Name or Department]
[Address]
[City, State ZIP Code]
Attention: [Name or Title]
Email: [Email Address]

**Large Load Customer Credit Contact**
[Name or Department]
[Address]
[City, State ZIP Code]
Attention: [Name or Title]
Email: [Email Address]

Such notices may be sent by overnight courier, personal delivery, or electronic mail. A notice from an issuer shall be effective only if delivered as required by the letter of credit.

# ARTICLE 17
# GENERAL PROVISIONS

## 17.1 Amendment

This CRA may be amended only by a written instrument executed by authorized representatives of all Parties.

An amendment shall become effective only upon: (i) acceptance or approval by FERC, if required; (ii) any approval or recognition required under the PJM Tariff; and (iii) satisfaction of any other requirement of applicable law.

An update to an Exhibit required under Section 3.2 shall not constitute an amendment for purposes of this Section.

## 17.2 Entire Agreement; Relationship to Other Agreements

This CRA and its Exhibits constitute the entire agreement between the Parties concerning the Firm Load Commitment and the payment, Credit Support, early-termination, and related administrative obligations established under this CRA.

This CRA supersedes prior oral or written communications, negotiations, and understandings between the Parties concerning the subject matter of this agreement. This CRA does not supersede or otherwise impact other agreements (which may include security or cost recovery provisions) that relate to the Large Load Facilities and that do not address matters set forth in this CRA related to Firm Load Commitments.

## 17.3 Severability

If a provision of this CRA is held invalid, unlawful, or unenforceable by FERC or another governmental authority or tribunal having jurisdiction, the remaining provisions shall remain in effect to the maximum extent permitted by law.

The Parties shall cooperate in good faith to replace the affected provision with a lawful and enforceable provision that preserves, to the greatest extent permitted by law, the original provision's purpose and the economic protections established by this CRA.

If the affected provision cannot be replaced and its invalidity defeats the essential purpose of this CRA, the Parties' rights shall be governed by the remaining enforceable provisions of this CRA and applicable law.

## 17.4 Governing Law

This CRA shall be governed by: (i) federal law, including the Federal Power Act, and the PJM Tariff with respect to matters within federal jurisdiction; and (ii) the laws of the State of [State], without regard to its conflict-of-laws principles, with respect to matters not governed by federal law.

Nothing in this Section limits FERC's jurisdiction or alters the allocation of jurisdiction between FERC, any state commission, and any court or other tribunal.

## 17.5 No Third-Party Beneficiaries

This CRA is entered into solely for the benefit of the Parties and their permitted successors and assigns.

Except as expressly provided in this CRA, no other Person, including PJM, another transmission customer, a Load Serving Entity, an issuer of Credit Support, or a governmental authority, shall have a right to enforce this CRA or be deemed a third-party beneficiary.

## 17.6 Relationship of the Parties

Nothing in this CRA creates or shall be construed to create: (i) a partnership; (ii) a joint venture; (iii) an agency relationship; (iv) a fiduciary relationship; or (v) an employment relationship among any of the Parties..

## 17.7 Counterparts; Electronic Signatures

This CRA may be executed in any number of counterparts, each of which shall be deemed an original and all of which together shall constitute one instrument.

## 17.8 Indemnification

Eligible Customer and Large Load Customer shall, jointly and severally, to the fullest extent permitted by law, indemnify, defend upon request, and hold harmless Transmission Owner and its Representatives from and against all claims, damages, expenses, liabilities, and losses (including, without limitation, reasonable attorneys' fees and expenses) asserted against, sustained, or incurred by Transmission Owner or its Representatives for any damage, harm, injury, or loss, of any kind, direct or indirect, to any property or person (including death), including, without limitation:

(a) claims for injuries or loss to employees of Transmission Owner, Eligible Customer, Large Load Customer, or their respective Representatives, arising out of or relating to any act, omission, conduct, negligence or breach by Large Load Customer, or Eligible Customer, or their respective Representatives;

(b) arising out of or relating to the work performed under or in connection with this CRA by Large Load Customer, Eligible Customer, or their respective Representatives; and/or

(c) claims arising out of or relating to Large Load Customer's, Eligible Customer's, or their respective Representatives, contact or encounter with, compromise or disruption of, or loss or damage to any property of Transmission Owner or its Representatives' property.

Large Load Customer and Eligible Customer each specifically agree, to the fullest extent permitted by law, to assume liability for all personal injury claims brought by their respective employees or the employees of their respective Representatives in connection with this CRA and waive any limitation of liability defense based upon the applicable worker's compensation law and cases decided thereunder. Eligible Customer and Large Load Customer agree to indemnify and defend Transmission Owner and its Representatives from and against all such loss, expense damage or injury, including, without limitation, reasonable attorneys' fees, which Transmission Owner's Representatives may sustain as a result of personal injury claims by Eligible Customer's or Large Load Customer's employees or their respective Representatives' employees or representatives.

## 17.9 Enforcement Costs

Each of Eligible Customer and Large Load Customer shall reimburse Transmission Owner for all reasonable attorneys' fees and expenses incurred in enforcing that Party's obligations under this CRA, to the extent Transmission Owner prevails in the applicable action or proceeding. Notwithstanding the foregoing, Large Load Customer shall be solely responsible for all reasonable attorneys' fees and expenses incurred by Transmission Owner in enforcing Large Load Customer's payment or Credit Support obligations or collecting any amount due from Large Load Customer under this CRA.

## 17.10 Rules of Interpretation

The Parties intend that any grouping of words or phrases in a series of three or more shall be interpreted to include the use of the Oxford (or serial) comma regardless of whether such Oxford (or serial) comma is actually present in the series.

## 17.11 Survival

Expiration or termination of this CRA shall not affect: (i) any payment obligation accrued or arising from a period before expiration or termination; (ii) any obligation to complete a calculation, invoice, reconciliation, refund, or return of an excess draw; (iii) any continuing right concerning Credit Support; (iv) Large Load Customer's obligation to pay any Shortfall Amount, Early Termination Amount, Partial Termination Amount, or other amount that survives expiration or termination; (v) Transmission Owner's right to draw upon or apply Credit Support and its obligation to provide any required credit, refund, release, or reconciliation; (vi) the confidentiality and dispute-resolution provisions of Articles 14 and 15; or (vii) any other provision that expressly survives or that by its nature must survive to give effect to the Parties' rights and obligations.

*[Signature page follows]*

IN WITNESS WHEREOF, the Parties, intending to be legally bound, have caused this CRA to be executed by their duly authorized representatives as of the date first written above.

**TRANSMISSION OWNER:**

[Name of Transmission Owner]

By: _____

Name: _____

Title: _____

Date: _____

**ELIGIBLE CUSTOMER:**

[Name of Eligible Customer]

By: _____

Name: _____

Title: _____

Date: _____

**LARGE LOAD CUSTOMER:**
**[Name of Large Load Customer]**

**By: _____**
**Name: _____**
**Title: _____**
**Date: _____**

## EXHIBIT A

## LARGE LOAD FACILITIES AND FIRM LOAD COMMITMENT

### 1. Parties and Large Load Information

**Transmission Owner:**
[Name of Transmission Owner]

**Eligible Customer:**
[Name of Eligible Customer]

**Large Load Customer:**
[Name of Large Load Customer]

**Large Load Facilities:**
[Name and general description of the Large Load Facilities]

**Facility Location:**
[Street Address]
[City, State, ZIP Code]

**Transmission Zone:**
[Applicable PJM Transmission Zone]

**Point of Delivery:**
[Point of Delivery or other applicable delivery-point identifier]

### 2. Term of Agreement: [__] Years

### 3. Minimum Commitment Percentage: [___] [add reduction schedule as applicable]%

### 4. Initial Load and Firm Load Commitments

Eligible Customer's Initial Load Commitment and Firm Load Commitment will be set forth in the following schedule:

| Load-Ramp Stage | Service Date | Load Commitment / Associated Firm Transmission Service Benchmark |
|---|---|---|
| 1 | [Date] | [___] MW |
| 2 | [Date] | [___] MW |

| | | |
|---|---|---|
| 3 | [Date] | [___] MW |
| [Additional Stage] | [Date] | [___] MW |
| Final | [Date] | [___] MW |

Following the update required under Section 3.2, the information in this Section 4 shall replace the Initial Load Commitment and shall establish the Firm Load Commitment for purposes of this CRA.

The Firm Load Commitment applicable during any Measurement Period is the amount of total load from the Large Load Facilities that is anticipated to be in service under the foregoing schedule if the Eligible Customer is taking NITS on behalf of the Large Load. If the Eligible Customer is taking FCDS or Firm Point-to-Point Transmission Service on behalf of the Large Load, the Firm Load Commitment applicable during any Measurement Period is the amount of such Firm Transmission Service for which the Eligible Customer has contracted or reserved, as applicable, during such period.

If a subsequent Service Date occurs during a Measurement Period, the Firm Load Commitment applicable before and after that Service Date shall be determined separately for the applicable portions of the Measurement Period in accordance with Exhibit B.

## 5. Service Dates

The first Service Date under this Exhibit A is [Date].

The final Service Date under this Exhibit A is [Date].

## 6. Commercial Operation Date

The anticipated Commercial Operation Date for the Large Load Facilities is [Date]. The anticipated Commercial Operation Date is not a guarantee of service on such date.

Except as expressly provided in the CRA, a change in the anticipated or actual Commercial Operation Date does not modify:

a Service Date;
the Firm Load Commitment;
the Committed Revenue Contribution;
the Credit Support Requirement; or
any other obligation under the CRA.

## 7. Relationship to Actual Load and Firm Transmission Service

The Firm Load Commitment is a contractual benchmark reflecting the anticipated load associated with the Large Load Facilities and the corresponding Firm Transmission Service

commitment on which the CRA is based. It is not a statement of the Large Load Facilities' actual demand during any Measurement Period.

## 8. Update and Amendment History

The following table will identify each update or amendment of this Exhibit A that becomes effective under Section 3.2 or Article 17 of the CRA:

| Update or Amendment No. | Effective Date | Description of Update or Amendment | Final PJM Agreement Identifier or FERC Docket No./Order Date, as Applicable |
|---|---|---|---|
| [___] | [Date] | [Description] | [Final PJM Agreement Identifier or Docket No./Order Date] |
| [___] | [Date] | [Description] | [Final PJM Agreement Identifier or Docket No./Order Date] |
| [___] | [Date] | [Description] | [Final PJM Agreement Identifier or Docket No./Order Date] |

An update required under Section 3.2 shall become effective without further agreement or signature of the Parties and shall not constitute an amendment to the CRA, except to the extent a filing with or acceptance by FERC is required. Any other change to this Exhibit A shall be made in accordance with Article 17.

Unless and until an update or amendment becomes effective in accordance with the CRA, the then-effective Firm Load Commitment and Service Dates will continue to control.

**EXHIBIT B**
**REVENUE CONTRIBUTION AND SHORTFALL CALCULATION**

## 1. Applicable Firm Load Commitment

For each Measurement Period, the "Applicable Firm Load Commitment" shall mean each amount of the Firm Load Commitment scheduled to apply during that Measurement Period under Exhibit A.

If more than one load level is scheduled to apply during a Measurement Period, each load level shall apply for the portion of the Measurement Period during which it is scheduled to be effective.

The Applicable Firm Load Commitment shall not be reduced or deferred based on:

the amount of load that actually materializes;
the amount of Firm Transmission Service actually taken to serve the Large Load Facilities; or
the actual operating level of the Large Load Facilities.

## 2. Full Firm Transmission Service Benchmark

For each Measurement Period, the "Full Firm Transmission Service Benchmark" shall equal 100% of the Firm Transmission Service-related charges that would apply if Eligible Customer took Firm Transmission Service corresponding to the Applicable Firm Load Commitment during that Measurement Period.

The Full Firm Transmission Service Benchmark shall be calculated using:

the Applicable Firm Load Commitment;
the Applicable Firm Transmission Service Rate;
the generally applicable rate components and billing determinants used under the PJM Tariff and Transmission Owner's applicable FERC-jurisdictional rate to calculate charges for Firm Transmission Service; and
the portion of the Measurement Period during which each applicable load level and Applicable Firm Transmission Service Rate applies.

If the Applicable Firm Load Commitment or Applicable Firm Transmission Service Rate changes during a Measurement Period, the Full Firm Transmission Service Benchmark shall equal the sum of the amounts separately calculated for each applicable portion of the Measurement Period.

## 3. Committed Revenue Contribution

For each Measurement Period, the Committed Revenue Contribution = Minimum Commitment Percentage × Full Firm Transmission Service Benchmark

The Minimum Commitment Percentage shall be the percentage specified in Exhibit A.

The Minimum Commitment Percentage shall be applied only to the Full Firm Transmission Service Benchmark and shall not be applied to the Actual Revenue Contribution.

**4. Actual Revenue Contribution**

For each Measurement Period, the Actual Revenue Contribution shall equal the Firm Transmission Service-related revenues paid or payable to PJM for remittance or allocation to Transmission Owner, or otherwise paid or payable to Transmission Owner, that are attributable to transmission service actually taken to serve the Large Load Facilities.

The Actual Revenue Contribution shall include amounts to the extent those amounts:

are attributable to Firm Transmission Service taken by Eligible Customer to serve the Large Load Facilities;
correspond to the same categories of rate components included in the Full Firm Transmission Service Benchmark; and
have not been refunded, reversed, or otherwise credited to the payer.

To the extent the applicable Firm Transmission Service methodology uses an assigned Network Service Peak Load contribution or another allocated billing determinant, the Actual Revenue Contribution shall be calculated using:

the billing determinant assigned to the Large Load Facilities for the applicable Measurement Period; and
the same categories of rates and rate components used to calculate the Full Firm Transmission Service Benchmark.

**5. Actual Billing Determinant and Allocation**

If Firm Transmission Service-related charges or billing determinants attributable to the Large Load Facilities are aggregated with charges or billing determinants attributable to other load, Transmission Owner shall determine the portion attributable to the Large Load Facilities using, in the following order of priority:

PJM billing and settlement data that separately identifies the Large Load Facilities;
metering or other load data for the Large Load Facilities, applied in accordance with the generally applicable billing and allocation methodology under the PJM Tariff; and
if the foregoing information is insufficient, other information supplied by Eligible Customer or the applicable billing or service entity that Transmission Owner reasonably determines is sufficient to identify and verify the portion attributable to the Large Load Facilities.

Eligible Customer shall provide, or cause the applicable billing or service entity to provide, information reasonably necessary to identify and verify the portion attributable to the Large Load Facilities.

**6. Included Rate Components**

The same categories of Firm Transmission Service rate components shall be used to calculate the Full Firm Transmission Service Benchmark and the Actual Revenue Contribution. The included rate components shall be derived from the applicable zonal Firm Transmission Service rate.

The following amounts shall be excluded:

charges for electric energy;
charges for generation capacity;
retail electric service or distribution-service charges;
penalties or charges for unreserved transmission use;
administrative-service or ancillary-service charges, unless expressly included above;
interest, late-payment charges, taxes, and fees unrelated to the included Firm Transmission Service rate components; and
amounts attributable to load other than the Large Load Facilities.

**7. Applicable Firm Transmission Service Rate**

The Applicable Firm Transmission Service Rate for each Measurement Period shall be the applicable zonal rate then in effect under the PJM Tariff and Transmission Owner's FERC-jurisdictional rate for Firm Transmission Service in the applicable Transmission Zone.

If an applicable zonal Firm Transmission Service Rate changes during a Measurement Period, each rate shall apply to the portion of the Measurement Period during which it was in effect.

**8. Shortfall Amount**

For each Measurement Period, the Shortfall Amount = Committed Revenue Contribution • Actual Revenue Contribution

If the Actual Revenue Contribution equals or exceeds the Committed Revenue Contribution, the Shortfall Amount shall be zero.

**9. Separate Measurement Periods**

Each Measurement Period shall be calculated independently. Any amount by which the Actual Revenue Contribution exceeds the Committed Revenue Contribution for one Measurement Period shall not reduce a Shortfall Amount for another Measurement Period, be carried forward or backward, or entitle Large Load Customer to any payment, refund, or credit.

**10. Partial Measurement Periods**

For any partial Measurement Period, the Full Firm Transmission Service Benchmark, Committed Revenue Contribution, Actual Revenue Contribution, and Shortfall Amount shall be calculated for the portion of the Measurement Period falling within the Term.

The Full Firm Transmission Service Benchmark shall be prorated in accordance with the billing interval applicable to the Applicable Firm Transmission Service Rate, based on the portion of the

Measurement Period during which each applicable load level and Applicable Firm Transmission Service Rate was effective.

**EXHIBIT C**
**CREDIT SUPPORT REQUIREMENT AND SCHEDULE**

## 1. Credit Support Requirement

The Credit Support Requirement is intended to secure Large Load Customer's projected financial exposure under the CRA for the remaining Term and does not determine or limit any amount otherwise payable by Large Load Customer under the CRA.

At execution by the Parties, the Initial Credit Support Requirement shall be calculated using the Initial Load Commitment, anticipated Service Dates, estimated Applicable Firm Transmission Service Rate, and other information then available, and the methodology specified below.

The Initial Credit Support Requirement shall equal the aggregate Projected Full Firm Transmission Service Benchmarks for the full Term of this CRA beginning on the first Service Date through the end of the Term.

Following the update required under Section 3.2 after execution of the Final PJM Agreement, Transmission Owner shall recalculate the Credit Support Requirement using the updated Firm Load Commitment, Service Dates, Applicable Firm Transmission Service Rate, and Projected Full Firm Transmission Service Benchmarks for the remainder of the Term. The recalculated Credit Support Requirement shall replace the Initial Credit Support Requirement.

At the end of each Measurement Period, Transmission Owner shall recalculate Large Load Customer's Credit Support Requirement. The recalculation shall equal the aggregate Projected Full Firm Transmission Service Benchmarks for the remaining Term. Transmission Owner shall exclude a completed Measurement Period from the Credit Support Requirement only after:

(i) Transmission Owner has finally calculated the Committed Revenue Contribution, Actual Revenue Contribution, and any resulting Shortfall Amount for that Measurement Period; and

(ii) Large Load Customer has paid all amounts due for that Measurement Period.

Transmission Owner shall provide Large Load Customer with notice after each recalculation, and the revised Credit Support Requirement shall become effective in accordance with Section 6.5 of the CRA. These recalculations shall not constitute an amendment to this Exhibit or the CRA.

## 2. Calculation of Projected Full Firm Transmission Service Benchmarks

For each Measurement Period included in the Credit Support Requirement, the Projected Full Firm Transmission Service Benchmark shall equal 100% of the Firm Transmission Service-related charges that would apply if Eligible Customer took Firm Transmission Service corresponding to the Initial Load Commitment or Firm Load Commitment, as applicable, scheduled to apply during that Measurement Period.

The Credit Support Requirement shall equal the aggregate Projected Full Firm Transmission Service Benchmarks for all Measurement Periods included in the applicable calculation.

The Projected Full Firm Transmission Service Benchmark shall be calculated using:

the Initial Load Commitment or Firm Load Commitment, as applicable, and set forth in Exhibit A;
the Applicable Firm Transmission Service Rate in effect or estimated to apply, as applicable, at the time of calculation;
any rate change accepted by FERC and scheduled to become effective during the applicable Measurement Period;
the rate components and billing determinants identified in Exhibit B; and
the portion of each Measurement Period during which each applicable load level and Applicable Firm Transmission Service Rate is scheduled to apply.

**3. No Reduction for Minimum Commitment Percentage or Projected Actual Revenues**

The Credit Support Requirement shall be calculated using 100% of the Projected Full Firm Transmission Service Benchmarks and shall not be reduced by:

the Minimum Commitment Percentage; or
any projected or estimated Actual Revenue Contribution.

Actual Revenue Contributions shall be credited in determining the Shortfall Amount for a completed Measurement Period in accordance with Article 5 and Exhibit B.

After the calculation for a completed Measurement Period has been finalized and Large Load Customer has paid all amounts due for that Measurement Period, that Measurement Period shall be excluded from the Credit Support Requirement in accordance with Sections 1 and 4 of this Exhibit.

For avoidance of doubt, Actual Revenue Contributions attributable to a completed Measurement Period shall not reduce the Projected Full Firm Transmission Service Benchmark for any future Measurement Period.

**4. Recalculation**

Transmission Owner shall recalculate the Credit Support Requirement:

following the update required under Section 3.2 after execution of the Final PJM Agreement;
after the Committed Revenue Contribution, Actual Revenue Contribution, and any resulting Shortfall Amount for a completed Measurement Period have been finally calculated and Large Load Customer has paid all amounts due for that Measurement Period in accordance with Section 1 of this Exhibit;;
following an effective modification to the Firm Load Commitment or a Service Date;
following an effective Partial Termination;
following a change in the Applicable Firm Transmission Service Rate that has become effective, or a rate change that has been accepted by FERC and is scheduled to become effective during a Measurement Period included in the Credit Support Requirement;

upon replacement of Credit Support following an issuer downgrade, disqualification, expiration, termination, or notice of nonrenewal; and
as otherwise expressly required under the CRA.

Transmission Owner shall provide notice of each such recalculation, and the revised Credit Support Requirement shall become effective in accordance with Section 6.5 of the CRA. These updates shall not constitute an amendment to this Exhibit or the CRA generally.

## 5. Letter of Credit Issuer Requirements

A financial institution issuing a letter of credit under the CRA shall:

maintain a long-term unsecured credit rating of [at least "A-" from S&P Global Ratings or Fitch Ratings or "A3" from Moody's Investors Service] [insert alternative credit rating requirement if applicable];
satisfy the requirements of Article 6 and any attachments to this Exhibit; and
otherwise satisfy Transmission Owner's generally applicable credit requirements.

## 6. Treatment of Prior Draws

A draw applied to an unpaid amount shall not reduce the Credit Support Requirement. Large Load Customer shall cause the Credit Support to be restored to the then-applicable Credit Support Requirement in accordance with Section 6.7 of the CRA.

A preservation draw under Section 6.4 shall not reduce the Credit Support Requirement because the proceeds continue to be held as cash security securing Large Load Customer's obligations under the CRA.

In determining the amount of replacement or additional Credit Support required, cash security held by Transmission Owner and legally available to secure the same obligations shall be credited against the otherwise applicable Credit Support Requirement.

## 7. Relationship to Amounts Payable

The Credit Support Requirement is a measure of secured exposure and does not determine or limit:

the actual Committed Revenue Contribution;
the Actual Revenue Contribution;
the Shortfall Amount for a completed Measurement Period; or
any amount otherwise payable under the CRA.

**EXHIBIT C, ATTACHMENT [__]**

## EXHIBIT D

## EARLY AND PARTIAL TERMINATION AMOUNT SCHEDULE

### 1. Applicable Termination Percentage

The Applicable Termination Percentage for an Early Termination or Partial Termination shall be determined based on the date on which the termination or Partial Termination becomes effective, as follows:

| Effective Date of Termination or Partial Termination | Applicable Termination Percentage |
|---|---|
| On or after the Effective Date and before execution of the Final PJM Agreement | 25% |
| On or after execution of the Final PJM Agreement through the 180th day after execution of the Final PJM Agreement | 50% |
| After the 180th day after execution of the Final PJM Agreement but before the first Service Date | 75% |
| On or after the first Service Date | 100% |

### 2. Early Termination Amount

The Early Termination Amount shall be calculated in accordance with Article 9 and this Exhibit of the CRA as follows:

Early Termination Amount = (Applicable Termination Percentage × Present Value of Remaining Projected Committed Revenue Contributions) • Applicable Credits

The Applicable Termination Percentage used in the calculation shall be the percentage specified in Section 1 of this Exhibit for the date on which the termination becomes effective.

Before execution of the Final PJM Agreement, the Early Termination Amount shall be calculated using the Initial Load Commitment, anticipated Service Dates, estimated Applicable Firm Transmission Service Rate, and other information then reflected in Exhibits A and C. After execution of the Final PJM Agreement, the calculation shall use the updated information provided pursuant to Section 3.2.

The Early Termination Amount shall not be less than zero.

### 3. Present Value of Remaining Projected Committed Revenue Contributions

The Present Value of Remaining Projected Committed Revenue Contributions shall be calculated as of the effective date of termination for the period beginning on the effective date of termination and ending on the date the fixed period specified in Section 4.2(i) of the CRA would have expired absent the termination.

The calculation shall be based on:

the Initial Load Commitment or Firm Load Commitment, as applicable, and Service Dates in effect immediately before termination;
the Minimum Commitment Percentage;
the Projected Full Firm Transmission Service Benchmark determined in accordance with Exhibit C;
the Applicable Firm Transmission Service Rate in effect or estimated to apply, as applicable, on the effective date of termination;
any rate change accepted by FERC and scheduled to become effective during the remaining fixed period;
the rate components and billing determinants identified in Exhibit B; and
Transmission Owner's then-effective FERC-approved weighted average cost of capital as the discount rate.

No rate escalation or other projected rate change shall be included unless the rate change has been accepted by FERC and is scheduled to become effective during the remaining fixed period.

**4. Applicable Credits**

Applicable Credits shall include, without duplication:

any Actual Revenue Contribution attributable to the portion of the Measurement Period occurring before the effective date of termination that has been paid or is payable and has not otherwise been credited;
any Shortfall Amount, Credit Support proceeds, or other amount previously collected and applied to the same revenue exposure; and
any Early Termination Offset Amount determined under Section 9.9 of the CRA.

No amount shall be treated as an Applicable Credit unless it has been paid, received, or applied to the revenue exposure included in the Early Termination Amount.

**5. Partial Termination Amount**

Unless the permanently reduced portion of the Firm Load Commitment consists of a separately identifiable load tranche, the Partial Termination Amount shall equal:

Partial Termination Amount = Early Termination Amount × (Permanently Reduced MW ÷ applicable Initial Load Commitment or Firm Load Commitment immediately before reduction)

The Applicable Termination Percentage shall be the percentage specified in Section 1 of this Exhibit for the effective date of the Partial Termination.

If the permanently reduced portion consists of one or more separately identifiable load tranches, the Partial Termination Amount shall be calculated using the Projected Committed Revenue Contributions attributable to the terminated tranche or tranches, including the applicable MW amount and Service Date for each terminated tranche.

The Partial Termination Amount shall not be less than zero.

## 6. Treatment After the First Service Date

On and after the first Service Date, the Applicable Termination Percentage shall remain 100%.

The Present Value of Remaining Projected Committed Revenue Contributions will decline as the remaining portion of the fixed period decreases. Accordingly, the Applicable Termination Percentage will not be separately reduced based solely on the passage of time after the first Service Date.

## 7. Early Termination Offset Amount

If an Early Termination Offset Amount is quantifiable when Transmission Owner issues the applicable termination invoice, Transmission Owner shall include that amount as an Applicable Credit.

If all or part of the Early Termination Offset Amount becomes quantifiable after the termination invoice is issued, Transmission Owner shall reflect the amount in a subsequent reconciliation and promptly return any resulting excess payment to Large Load Customer in accordance with Articles 7 and 9 of the CRA.

Nothing in this Exhibit requires Transmission Owner to market the Point of Delivery, solicit replacement load, modify its transmission planning or service processes, or enter into a transmission-service arrangement with another Person.

## 8. No Duplicate Recovery

The Early Termination Amount and Partial Termination Amount are forward-looking amounts intended to address projected revenue exposure arising after the effective date of termination or Partial Termination.

Transmission Owner shall not recover the same revenue exposure through both:

a Shortfall Amount; and
an Early Termination Amount or Partial Termination Amount.

Amounts collected before termination or Partial Termination shall be credited only to the extent required under Article 9 and this Exhibit to prevent duplicate recovery.

## 706 Rates and Charges

Eligible Customers taking Interim Network Integration Transmission Service shall pay the charges set forth in this Section 706.

### 706.1 Monthly Demand Charge

Eligible Customer shall pay a Monthly Demand Charge for Zone Network Load and Non-Zone Network Load, which shall be determined as follows: Eligible Customer's measured demand amount (in MWs) multiplied by the applicable zonal Network Integration Transmission Service rate established pursuant to Section 34.1.

**Revenue Crediting.** Each month, revenue credits will be applied to the gross monthly Demand Charge to determine the actual charge to the Transmission Customer. Revenue credits shall be calculated based on the sum of the applicable Zone's share of revenues collected during the month from the Non-Firm Contract Demand Charge under Schedule 19. The sum of these revenues will appear as a reduction to the gross monthly rate stated above on a Transmission Customer's bill in that month for service under this schedule.

### 706.2 Redispatch Charge

The Eligible Customer 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.

## 714 Rates and Charges for Firm Contract Demand Transmission Service

Eligible Customers taking Firm Contract Demand Transmission Service on behalf of Eligible Load or Large Load shall pay the charges set forth in this Section 714.

### 714.1 Monthly Demand Charge

Eligible Customer taking service on behalf of Eligible Load or Large Load shall pay a Monthly Demand Charge based on the Firm Contract Demand Transmission Service amount (MW), as specified in Eligible Customer's Service Agreement, in accordance with Tariff, Schedule 18.

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

Eligible Customers taking Non-Firm Contract Demand Transmission Service shall pay the charges set forth in this Section 715.

### 715.1 Monthly Demand Charge

Eligible Customer shall pay a discounted reservation rate set as a function of the Zonal Firm Contract Demand Transmission Service rate and the transmission system load factor for a Zone, as specified in Eligible Customer's Service Agreement, in accordance with Tariff, Schedule 19.

**SCHEDULE 7**
**Long-Term Firm and Short-Term Firm Point-To-Point**
**Transmission Service**

1) The Transmission Customer shall pay each month for Reserved Capacity at the sum of the applicable charges set forth below for the Point of Delivery:

**Summary of Charges**
(in $/kW)

| **Point of Delivery** | **Yearly Charge** | **Monthly Charge** | **Weekly Charge** | **Daily On-Peak[1/] Charge** | **Daily Off-Peak[2/] Charge** |
|---|---|---|---|---|---|
| Border of PJM[3/] | Border Yearly Charge established pursuant to section 11 below | Yearly Charge /12 | Yearly Charge /52 | Weekly Charge /5 | Weekly Charge /7 |
| AE Zone | 23.809 | 1.984 | 0.4580 | 0.0920 | 0.0650 |
| BGE Zone | 15.675 | 1.306 | 0.3010 | 0.0600 | 0.0430 |
| Delmarva Zone | 19.378 | 1.615 | 0.3730 | 0.0750 | 0.0530 |
| JCPL Zone | 15.112 | 1.259 | 0.2906 | 0.0581 | 0.0414 |
| MetEd Zone | 15.112 | 1.259 | 0.2906 | 0.0581 | 0.0414 |
| Penelec Zone | 15.112 | 1.259 | 0.2906 | 0.0581 | 0.0414 |
| PECO Zone | 26.264 | 2.189 | 0.5051 | 0.1010 | 0.0722 |
| PPL Zone: Total charge is the sum of the components | PPL: *<br>AEC: 0.463<br>UGI: * | PPL: *<br>AEC: 0.039<br>UGI: * | PPL: *<br>AEC: 0.0089<br>UGI: * | PPL: *<br>AEC: 0.0018<br>UGI: * | PPL: *<br>AEC: 0.0013<br>UGI: * |

| Point of Delivery | Yearly Charge | Monthly Charge | Weekly Charge | Daily On-Peak[1/] Charge | Daily Off-Peak[2/] Charge |
|---|---|---|---|---|---|
| Pepco Zone | 20.999 | 1.750 | 0.4040 | 0.0810 | 0.0580 |
| PSE&G Zone | 23.696 | 1.975 | 0.4557 | 0.0911 | 0.0651 |
| AP Zone | Rate Pursuant to Attachment H-11 and Attachment H-34 | Rate Pursuant to Attachment H-11 and Attachment H-34 | Rate Pursuant to Attachment H-11 and Attachment H-34 | Rate Pursuant to Attachment H-11 and Attachment H-34 | Rate Pursuant to Attachment H-11 and Attachment H-34 |
| Rockland Zone | 53.766 | 4.481 | 1.0340 | 0.2068 | 0.1477 |
| ComEd Zone[4/] | [5/] | | | | |
| AEP East Zone[6/] | Rate Pursuant to Attachment H-14 and Attachment H-20 | Rate Pursuant to Attachment H-14 and Attachment H-20 | Rate Pursuant to Attachment H-14 and Attachment H-20 | Rate Pursuant to Attachment H-14 and Attachment H-20 | Rate Pursuant to Attachment H-14 and Attachment H-20 |
| Dayton Zone | Rate Pursuant to Attachment H-15 | Rate Pursuant to Attachment H-15 | Rate Pursuant to Attachment H-15 | Rate Pursuant to Attachment H-15 | Rate Pursuant to Attachment H-15 |
| Duquesne Zone | 14.17 | 1.18 | 0.27 | 0.0540 | 0.0386 |
| Dominion Zone[7/] | | | | | |
| ATSI Zone | Rate Pursuant to Attachment H-21 | Rate Pursuant to Attachment H-21 | Rate Pursuant to Attachment H-21 | Rate Pursuant to Attachment H-21 | Rate Pursuant to Attachment H-21 |
| DEOK Zone | Rate Pursuant to Attachment H-22 | Rate Pursuant to Attachment H-22 | Rate Pursuant to Attachment H-22 | Rate Pursuant to Attachment H-22 | Rate Pursuant to Attachment H-22 |
| EKPC Zone | Rate Pursuant to Attachment H-24 | Rate Pursuant to Attachment H-24 | Rate Pursuant to Attachment H-24 | Rate Pursuant to Attachment H-24 | Rate Pursuant to Attachment H-24 |

| | | | | | |
|---|---|---|---|---|---|
| OVEC Zone | 5.16 | 0.43 | 0.10 | 0.02 | 0.014 |

* PPL Electric Utilities Corporation's and UGI Utilities' respective component of the total charge is posted on the PJM Internet website.

1/ Monday – Friday except the following holidays: New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.

2/ Saturday and Sunday and the following holidays: New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.

3/ The charge for Points of Delivery at the Border of PJM shall not apply to any Reserved Capacity with a Point of Delivery of the Midcontinent Independent Transmission System Operator, Inc.

4/ Each month, revenue credits will be applied to the gross charge in accordance with section 8 below to determine the actual charge to the Transmission Customer.

5/ The charges for the ComEd zone are posted on PJM's website. In addition to other rates set forth in this schedule, customers within the ComEd zone shall be charged for recovery of RTO start-up costs at the following rates, each computed to four decimal places:

Annual Rate - $/kW/year = $1,523,039, divided by the 1 CP demand for the ComEd zone for the prior calendar year;

Monthly Rate - $/kW/month. = Annual Rate divided by 12;

Weekly Rate - $/kW/week = Annual Rate divided by 52;

Daily Rate - $/kW/day = Weekly Rate divided by 5.

In order to ensure that the charge does not result in either an over-recovery or under-recovery of ComEd's start-up costs, PJM will institute an annual true-up mechanism in the month of May of each of the years 2008-2014. In May of each of those years, PJM will compare the amount collected under this charge for the previous 12 months with the target annual amount of $1,523,039 and calculate any credits or surcharges that would be needed to ensure that $1,523,039 is collected for each year. Any credit or surcharge will be assessed in the June bills for years 2008-2014, consistent with the above methodology.

6/ The rates for firm point-to-point transmission service in the AEP Zone will be charged at the yearly, monthly, weekly or daily rate equivalent to the rate effective in such period under Attachments H-14 and H-20. In addition to other rates set forth in this schedule, customers within the AEP East Zone shall be charged for recovery of RTO start-up costs at the following rates, each computed to four decimal places:

Annual Rate - $/kW/year = $2,362,185, plus any applicable true-up adjustment, divided by the 1 CP demand for the AEP East Zone for the prior calendar year;

Monthly Rate - $/kW/month. = Annual Rate divided by 12;

Weekly Rate - $/kW/week = Annual Rate divided by 52;

Daily Rate - $/kW/day = Weekly Rate divided by 5.

For the period November 1, 2005 through March 31, 2006, the rate shall be $8.94/MW-month; for the period April 1 through December 31, 2006, the rate shall be $8.60/MW-month, thereafter, the rate will be subject to the following true-up:

In order to ensure that the charge does not result in either over-recovery or under-recovery of AEP's start-up costs, PJM will institute an annual true-up mechanism and implement revised charges as of January 1st of each of the years 2007-2019. In January of each of those years, PJM will compare the amount collected under this charge for the previous year or part thereof with the target annual amount of $2,362,185 and calculate the rates that would be needed, given the expected billing demands, to collect $2,362,185, adjusted for any prior year over-collection or under-collection. In the final year that the rate is collected, PJM will calculate the rate to collect five-twelfths of the annual amount ($984,244), plus or minus any prior year true up amount, by May 31 of that year, and shall charge such rate until that amount is collected, whether that date be before or after May 31, 2020.

7/ The service period charges rounded to four decimal places for the Dominion Zone are as follows:

Yearly Charge - $/kW/year = the formula rate for Network Integration Transmission Service as described in Attachment H-16 and Attachment H-16A divided by 1000 kW/MW

Monthly Charge - $/kW/month. = Yearly Charge divided by 12;

Weekly Charge - $/kW/week = Yearly Charge divided by 52;

Daily On-Peak Charge - $/kW/day = Weekly Charge divided by 5;

Daily Off-Peak Charge - $/kW/day = Weekly Charge divided by 7.

On a monthly basis, revenue credits shall be calculated based on the sum of VEPCO's share of revenues collected during the month from Schedule 7 and Network Integration Transmission Service to Non-Zone Network Load under Attachment H-A. The sum of these revenue credits will appear as an adjustment to the to the gross monthly service period charges produced by the above formula.

2) The total demand charge in any week, pursuant to a reservation for Daily On-Peak Delivery, or Daily Off-Peak Delivery shall not exceed the Weekly Delivery rate specified in section (1) above for weekly service times the highest amount in kilowatts of Reserved Capacity and any additional transmission service, if any, in any day during such week.

3) **Discounts:** Three principal requirements apply to discounts for transmission service as follows: (1) any offer of a discount made by the Transmission Provider must be announced to all Eligible Customers solely by posting on the OASIS, (2) any customer-initiated requests for discounts (including requests for use by one's wholesale merchant or an Affiliate's use) must occur solely by posting on the OASIS, and (3) once a discount is negotiated, details must be immediately posted on the OASIS. For any discount agreed upon for service on a path, from point(s) of receipt to point(s) of delivery, the Transmission Provider must offer the same discounted transmission service rate for the same time period to all Eligible Customers on all unconstrained transmission paths that go to the same point(s) of delivery on the Transmission System.

4) **Congestion, Losses and Capacity Export:** In addition to any payment under this Schedule, the Transmission Customer shall pay Redispatch Costs as specified in Section 27 of the Tariff. The Transmission Customer shall be responsible for losses as specified in the Tariff. Any Transmission Customer that is a Capacity Export Transmission Customer, shall pay any applicable charges, and receive any applicable credits, for such a customer pursuant to Attachment DD.

5) **Other Supporting Facilities and Taxes:** In addition to the rates set forth in section (1) of this schedule, the Transmission Customer shall pay charges determined on a case-by-case basis for facilities necessary to provide Transmission Service at voltages lower than those shown in Attachment H for the applicable Zone(s) and any amounts necessary to reimburse PJMSettlement for any amounts payable as sales, excise, "Btu," carbon, value-added or similar taxes (other than taxes based upon or measured by net income) with respect to the amounts payable pursuant to the Tariff.

6) **[Reserved]**

7) **Transmission Enhancement Charges.** Except for Points of Delivery at the Border of PJM, which are subject to the Border Yearly Charge determined under section 11, in addition to the rates set forth in section (1) of this Schedule and any other applicable charges, the Transmission Customer shall also pay any Transmission Enhancement Charges for which it is designated as a Responsible Customer under Schedule 12 appended to the Tariff.

8) **Determination of monthly charges for ComEd Zone:** On a monthly basis, revenue credits shall be calculated based on the sum of ComEd's share of revenues collected during the month from: (i) the PJM Border Rate under Schedule 7; (ii) Network Integration Transmission Service to Non-Zone Network Load under Attachment H-A; (iii) Seams Elimination Charge/Cost Adjustment/Assignment ("SECA") revenues allocable to ComEd under the Tariff; and (iv) any Point-To-Point Transmission Service where the Point of Receipt and the Point of Delivery are both internal to the ComEd Zone. On this basis, the sum of these revenues will appear as a reduction to the gross monthly rate stated above on a Transmission Customer's bill in that month for service under this schedule.

9) **Determination of monthly charges for AEP Zone:** On a monthly basis, revenue credits shall be calculated based on the sum of AEP's share of revenues collected during the month from: (i) the PJM Border Rate under Schedule 7; (ii) Network Integration Transmission Service to Non-Zone Network Load under Attachment H-A; and (iii) Firm Point-To-Point Transmission Service where the Point of Delivery is internal to the AEP Zone. The sum of these revenue credits will appear as an adjustment (reduction) to the gross monthly rate stated above on a Transmission Customer's bill in that month for service under this schedule.

10) **Resales:** The rates and rules governing charges and discounts stated above shall not apply to resales of transmission service, compensation for which shall be governed by section 23.1 of the Tariff.

11) **Determining the Border Yearly Charge**

(A) Formula for Determining the Border Yearly Charge

(i) Beginning with the calendar year 2020, the Border Yearly Charge shall be based on the following formula:

BYC = SHRR/SZPL

Where:

BYC is the Border Yearly Charge stated in dollars per kW of Reserved Capacity;

SHRR is the sum of the Revenue Requirements for each Transmission Owner used to determine charges for Network Integration Transmission Service either (a) stated in Attachment H for a Transmission Owner or (b) determined pursuant to a formula rate set forth in Attachment H, both as adjusted in accordance with this section (11)(A).

SZPL is the sum of each Zone's annual peak load (in kW) plus the peak day firm reservations for Point-to-Point service at the Border of PJM (in kW) subject to the charges set forth in section (1) herein (prior to any applicable discount) from the most recently completed 12-month period ending October 31.

(ii) Where the Revenue Requirement of a Transmission Owner is determined pursuant to a formula rate:

(a) the Revenue Requirement shall be increased by the amount of any revenue included in the Transmission Owner's formula rate as credits in determining the Revenue Requirement for Network Integration Transmission Service from: (i) Transmission Enhancement Charges; (ii) Firm Point-to-Point Transmission Service charges under Schedule 7; (iii) Network Integration Transmission Service to Non-Zone Network Load under Attachment H-A; (iv) Interconnection Reliability Reinforcement Charges; or (v) Generator Reliability Reinforcement Recovery Fees that are included in the Transmission Owner's formula rate as revenue credits in determining the Revenue Requirement for Network Integration Transmission Service, if such credits are identified in the Transmission Owner's formula rate annual update; and

(b) (I) the Revenue Requirement shall be reduced by the amount of any credit applied directly to Network Customers to offset the cost of Network Integration Transmission Service, including credits to Network Customers resulting from: (i) a Network Upgrade Funding Agreement, Tariff, Attachment O-2; (ii) a State Agreement Public Policy Project subject to Tariff, Schedule 12, section (b)(xii)(B); (iii) agreements for transmission service entered into prior to a Transmission Owner signing the Consolidated Transmission Owners Agreement or any of its predecessor agreements or (iv) an entity executing an agreement by which such entity is obligated to pay for some, or all, of the Revenue Requirement of Transmission Facilities for which Network Customers would otherwise be responsible. (II) The Revenue Requirement for inclusion in the SHRR shall not be reduced by the amount of any credits for (i) Transmission Enhancement Charges; (ii) Firm Point-to-Point Transmission Service charges under this Schedule 7; (iii) Network Integration Transmission Service to Non-Zone Network Load under Tariff, Attachment H-A; (iv) Interconnection Reliability Reinforcement Charges; or (v) Generator Reliability Reinforcement Recovery Fees.

(B) The Transmission Provider shall update the Border Yearly Charge annually based on the Revenue Requirements for each Transmission Owner used to determine charges for Network Integration Transmission Service in effect on January 1, provided that such Revenue Requirements were approved by FERC, stated in a formula rate update informational filing with FERC, or posted on the Transmission Provider's website no later than the preceding October 31. The Border Yearly Charge so updated shall become effective as of January 1 and remain in effect for the remainder of the calendar year. Except as provided in subsection (D) of this section (11), any change to the data used to determine the Border Yearly Charge following October 31, including any change in the number or identity of Transmission Owners filing Revenue Requirements for Network Integration Transmission Service under Attachment H, shall not be reflected in Border Yearly Charge until the next annual update.

(C) Not later than the first Business Day of December each year, the Transmission Provider shall post on the Transmission Provider's website a "BYC Workbook" that shall include (1) all of the inputs and calculations used to determine the Border Yearly Charge, (2) references to the sources of the inputs used to determine the Border Yearly Charge from each Transmission Owner's stated or formula rate filing or posting, (3) a variance report detailing all changes to the calculations, inputs, or procedures used to determine the proposed Border Yearly Charge as compared to the calculations, inputs or procedures used to determine the Border Yearly Charge then in effect, and (4) contact information for the submission of inquiries or comments regarding the posted BYC Workbook. All inputs used to determine the SHRR must be taken either from a stated Revenue Requirement for Network Integration Transmission Service specified in Attachment H or from an identified entry in a Transmission Owner's formula rate update either filed with the FERC or posted on the Transmission Provider's website for the rate for Network Integration Transmission Service that will be in effect on January 1.

(D) Procedure for Review of and Challenge to the Border Yearly Charge Determination.

(i) Review of the Border Yearly Charge Determination.

(a) Within sixty (60) days of the posting of the BYC Workbook, Interested Parties, including entities with existing, requested or planned transmission service reservations for service at the Border of PJM ("Border Rate Transmission Customers"), state utility regulatory commissions, consumer advocacy agencies, state attorneys general, and any entity having standing under Section 206 of the Federal Power Act ("Interested Party"), may submit reasonable information requests to the Transmission Provider regarding its selection and use of inputs and the calculations performed in calculating the Border Yearly Charge, including the creation of the BYC Workbook, with respect to any adjustments made by the Transmission Provider, including adjustments made based on information provided by a Transmission Owner to the Transmission Provider: (1) to a Transmission Owner's Revenue Requirement for Network Integration Transmission Service prior to its inclusion as an input into the calculation of the SHRR for the Border Yearly Charge; (2) to the data used in determining SZPL; (3) to the Revenue Requirement of a Transmission Owner in determining the Border Yearly Charge made in accordance with Section (11)(A)(ii); and (4) in response to any FERC orders approving or requiring changes to, or refunds associated with, a Transmission Owner's formula rate or resulting annual Revenue Requirement.

(b) The Transmission Provider shall respond to such reasonable information requests as soon as practicable, but no later than within forty-five (45) days of the receipt of the information request, unless it determines that additional time is required to respond. The Transmission Provider shall post any information requests received and its responses thereto on the Transmission Provider's website, provided that any responsive information that has been designated by a Transmission Owner as confidential pursuant to the provisions of the Operating Agreement or Consolidated Transmission Owners Agreement shall not be posted and shall be handled solely in accordance with such provisions. An Interested Party may request a meeting with the Transmission Provider and any interested Transmission Owner to discuss any response to an information request or any dispute regarding the calculation of the Border Yearly Charge annual update. The Transmission Provider and any interested Transmission Owner shall exercise good faith in responding to an Interested Party's meeting request and shall not unreasonably deny or delay such meeting in a manner that prejudices an Interested Party's opportunity to timely review the Border Yearly Charge annual update.

(c) At any time after posting of the BYC Workbook, but before a challenge pursuant to section (11)(D)(ii) ("Challenge") is filed, at the request of an Interested Party, the Transmission Provider will be required to meet with the Interested Party within ten (10) Business Days of such request in an attempt to resolve any dispute regarding the calculation of the Border Yearly Charge raised by the Interested Party in its meeting request. If the dispute relates to information from one or more Transmission Owners' Tariff, Attachment H stated or formula rate or Zonal peak load determination, the relevant Transmission Owner(s) will be notified by the Transmission Provider of the dispute and will be permitted to attend the meeting.

(d) If it is determined that the Border Yearly Charge is based on an incorrect input or calculation or FERC directs that a Transmission Owner's Revenue Requirement, upon which the Border Yearly Charge is based, be changed and implemented as a change to the Transmission Owner's rate for Network Integration Transmission Service at a time other than provided for in the Transmission Owner's formula rate protocols ("Changed Revenue Requirement"), the Transmission Provider shall change the Border Yearly Charge as necessary to account for such Changed Revenue Requirement and post on the Transmission Provider's website a revised BYC Workbook documenting the changes to the Border Yearly Charge to incorporate the correction or change. The correction to the Border Yearly Charge shall take effect no

later than the first day of the month that begins 30 days after a correction is posted by the Transmission Provider or, if the correction or Changed Revenue Requirement results from a FERC order, on a schedule consistent with that order. Subject to the notice of correction described above, to the extent permitted by Tariff, Part I, section 10.4, PJM Settlement, on behalf of itself or as agent for the Transmission Provider, shall adjust the charges to Border Rate Transmission Customers with respect to any month prior to the effective date of the Changed Revenue Requirement being reflected in the Border Yearly Charge that is affected by the correction or Changed Revenue Requirement and refund or credit any amount paid in excess of the corrected Border Yearly Charge. Any correction under this subsection (D) shall be limited to any Changed Revenue Requirement and the Transmission Provider's selection and use of Border Yearly Charge inputs and the calculations necessary to determine the Border Yearly Charge. This section does not apply to a FERC order that changes a Transmission Owner's Revenue Requirement that is implemented through a true-up mechanism.

(e) If FERC issues an order directing or approving refunds associated with a Transmission Owner's Revenue Requirement that previously was, or currently is, incorporated into the SHRR to be paid to Network Integration Transmission Service customers, Border Rate Transmission Customers shall also receive a refund, to the extent that the changes in a Transmission Owner's Revenue Requirement upon which such refund is based affects the calculation of the Border Yearly Charge.

(f) Nothing in section (11) shall authorize an inquiry into the data or information filed or posted by a Transmission Owner as part of its transmission rate protocols pursuant to Tariff, Attachment H, or shall affect the rights that any Border Rate Transmission Customer may have under said protocols.

(ii) Challenge to the Border Yearly Charge Determination.

(a) An Interested Party may file with FERC a Challenge to the annual update of the Border Yearly Charge within ninety (90) days of the posting of the BYC Workbook or thirty (30) days of receiving a response to any information request it submitted under subsection (11)(D)(i)(a), whichever is later. Any such Challenge shall be served on Transmission Provider and each Transmission Owner with Revenue Requirements included in the BYC Workbook.

(b) A Challenge must specify and include adequate supporting documentation, detailing how the Transmission Provider's selection of inputs to or calculation of the Border Yearly Charge fails to comply with the provisions of this Schedule 7, section (11), identifying any input data or other BYC Workbook entry that is alleged to be missing or inaccurate or the Border Yearly Charge calculations alleged to be performed incorrectly.

(c) A Challenge must be limited to the Transmission Provider's selection and use of Border Yearly Charge inputs and the calculations necessary to determine the Border Yearly Charge and may not seek to modify Tariff, Schedules 7 and 8 or Attachment H-A or question the data or information filed or posted by a Transmission Owner pursuant to Tariff, Attachment H.

(d) The Transmission Provider and each Transmission Owner with Revenue Requirements included in the BYC Workbook shall have thirty (30) days to answer a Challenge.

(e) In any proceeding before the FERC in response to a Challenge, the Transmission Provider shall bear the burden, consistent with Section 205 of the FPA, of demonstrating that it has correctly applied the terms of this Schedule 7, section (11).

(E) When the Transmission Provider posts on its website a Border Yearly Charge annual update under subsection (C) or correction under subsection (D) of this section (11), it shall also make an informational filing with the FERC that includes such posting.

(F) A Transmission Customer taking Point-to-Point Transmission Service at the Border of PJM under this Schedule 7, including any discounted service pursuant to Section (3), is relieved from, and shall not be separately allocated or assigned Transmission Enhancement Charges under Schedule 12 §(c)(5) on the basis of its reservation of Firm Point-to-Point Transmission Service at the Border of PJM. Payment of the charges set forth in this Schedule does not relieve the responsibility of a Transmission Customer or Merchant Transmission Facility to pay Transmission Enhancement Charges assigned to such Merchant Transmission Facility, other than pursuant to Tariff, Schedule 12, §(c)(5), nor does it determine other cost obligations of Transmission Customers or Merchant Transmission Facilities that may be imposed under other provisions of the Tariff.

(G) Point-to-Point Transmission Service at the Border of PJM includes service to a Point of Delivery at a Merchant Transmission Facility that provides service to a neighboring transmission system.

(H) Customers taking Point-to-Point Transmission Service at the Border of PJM with a Point of Delivery at a Merchant Transmission Facility and not receiving a discount from the Border Yearly Charge pursuant to this Schedule 7, section (3) under the settlement entered into in FERC Docket No. ER19-2105, shall receive a credit determined in accordance with the following formula:

MTFC = BYC*MTFTEC/SHRR

Where:

MTFC is the credit to the Border Yearly Charge per kW of reserved capacity;

BYC is the Border Yearly Charge;

MTFTEC is the total annual Transmission Enhancement Charges under Tariff, Schedule 12 applicable to the Merchant Transmission Facility to which the customer is taking Point-to-Point Transmission Service during the current calendar year; and

SHRR is the amount determined pursuant to subsection (A) of this section (11).

The MTFC shall be credited on a monthly basis only for those months during which the customer takes Firm Point-to-Point Transmission Service to the Merchant Transmission Facility.

## SCHEDULE 12
## Transmission Enhancement Charges and Interconnection Reliability Reinforcement Cost Recovery

**(a) Establishment of Transmission Enhancement Charges.**

**(i) Establishment of Transmission Enhancement Charges by Transmission Owners and Entities That Will Become Transmission Owners.** One or more of the Transmission Owners may be designated to construct and own and/or finance Required Transmission Enhancements by (1) the Regional Transmission Expansion Plan periodically developed pursuant to Operating Agreement, Schedule 6 or (2) any joint planning or coordination agreement between PJM and another region or transmission planning authority set forth in Tariff, Schedule 12-Appendix B ("Appendix B Agreement") (collectively, for purposes of this Schedule 12 only, "Regional Transmission Expansion Plan"). Operating Agreement, Schedule 6, section 1.7 recognizes that Transmission Owners, subject to obtaining any necessary regulatory approvals, may seek to recover the costs of Required Transmission Enhancements and obligates PJMSettlement to collect on behalf of Transmission Owner(s) any charges established by Transmission Owners to recover the costs of Required Transmission Enhancements. If a Transmission Owner is designated by the Regional Transmission Expansion Plan to construct and own and/or finance a Required Transmission Enhancement, such Transmission Owner may choose any of the following cost recovery mechanisms, subject to the crediting procedures set forth in section (e) below:

(1) Decline to seek to recover the costs of Required Transmission Enhancements from customers until such time as it makes a filing pursuant to Section 205 of the Federal Power Act to revise its Network Integration Transmission Service rates;

(2) Make a filing pursuant Section 205 of the Federal Power Act and the FERC's rules and regulations to establish the revenue requirement with respect to a Required Transmission Enhancement, without filing to revise its rates for Network Integration Transmission Service generally; or

(3) Establish the revenue requirement with respect to a Required Transmission Enhancement through the operation of a formula rate in effect applicable to its rates for Network Integration Transmission Service.

A charge established to recover the revenue requirement with respect to a Required Transmission Enhancement is hereafter referred to as a "Transmission Enhancement Charge." Transmission Enhancement Charges of one or more Transmission Owners for Required Transmission Enhancements shall be established in accordance with this Schedule 12.

**(ii) Establishment of Transmission Enhancement Charges With Respect to Required Transmission Enhancements Constructed by Entities in Another Region.** The revenue requirement with respect to a Required Transmission Enhancement constructed pursuant to an Appendix B Agreement in another region by an entity designated by such other region shall be governed by the tariffs or agreements in effect in such region. Transmission Enhancement

Charges to recover the costs of such Required Transmission Enhancement for which PJM is responsible shall be determined in accordance with this Schedule 12. Other than with respect to a Required Transmission Enhancement constructed pursuant to an Appendix B Agreement, no PJM Network or Transmission Customer will bear cost responsibility for any required transmission upgrades in another region as a consequence of a Required Transmission Enhancement included in the Regional Transmission Expansion Plan.

**(iii) Transmission Facilities Not Eligible for Cost Responsibility Assignment.** Any alternating current ("A.C.") facilities or direct current ("D.C.") facilities that are Attachment Facilities, Local Upgrades, Merchant Network Upgrades, Merchant Transmission Facilities, Network Upgrades, Supplemental Projects, or any other Transmission Facilities that operate or are planned to be operated in a manner that requires customers to subscribe to transmission service over such facilities or to a portion of the electric capability of such facilities shall not be eligible for cost responsibility assignment pursuant to this Schedule 12.

**(iv) Entities Not Yet Eligible to Become Transmission Owners.** For purposes of this Schedule 12 only, the term, "Transmission Owner," shall include any entity that undertakes to construct and own and/or finance a Required Transmission Enhancement pursuant to a designation in the Regional Transmission Expansion Plan to construct and own and/or finance such Required Transmission Enhancement, even if such entity is not yet eligible to become a party to the Consolidated Transmission Owners Agreement. Nothing in the PJM Tariff nor the Consolidated Transmission Owners Agreement shall prevent an entity that undertakes to construct and own and/or finance a Required Transmission Enhancement pursuant to a designation in the Regional Transmission Expansion Plan to construct and own and/or finance such Required Transmission Enhancement from recovering the costs of such Required Transmission Enhancement through this Schedule 12.

**(v) Effective Date.** The assignment of cost responsibility or classification of Required Transmission Enhancements either (1) made by the Transmission Provider prior to February 1, 2013, or (2) applicable to Required Transmission Enhancements approved by the PJM Board pursuant to Operating Agreement, section 1.6 prior to February 1, 2013 are set forth in Tariff, Schedule 12-Appendix. Except as specifically set forth herein, nothing in this Schedule 12 shall change the assignment of cost responsibility or classification of Required Transmission Enhancements included in Tariff, Schedule 12-Appendix. The assignment of cost responsibility or classification of all other Required Transmission Enhancements shall be set forth in Tariff, Schedule 12-Appendix A.

**(b) Designation of Customers Subject to Transmission Enhancement Charges.**

**(i) Regional Facilities and Necessary Lower Voltage Facilities.** Transmission Provider shall assign cost responsibility on a region-wide basis for Required Transmission Enhancements included in the Regional Transmission Expansion Plan that (1) (a) are A.C. facilities that operate at or above 500 kV; (b) constitute a single Required Transmission Enhancement comprising two A.C. circuits operating at or above 345 kV and below 500 kV, where both circuits originate from a single substation or switching station at one end and

terminate at a single substation or switching station at the other end, regardless of whether or not the two circuits are routed in the same right-of-way ("Double-circuit 345 kV Required Transmission Enhancement"); (c) are A.C. or D.C. shunt reactive resources (such as capacitors, static var compensators, static synchronous condenser (STATCON), synchronous condensers, inductors, other shunt devices, or their equivalent) connected to a Transmission Facility described in clause (a) or (b) of this subsection, or (d) are D.C. facilities meeting the criteria set forth in subsection (b)(i)(D) (collectively, "Regional Facilities"), or (2) new A.C. Transmission Facilities or expansions or enhancements to existing Transmission Facilities that operate below 500 kV (or 345 kV in the case of a Regional Facility described in clause (1)(b) of this subsection) or new D.C. Transmission Facilities that do not meet the criteria of subsection (b)(i)(D) that must be constructed or strengthened to support new Regional Facilities, based on the planning criteria used by the Transmission Provider in developing the applicable Regional Transmission Expansion Plan ("Necessary Lower Voltage Facilities") as follows:

(A) Cost responsibility for Regional Facilities and Necessary Lower Voltage Facilities shall be allocated among Responsible Customers as defined in this Schedule 12 as follows:

(1) Fifty percent (50%) shall be assigned annually on a load-ratio share basis as follows:

(a) With respect to each Zone, using, consistent with Tariff, Part III, section 34.1, the applicable zonal loads at the time of such Zone's annual peak load from the 12-month period ending October 31 preceding the calendar year for which the annual cost responsibility allocation is determined; and

(b) With respect to Merchant Transmission Facilities, (1) for the calendar year following the year in which it initiates operation, the actually awarded Firm Transmission Withdrawal Rights associated with its existing Merchant Transmission Facility; and (2) for all subsequent calendar years, the annual peak load of the Merchant Transmission Facility (not to exceed its actual Firm Transmission Withdrawal Rights) from the 12-month period ending October 31 of the calendar year preceding the calendar year for which the annual cost responsibility allocation is determined.

(2) Fifty percent (50%) shall be assigned as follows:

(a) In the case of a Required Transmission Enhancement included in the Regional Transmission Expansion Plan to address one or more reliability violations or to address operational adequacy and performance issues (collectively, "Reliability Project"), in accordance with the distribution factor ("DFAX") analysis described in subsection (b)(iii) or the analysis applicable to Regional Facilities that address stability issues described in subsection (b)(xviii) of this Schedule 12 as applicable; and

(b) In the case of a Required Transmission Enhancement included in the Regional Transmission Expansion Plan to relieve one or more economic constraints as described in Operating Agreement, Schedule 6, section 1.5.7(b)(iii) ("Economic

Project"), in accordance with the methodology described in subsection (b)(v) of this Schedule 12.

(B) (1) Except for transformers that are an integral component of a Regional Facility, transformers connected to Lower Voltage Facilities, as defined in section (b)(ii) of this Schedule 12, shall not be considered Regional Facilities or Necessary Lower Voltage Facilities; and (2) Transmission Facilities that are not Regional Facilities and deliver energy from a Regional Facility to load shall not be considered Necessary Lower Voltage Facilities.

(C) With respect Required Transmission Enhancements that qualify as Regional Facilities under subsection (b)(i)(1)(b) or subsection (b)(i)(D)(2) of this Schedule 12:

(1) where the Required Transmission Enhancement includes both new Transmission Facilities and pre-existing Transmission Facilities, cost responsibility under this section (b)(i) shall apply only to the cost of the new Transmission Facilities plus the original cost less accumulated depreciation of pre-existing Transmission Facilities that are included in Tariff, Schedule 12-Appendix or Tariff, Schedule 12-Appendix A;

(2) cost responsibility shall be assigned under this section (b)(i) only after the Required Transmission Enhancement goes into service as a Double-circuit 345 kV Required Transmission Enhancement or a Double-circuit D.C. Required Transmission Enhancement; and

(3) cost responsibility shall be assigned under this section (b)(i) for any CWIP permitted to be recovered before the Required Transmission Enhancement goes into service only after such Transmission Facilities are approved in a Regional Transmission Expansion Plan as a Double-circuit 345 kV Required Transmission Enhancement or a Double-circuit D.C. Required Transmission Enhancement.

(D) A Required Transmission Enhancement included in the Regional Transmission Expansion Plan that is a D.C. facility, consisting of D.C. lines (i.e., wires or cables) and A.C./D.C. converters, shall be a Regional Facility only if:

(1) such D.C. facility comprises two poles and operates at a voltage of ±433 kV D.C. or above; or

(2) such D.C. Facility constitutes a single Required Transmission Enhancement comprising two D.C. circuits where (i) both circuits originate from a single substation or switching station at one end and terminate at a single substation or switching station at the other end, regardless of whether or not both circuits are routed in the same right-of-way, and (ii) each such circuit consists of two poles and operates at a voltage of ±298 kV D.C or above ("Double-circuit D.C. Required Transmission Enhancement").

**(ii) Lower Voltage Facilities.** Transmission Provider shall assign cost responsibility for Required Transmission Enhancements that (a) are not Regional Facilities; and (b) are not "Necessary Lower Voltage Facilities" as defined in section(b)(i) of this Schedule 12 (collectively "Lower Voltage Facilities"), as follows:

(A) If the Lower Voltage Facility is a Reliability Project, Transmission Provider shall use the DFAX analysis described in subsection (b)(iii) or the analysis applicable to Regional Facilities that address stability issues described in subsection (b)(xviii) of this Schedule 12 as applicable; and

(B) If the Lower Voltage Facility is an Economic Project, Transmission Provider shall use the methodology described in subsection (b)(v) of this Schedule 12.

**(iii) DFAX Analysis for Reliability Projects.**

(A) For purposes of the assignment of cost responsibility for Reliability Projects under subsection (b)(i)(A)(2)(a) and subsection (b)(ii)(A) of this Schedule 12, the Transmission Provider, based on a computer model of the electric network and using power flow modeling software, shall calculate distribution factors, represented as decimal values or percentages, which express the portions of a transfer of energy from a defined source to a defined sink that will flow across a particular transmission facility or group of transmission facilities. These distribution factors represent a measure of the use by the load of each Zone or Merchant Transmission Facility (collectively, "Responsible Zone") of the Required Transmission Enhancement, as determined by a power flow analysis. In general, a distribution factor can be represented as:

Distribution Factor = (After-shift power flow – pre-shift power flow) / Total amount of power shifted

Total amount of power shifted = Modeled incremental megawatt transfer to a given Load Deliverability Area or Merchant Transmission Facility

Pre-shift power flow = Megawatt flow over the Required Transmission Enhancement before the incremental megawatt transfer

After-shift power flow = Megawatt flow over the Required Transmission Enhancement after the incremental megawatt transfer

When calculating such distribution factors:

(1) All distribution factors are calculated with respect to the Required Transmission Enhancement subject to cost allocation under subsection (b)(i)(A)(2)(a) and subsection (b)(ii)(A) of this Schedule 12.

(2) The calculation of distribution factors shall be determined using linear matrix algebra, such that distribution factors represent the ratio of (i) a change in megawatt flow on a Required Transmission Enhancement to (ii) a change in megawatts transferred to aggregate load within a Zone or, in the case of a Merchant Transmission Facility, the point of withdrawal associated with Firm Transmission Withdrawal Rights over such Merchant Transmission Facility.

(3) With respect to a Merchant Transmission Facility, zonal peak load shall mean (i) the existing Firm Transmission Withdrawal Rights of the Merchant Transmission Facility being evaluated, if the Merchant Transmission Facility is in service, or (ii) for a Merchant Transmission Facility that is not yet in service, the planned Firm Transmission Withdrawal Rights of the Merchant Transmission Facility being evaluated as identified in the Interconnection Service Agreement in effect for such Merchant Transmission Facility.

(4) In the DFAX analysis, when Transmission Provider models a transfer from generation to all load within an individual Zone, Transmission Provider shall model the transfer to the Zone as a whole (not on a bus-by-bus basis).

(5) In the DFAX analysis, Transmission Provider shall model generation both external and internal to individual Responsible Zones to reflect (a) the boundaries of Locational Deliverability Areas ("LDAs"), and (b) limitations with respect to the reliability objective for moving generation capacity across the transmission system. Transmission Provider shall adopt the Capacity Emergency Transfer Objective ("CETO"), associated with that LDA and calculated for the applicable planning year to be the transfer limitation into the LDA. In modeling the system generation and load, Transmission Provider shall assume that the percentage of the zonal load in the LDA served by external (or internal) generation to the LDA shall equal the ratio of (i) the CETO associated within that LDA (or generation internal with the LDA) to (ii) the sum of (a) the internal generation within the LDA and (b) the CETO associated with that LDA. For the generation dispatch used in calculating the distribution factor, Transmission Provider shall distribute these amounts of external/internal generation among all generation in the PJM Region external to/internal within the LDA, respectively, in proportion to their capacity. For Responsible Zones that are located within LDAs that are also entirely contained in other larger LDAs, the modeling approach and distribution factor calculations shall be repeated for such Responsible Zones for each LDA. The lowest distribution factor derived from these calculations shall be applied to the Responsible Zone in the calculation of the use of the Required Transmission Enhancement.

(B) The DFAX analysis will be performed in accordance with the following steps:

(1) Transmission Provider shall calculate a distribution factor and a direction of use for each Responsible Zone by modeling a transfer from all generation in the PJM Region to each Responsible Zone. To establish the use by a Responsible Zone, in megawatts, of a Required Transmission Enhancement, the distribution factor of a Required Transmission Enhancement associated with the resulting transfer modeled by the Transmission Provider to each Responsible Zone shall be multiplied by the Responsible Zone's peak load.

(2) The Transmission Provider shall separately determine the relative use of the Required Transmission Enhancement by each Responsible Zone in each direction by dividing the megawatts of use by each Responsible Zone determined in section (iii)(B)(1) above

by the total use of all Responsible Zones using the Required Transmission Enhancement in the same direction of use.

(3) Transmission Provider shall determine the direction of use percentage of the Required Transmission Enhancement in each direction using a production cost analysis to determine the total use, in megawatt-hours, of the Required Transmission Enhancement by all Zones and Merchant Transmission Facilities in each direction over the course of a year. The Transmission Provider shall calculate the percentage use in each direction by dividing the megawatt-hours of use in each direction by total use in megawatt-hours in both directions of use.

(4) The Transmission Provider shall multiply the relative use by each Responsible Zone of the Required Transmission Enhancement in each direction of use determined in section (iii)(B)(2) above, by the applicable direction of use percentage determined in section (iii)(B)(3) above.

(5) The products of the calculation performed in section (iii)(B)(4) above, shall determine the relative allocation to each Responsible Zone of cost responsibility for the Required Transmission Enhancement.

(C) In the DFAX analysis, the Zones of Public Service Electric and Gas Company and Rockland Electric Company will be treated as one Zone unless and until Rockland Electric Company elects to be treated as a separate Zone in accordance with the terms of the Settlement Agreement And Offer Of Partial Settlement approved by FERC in Docket Nos. ER06-456-000, et al.

(D) Transmission Provider shall round cost responsibility assignments determined using the DFAX analysis described in subsection (b)(iii) of this Schedule 12 to the nearest one-hundredth of one percent.

(E) Transmission Provider shall not account for the ability to adjust use of phase angle regulators ("PARs") in the DFAX analysis described in subsection (b)(iii) of this Schedule 12. In the DFAX analysis, all PAR angles shall be fixed at their base case settings.

(F) In the DFAX analysis, if the Required Transmission Enhancement is a D.C. facility, the Transmission Provider shall determine cost responsibility assignment as follows:

(1) The Required Transmission Enhancement shall be replaced in the model with a comparable proxy A.C. facility, the impedance of which shall be calculated based on the length of the D.C. facility that was removed from the model multiplied by an approximate per unit/mile impedance value for the proxy A.C. facility.

(2) Where a D.C. facility is an integral part of a Required Transmission Enhancement that also includes A.C. facilities, the methodology described in

subsection (b)(iii)(F)(1) above shall be used only for the D.C. facility segment of such Required Transmission Enhancement.

(3) A D.C. facility used to control flow over portions of the Transmission System shall be modeled with a zero impedance and no control shall be applied.

(G) If Transmission Provider determines in its reasonable engineering judgment that, as a result of applying the provisions in section (b)(iii) of this Schedule 12, the DFAX analysis cannot be performed or that the results of such DFAX analysis are objectively unreasonable, the Transmission Provider may use an appropriate substitute proxy for the Required Transmission Enhancement in conducting the DFAX analysis. If a proxy is used that is not specified in this Schedule 12, Transmission Provider shall state in a written report (a) the reasons why it determined the DFAX analysis could not be performed or that the results of the DFAX analysis were objectively unreasonable; (b) why the substitute proxy produced objectively reasonable results; and (3) a recommendation as to what changes, if any, should be considered in conducting the DFAX analysis.

(H) The Transmission Provider shall make a preliminary cost responsibility determination for each Required Transmission Enhancement subject to section (b)(iii) of this Schedule 12 at the time such Required Transmission Enhancement is included in the Regional Transmission Expansion Plan.

(1) When CWIP in connection with a Required Transmission Enhancement subject to this section (b)(iii) of this Schedule 12 is entitled to be recovered, the preliminary determination of cost responsibility made at the time that the Required Transmission Enhancement was included in the Regional Transmission Expansion Plan shall be used to assign cost responsibility for such CWIP and such cost responsibility shall remain unchanged until the date the Required Transmission Enhancement goes into service. Once a Required Transmission Enhancement has gone into service, the updated cost responsibility determination provided for in subsection (b)(iii)(H)(2) below shall apply.

(2) Beginning with the calendar year in which a Required Transmission Enhancement is scheduled to enter service, and thereafter annually at the beginning of each calendar year, the Transmission Provider shall update the preliminary cost responsibility determination for each Required Transmission Enhancement using the values and inputs used in the base case of the most recent Regional Transmission Expansion Plan approved by the PJM Board prior to the date of the update. All values and inputs used in the calculation of the distribution factor in a determination of cost responsibility shall be the same values and inputs as used in the base case of the most recent Regional Transmission Expansion Plan approved by the PJM Board prior to the determination of cost responsibility.

**(iv) Spare Parts, Replacement Equipment And Circuit Breakers.** Transmission Provider shall assign cost responsibility for spare parts, replacement equipment, and circuit breakers and associated equipment, included in the Regional Transmission Expansion Plan as follows:

(A) Spare parts that are part of the design specifications of a Required Transmission Enhancement at the time such Required Transmission Enhancement is first included in the Regional Transmission Expansion Plan shall be considered part of the Required Transmission Enhancement for the purpose of applying the cost threshold described in subsection (b)(vi) of this Schedule 12 and cost responsibility for such spare parts shall be assigned in the same manner as the Required Transmission Enhancement. Cost responsibility for spare parts independently included the Regional Transmission Expansion Plan and not a part of the design specifications of a Required Transmission Enhancement as described above in this subsection shall be assigned to the Zone of the owner of the spare part, if the owner of the spare part is a Transmission Owner listed in Tariff, Attachment J. If the owner of the spare part is not a Transmission Owner listed in Tariff, Attachment J, cost responsibility shall be assigned on a pro rata basis to the zones that bear cost responsibility for the owner's Required Transmission Enhancements.

(B) Replacement equipment that is part of the design specifications of a Required Transmission Enhancement at the time the Required Transmission Enhancement is first included in the Regional Transmission Expansion Plan shall be considered part of the Required Transmission Enhancement for the purpose of applying the cost threshold described in section (b)(vi) of this Schedule 12 and cost responsibility for such replacement equipment shall be assigned in the same manner as the Required Transmission Enhancement. Cost responsibility for Required Transmission Enhancement replacement equipment independently included in the Regional Transmission Expansion Plan and not a part of the design specifications of a Required Transmission Enhancement as described above in this subsection, shall be assigned to the same Zones and/or Merchant Transmission Facilities and in the same proportions as the then-existing assignments of cost responsibility for the facilities that the replacement equipment is replacing.

(C) Circuit breakers and associated equipment that are part of the design specifications of a Required Transmission Enhancement at the time the Required Transmission Enhancement is first included in the Regional Transmission Expansion Plan shall be considered part of the Required Transmission Enhancement for the purpose of applying the cost threshold described in subsection (b)(vi) of this Schedule 12 and cost responsibility for such circuit breakers and associated equipment shall be assigned in the same manner as the Required Transmission Enhancement. Cost responsibility for circuit breakers and associated equipment independently included in the Regional Transmission Expansion Plan and not a part of the design specifications of a transmission element of a Required Transmission Enhancement as described above in this subsection, shall be assigned to the Zone of the owner of the circuit breaker and associated equipment if the owner of the circuit breaker is a Transmission Owner listed in Tariff, Attachment J. If the owner of the circuit breaker is not a Transmission Owner listed in Tariff, Attachment J, cost responsibility shall be assigned on a pro rata basis to the zones that bear cost responsibility for the owner's Required Transmission Enhancements.

**(v) Economic Projects.** Transmission Provider shall assign (i) fifty percent (50%) of cost responsibility for Economic Projects that are Regional Facilities; and (ii) full cost responsibility for Economic Projects that are Lower Voltage Facilities; as follows:

(A) Transmission Provider shall assign cost responsibility for Economic Projects that are accelerations of Reliability Projects as described in Operating Agreement, Schedule 6, section 1.5.7(b)(i) ("Acceleration Projects") by performing and comparing (1) a DFAX analysis consistent with the methodology described in subsection (b)(iii) of this Schedule 12, and (2) a methodology that is intended to act as a proxy for expected economic benefits from reduced Locational Marginal Prices ("LMP Benefit") over the period that the reliability-based enhancement or expansion is to be accelerated ("LMP Benefits Methodology"). The LMP Benefits Methodology shall determine cost responsibility assignment percentages to Zones and Merchant Transmission Facilities in the following manner. The LMP Benefit to a Zone shall be deemed to be equal to the reduction in Locational Marginal Price payments made by Load Serving Entities as a result of the Acceleration Project assuming the customers purchase all energy needs from the PJM Interchange Energy Market, and LMP Benefits so calculated shall be converted into percentage cost responsibility assignments for the affected Zones. The LMP Benefits Methodology shall not incorporate the financial effects of allocations of Auction Revenue Rights or Financial Transmission Rights. The LMP Benefit to a Merchant Transmission Facility shall be deemed to be equal to the proportionate share of assigned cost responsibility using the DFAX analysis and the assignments of cost responsibility to other Zones in the LMP Benefits Methodology shall be proportionately adjusted, as necessary, to reflect this treatment of Merchant Transmission Facilities to ensure that the total allocation for any economic-based Required Transmission Enhancement equals one hundred percent. If, after performing both analyses and comparing the percentage cost responsibility assignments for the affected Zones calculated pursuant to the DFAX analysis and the LMP Benefits Methodology, the results do not indicate at least a ten percentage point cost responsibility assignment differential between the two methods for any Zone, cost responsibility for the Acceleration Project shall be assigned using the DFAX analysis. If, after performing both analyses and comparing the percentage cost responsibility assignments for the affected Zones calculated pursuant to the DFAX analysis and LMP Benefits Methodology, the results indicate at least a ten percentage point cost responsibility assignment differential between the DFAX analysis and the LMP Benefits Methodology for any Zone, cost responsibility for the Acceleration Project for the period of time the Reliability Project is accelerated (i.e. the period between the date the Reliability Project actually goes into service and the date the Reliability Project originally was scheduled to go in service in the PJM Board approved Regional Transmission Expansion Plan) shall be assigned using the LMP Benefits Methodology. For all periods other than the period of time the Reliability Project is accelerated, cost responsibility for such an Acceleration Project shall be assigned in accordance with the provisions of this Schedule 12 governing the assignment of cost responsibility of Regional Facility Reliability Projects or Lower Voltage Facility Reliability Projects, as applicable.

(B) Transmission Provider shall assign cost responsibility for Economic Projects that are modifications to Reliability Projects as described in Operating Agreement, Schedule 6, section 1.5.7(b)(ii) in accordance with the provisions of this Schedule 12 governing the assignment of cost responsibility of Regional Facility Reliability Projects or Lower Voltage Facility Reliability Projects, as applicable.

(C) Transmission Provider shall assign cost responsibility for Economic Projects that are new enhancements or expansions that could relieve one or more economic

constraints as described in Operating Agreement, Schedule 6, section 1.5.7(b)(iii) to the Zones that show a decrease in the net present value of the Changes in Load Energy Payment. The Change in Load Energy Payment for each year shall be determined using the methodology set forth in Operating Agreement, Schedule 6, section 1.5.7(d) for the period specified in that section. Cost responsibility shall be assigned based on each Zone's pro rata share of the sum of the net present values of the Changes in Load Energy Payment only of the Zones in which the net present value of the Changes in Load Energy Payment shows a decrease.

**(vi) Required Transmission Enhancements Costing Less Than $5 Million.** Notwithstanding sections (b)(i), (b)(ii), (b)(iv) and (b)(v) of this Schedule 12, cost responsibility for a Required Transmission Enhancement for which the good faith estimate of the cost of the Required Transmission Enhancement (a) prepared in connection with the development of the Regional Transmission Expansion Plan and (b) provided to the PJM Board at the time the Required Transmission Enhancement is included for the first time in the Regional Transmission Expansion Plan, does not equal or exceed $5 million shall be assigned to the Zone where the Required Transmission Enhancement is to be located. The determination of whether the estimated cost of a Required Transmission Enhancement does not equal or exceed $5 million shall be based solely on such good faith estimate of the cost of the Required Transmission Enhancement regardless of the actual costs incurred. The estimated cost of a Required Transmission Enhancement shall include the aggregate estimated costs of all of the transmission elements approved by the PJM Board at the time such elements are included in the Regional Transmission Expansion Plan that collectively are intended (i) in the case of a Reliability Project, to resolve a specific reliability criteria violation, or (ii) in the case of an Economic Project, provide a specific LMP Benefit. Where a Required Transmission Enhancement subject to this section (b)(vi) consists of a single transmission element or multiple transmission elements that will be located in more than one Zone, each Zone shall be assigned cost responsibility for the transmission elements or portions of the transmission elements located in such Zone. Merchant Transmission Facilities shall not be assigned cost responsibility for a Required Transmission Enhancement subject to this section (b)(vi).

**(vii) Modifications of Required Transmission Enhancements.** Once a Required Transmission Enhancement is included in the Regional Transmission Expansion Plan, any modification to such Required Transmission Enhancement that subsequently is included in the Regional Transmission Expansion Plan as a separate Reliability or Economic Project shall be considered a separate and distinct Required Transmission Enhancement for purposes of cost responsibility assignment under this Schedule 12. Except as provided in sections (b)(iv) and (b)(xiv) of this Schedule 12, any cost responsibility assignment that has been made for a previously approved Required Transmission Enhancement shall have no impact on the cost responsibility assignment of such modification.

**(viii) FERC Filing.** Within 30 days of the approval of each Regional Transmission Expansion Plan or an addition to such plan by the PJM Board pursuant to Operating Agreement, Schedule 6, section 1.6, the Transmission Provider shall designate in the Tariff, Schedule 12-Appendix A and in a report filed with the FERC the Responsible Customers based on the cost responsibility assignments determined pursuant to this Schedule 12. Those customers designated by the Transmission Provider as Responsible Customers shall have 30 days from the date the

filing is made with the FERC to seek review of such designation. Such cost responsibility designations shall be the same as those made for the relevant Regional Facility, Necessary Lower Voltage Facility, or Lower Voltage Facility in the Regional Transmission Expansion Plan.

**(ix) Regions With Which PJM Has Entered Into an Agreement Listed in Schedule 12-Appendix B .** For purposes of this Schedule 12, where costs of a Required Transmission Enhancement are allocated to a region other than PJM pursuant to an agreement set forth in Tariff, Schedule 12-Appendix B, Responsible Customers for such costs shall be customers in such region. Cost responsibility with respect to the costs of a Required Transmission Enhancements allocated to a region other than PJM shall be allocated within such region in accordance with the applicable tariff or agreement governing the allocation of such costs in such region.

**(x) Merchant Transmission Facilities.**

(A) For purposes of this Schedule 12, where the Transmission Provider has allocated all or a portion of a Required Transmission Enhancement to a Merchant Transmission Facility, the owner of the Merchant Transmission Facility shall be the Responsible Customer with respect to such Required Transmission Enhancement, and shall pay the Transmission Enhancement Charges associated with the Required Transmission Enhancement.

(B) (1) Transmission Provider shall defer collection of Transmission Enhancement Charges from a Merchant Transmission Facility until the Merchant Transmission Facility goes into commercial operation; provided, however, in the event the commercial operation of a Merchant Transmission Facility is delayed beyond the commercial operation milestone date(s) specified in the Interconnection Service Agreement associated with the Merchant Transmission Facility and the Transmission Provider or Transmission Owner constructing the Required Transmission Enhancement demonstrates that the Merchant Transmission Facility is responsible for such delay, Transmission Provider may begin collecting Transmission Enhancement Charges from the Merchant Transmission Facility prior to the Merchant Transmission Facility going into commercial operation. Transmission Enhancement Charges allocated to a Merchant Transmission Facility for which collection is deferred in accordance with this section (b)(x)(B)(1) shall be recorded in appropriate Transmission Provider accounts for deferred charges and collected in accordance with section (b)(x)(B)(3) below.

(2) Transmission Provider shall base the collection of Transmission Enhancement Charges associated with Required Transmission Enhancements from a Merchant Transmission Facility on the actual Firm Transmission Withdrawal Rights that have been awarded to the Merchant Transmission Facility; provided, however, to the extent that a Merchant Transmission Facility has been awarded less than the amount of Firm Transmission Withdrawal Rights specified in the Interconnection Service Agreement associated with the Merchant Transmission Facility, then Transmission Provider shall record the difference between the amount of Transmission Enhancement Charges collected based on the lesser amount of Firm Transmission Withdrawal Rights and the amount of Transmission Enhancement Charges based on the full amount of Firm Transmission Withdrawal Rights specified in the applicable Interconnection Service Agreement in appropriate accounts for deferred charges and, after the

Merchant Transmission Facility has been awarded the full amount of Firm Transmission Withdrawal Rights specified in the Interconnection Service Agreement, collect such deferred amounts in accordance with section (b)(x)(B)(3) below. Notwithstanding the foregoing, Transmission Provider may collect Transmission Enhancement Charges based on more than a Merchant Transmission Facility's actually awarded Firm Transmission Withdrawal Rights (not to exceed the Firm Transmission Withdrawal Rights specified in the applicable Interconnection Service Agreement) if the Transmission Provider or Transmission Owner demonstrates that the Merchant Transmission Facility is responsible for receiving fewer Firm Transmission Withdrawal Rights than are specified in the applicable Interconnection Service Agreement.

(3) Transmission Provider shall record: (i) in an appropriate deferred asset account, the Transmission Enhancement Charges associated with Required Transmission Enhancements for which collection is deferred in accordance with sections (b)(x)(B)(1) and (b)(x)(B)(2) above; and (ii) in an appropriate deferred liability account, the revenues associated with the Transmission Enhancement Charges that, absent the deferred charges, would have been due to Transmission Owners or to Transmission Owners' customers as directed by the applicable Transmission Owner. At such time as collection of such deferred Transmission Enhancement Charges are permitted in accordance with sections (b)(x)(B)(1) and (b)(x)(B)(2) above, the deferred charges (along with appropriate interest) shall be collected from the Merchant Transmission Facility in equal installments over the twelve months following the commencement of the collection of the deferred charges. Such amounts shall be distributed to Transmission Owners or to Transmission Owners' customers as directed by the applicable Transmission Owner, and the Transmission Provider shall make appropriate adjustments to the deferred asset and liability accounts. Transmission Provider shall not be responsible for distributing revenues associated with deferred Transmission Enhancement Charges unless and until such charges are collected in accordance with this section (b)(x)(B), and uncollected deferred Transmission Enhancement Charges shall not be subject to Default Allocation Assessments to the Members pursuant to Operating Agreement, section 15.2.

**(xi) Consolidated Edison Company of New York.** (A) Cost responsibility assignments to Consolidated Edison Company of New York for Required Transmission Enhancements pursuant to this Schedule 12 with respect to the Firm Point-To-Point Service Agreements designated as Original Service Agreement No. 1873 and Original Service Agreement No. 1874 accepted by the Commission in Docket No. ER08-858 ("ConEd Service Agreements") shall be in accordance with the terms and conditions of the settlement approved by the FERC in Docket No. ER08-858-000. (B) All cost responsibility assignments for Required Transmission Enhancements pursuant to this Schedule 12 shall be adjusted at the commencement and termination of service under the ConEd Service Agreements to take account of the assignments under subsection (xi)(A) of this section.

**(xii) Public Policy Projects**.

(A) Transmission Facilities as defined in Consolidated Transmission Owners Agreement, section 1.27 constructed by a Transmission Owner pursuant to a Public Policy Requirement but not included in a Regional Transmission Expansion Plan as a Required Transmission Enhancement, shall be as considered a Supplemental Project.

(B) If a transmission enhancement or expansion is proposed pursuant to Operating Agreement, Schedule 6, section 1.5.9(a) which is not a Supplemental Project ("State Agreement Public Policy Project"), the Transmission Provider shall submit the assignment of costs to Responsible Customers proposed in connection with such State Agreement Public Policy Project to the Transmission Owners Agreement Administrative Committee for consideration and filing pursuant to Consolidated Transmission Owners Agreement, section 7.3 and Tariff, Part I, section 9.1(a). Nothing in this section (b)(xii) shall prevent the Transmission Provider or the state governmental entities proposing such State Agreement Public Policy Project from filing a proposed assignment of costs to Responsible Customers for such project pursuant to Section 206 of the Federal Power Act.

**(xiii) Replacement of Transmission Facilities.** Unless determined by PJM to be a Required Transmission Enhancement included in a Regional Transmission Expansion Plan, cost responsibility for the replacement of Transmission Facilities, as defined in Consolidated Transmission Owners Agreement, section 1.27, shall be assigned to the Zonal loads and Merchant Transmission Facilities responsible for the costs of the Transmission Facilities being replaced.

**(xiv) Multi-Driver Projects.**

(A) Assignment of Proportional Multi-Driver Project Costs. The Transmission Provider shall assign cost responsibility for Proportional Multi-Driver Projects in proportion to the relative percentage benefit that each driver of a Proportional Multi-Driver Project addresses, respectively, reliability violations or operational performance ("reliability"), economic constraints ("economic") and/or Public Policy Requirements ("public policy") as follows:

(1) As part of the open planning process provided for in Operating Agreement, Schedule 6, section 1.5.10(h), the Transmission Provider employs the Proportional Method to develop a Proportional Multi-Driver Project, by determining which of the following drivers a Proportional Multi-Driver Project addresses: reliability, economic, or public policy, and the extent to which each such driver contributes to the size, scope, and estimated costs of such Proportional Multi-Driver Project (irrespective of the reliability cost allocation treatment that is otherwise accorded an incremental market efficiency modification thereto pursuant to section (b)(v)(B) of this Schedule 12). The Transmission Provider shall identify the contribution of each driver in terms of a percentage totaling 100 percent for all such drivers at the time that each Proportional Multi-Driver Project is submitted to the PJM Board for approval and included in the Regional Transmission Expansion Plan. The percentage contribution of each driver shall be based on the ratio of the estimated cost of each project that the Multi-Driver Project replaces to the total of the estimated costs of all projects combined into the Multi-Driver Project.

(2) Once a Proportional Multi-Driver Project is approved by the PJM Board, the percentage contributions of each driver shall not be changed unless the PJM Board

subsequently approves an upgrade or modification to the Proportional Multi-Driver Project. In that event, the cost responsibility for the Proportional Multi-Driver Project, including any costs incurred prior to the upgrade or modification, will be determined as if it were a new Proportional Multi-Driver Project, such that the percentage contribution for each driver shall be established anew.

(B) Assignment of Incremental Multi-Driver Project Costs. The Transmission Provider shall assign cost responsibility for Incremental Multi-Driver Projects as defined in Operating Agreement, Schedule 6, section 1.15B using the same methodology described in section (b)(xiv)(A)(1) above treating the estimated cost of modifying the original project as if it were the estimated cost of a separate project included in a Proportional Multi-Driver Project. Any costs that had been expended on the original project prior its designation by Transmission Provider as an Incremental Multi-Driver Project shall be included in the calculation of the Incremental Multi-Driver Project pursuant to this section (b)(xiv)(B).

(C) The Transmission Provider shall separately assign cost responsibility for the costs assigned to each driver pursuant to this section (b)(xiv) in accordance with the provisions of this Schedule 12 governing the assignment of cost responsibility for a single driver project of each driver's respective type (reliability, economic or public policy). Except as provided in section (b)(xiv)(D) below, cost responsibility will be assigned based on the final voltage and configuration of the Multi-Driver Project determined in accordance with sections (b)(i), (b)(ii), or (b)(vi) of this Schedule 12.

(D) Notwithstanding the cost assignments that would otherwise be provided for in section (b)(xiv)(C) above, if a Multi-Driver Project includes a public policy driver that is the result of the State Agreement Approach provided for in Operating Agreement, Schedule 6, section 1.5.9 and is a Regional Facility as defined in section (b)(i) of this Schedule 12 and such Multi-Driver Project would not be a Regional Facility but for the inclusion of the public policy driver, then the percentage of costs of such Multi-Driver Project assigned to the non-public policy drivers in accordance with the procedures set forth in in section (b)(i)(A)(1) above shall be twenty percent (20%) and the percentage of costs assigned to the non-public policy drivers of such Multi-Driver Project in accordance section (b)(i)(A)(2) above shall be eighty percent (80%), and not the fifty percent (50%) cost responsibility percentages provided for in section (b)(i)(A)(i) and section (b)(i)(A)(2), respectively, of this Schedule 12.

**(xv)** ***Reserved.***

**(xvi) Required Transmission Enhancements Designed to Address Reliability Violations on Transmission Facilities Operating Below 200 kV.** Notwithstanding section (b)(ii), above, cost responsibility for any Required Transmission Enhancements that are included in the Regional Transmission Expansion Plan to address reliability violations on Transmission Facilities that are designed to operate at below 200 kV and, pursuant to Operating Agreement, Schedule 6, section 1.5.8(n), were not included in an Operating Agreement, Schedule 6, section 1.5.8(c) proposal window, shall be assigned to the Responsible Customers in the Zone where the Required Transmission Enhancement is to be located.

**(xvii) Required Transmission Enhancements Constructed As Targeted Market Efficiency Projects Under The Midcontinent Independent Transmission System Operator, Inc. and PJM Interconnection, L.L.C. Coordinated System Plan.** Notwithstanding sections (b)(i), (b)(ii), (b)(iv), (b)(v), (b)(vi) and (b)(x)(B)(2) of this Schedule 12, cost responsibility for the costs of a Required Transmission Enhancement that is included in the Regional Transmission Expansion Plan because it is a Targeted Market Efficiency Project ("TMEP") identified in the Coordinated System Plan periodically developed pursuant to the Joint Operating Agreement Between the Midcontinent Independent Transmission System Operator, Inc. and PJM Interconnection, L.L.C. ("PJM-MISO JOA") and assigned to PJM pursuant to PJM-MISO JOA, section 9.4.4.2.5, shall be assigned among Zones and Merchant Transmission Facilities in accordance with this section (b)(xvii). Using the Targeted Market Efficiency Project study conducted pursuant to PJM-MISO JOA, section 9.3.7.2(c) of in which the TMEP was identified, the Transmission Provider shall determine, in accordance with Tariff, Attachment K-Appendix, section 5.1, the average annual Transmission Congestion Charges experienced by Market Buyers in Zones and at Merchant Transmission Facilities attributable to the targeted Reciprocal Coordinated Flowgate during the two historical calendar years prior to the study year of the Targeted Market Efficiency Project study. In making this determination, the Transmission Provider shall net any increases in Day-ahead and Real-time Prices paid by Market Buyers in a Zone or at a Merchant Transmission Facility against any decreases in Day-ahead and Real-time Prices paid by Market Buyers in such Zone or at such Merchant Transmission Facility attributable to the targeted Reciprocal Coordinated Flowgate. Where a single TMEP is constructed to reduce Transmission Congestion Charges attributable to more than one targeted Reciprocal Coordinated Flowgate, the Transmission Provider shall net any increases in Day-ahead and Real-time Prices paid by Market Buyers in a Zone or at a Merchant Transmission Facility against any decreases in Day-ahead and Real-time Prices paid by Market Buyers in such Zone or at such Merchant Transmission Facility attributable to all targeted Reciprocal Coordinated Flowgates. Cost responsibility shall be assigned based on each Zone's and Merchant Transmission Facility's pro rata share of the sum of the net Transmission Congestion Charges paid by Market Buyers only of the Zones and Merchant Transmission Facilities in which Market Buyers experienced net Transmission Congestion Charges.

**(xviii) Required Transmission Enhancements Designed to Address Stability Issues.** For purposes of the assignment of cost responsibility for Reliability Projects designed to address stability issues under subsection (b)(i)(A)(2)(a) and subsection (b)(ii)(A) of this Schedule 12, the Transmission Provider shall, using the same inputs and assumptions from the simulation that originally drove the need for the stability upgrade, perform a stability simulation that includes the stability upgrade under the worst fault condition. The worst fault condition shall be the fault condition in the simulation that produces the maximum rotor angle swing with the stability upgrade included. For each load bus on the system, the difference between the highest and lowest voltage angle that occurs during the simulation of the worst fault condition will be recorded. Load buses having a voltage angle deviation less than 25 percent of the load bus with the largest voltage angle deviation will not be included in the cost allocation calculation. For the remaining load buses, the voltage angle deviation will be multiplied by the megawatt load at the bus obtained from the stability simulation model, or, in the case of a Merchant Transmission Facility, the Firm Transmission Withdrawal Rights at the bus. The products of the voltage angle deviation and megawatt load at each bus will be summed for each Responsible Zone. The

Stability Deviation cost allocation for a Responsible Zone or Merchant Transmission Facility will be determined by dividing the sum of the load-weighted angle deviations for the Responsible Zone or Merchant Transmission Facility by the sum of the load-weighted angle deviations for each Responsible Zone and Merchant Transmission Facility. Transmission Provider shall round cost responsibility assignments to the nearest one-hundredth of one percent.

**(c) Determination of Transmission Enhancement Charges.** In the event that any Transmission Owner recovers the cost of a Required Transmission Enhancement through a Transmission Enhancement Charge, such charge shall be determined as follows:

(1) Transmission Provider shall identify in writing and post on the PJM Internet site the Required Transmission Enhancement(s) to which each Transmission Enhancement Charge corresponds. The Transmission Enhancement Charge with respect to a Required Transmission Enhancement shall recover the applicable Transmission Owner's annual transmission revenue requirement associated with the Required Transmission Enhancement.

(2) Each Transmission Enhancement Charge shall be a monthly charge based on all costs and applicable incentives associated with a particular Required Transmission Enhancement for which the Transmission Owner is responsible.

(3) A Transmission Owner's annual transmission revenue requirement associated with a Required Transmission Enhancement shall be determined pursuant to either (i) a unilateral filing by the Transmission Owner under Section 205 of the Federal Power Act and the FERC's rules and regulations thereunder; or (ii) a formula rate in effect applicable to the Transmission Owner's rates for Network Integration Transmission Service, including the costs associated with Required Transmission Enhancements.

(4) Each Transmission Enhancement Charge applicable to Network Customers and Non-Zone Network Customers shall be recalculated annually to reflect the annual revisions to the billing determinants used by the Transmission Provider to calculate charges to Network Customers for Network Integration Transmission Service under Tariff, Part III, section 34.1. The Transmission Provider shall post on its Internet site by October 31 of each calendar year each recalculated Transmission Enhancement Charge that shall be effective during the subsequent calendar year.

(5) Each Transmission Enhancement Charge applicable to customers using Point-To-Point Transmission Service shall be calculated monthly to reflect the billing determinants used by the Transmission Provider to determine charges for customers of Point-To-Point Transmission Service in accordance with Tariff, Part II, section 25.

(6) Each Transmission Enhancement Charge payable by an owner of a Merchant Transmission Facility pursuant to section (b) of this Schedule 12 shall be calculated as a fixed monthly charge.

(7) If a Transmission Owner chooses to recover the cost of Required Transmission Enhancements through the operation of a formula rate as described in section (a) of this Schedule 12, the Transmission Owner must make an informational filing with the Commission one year from the date the selecting Transmission Owner's formula rates go into effect, and each year thereafter, providing a detailed list of the costs the Transmission Owner has incurred, and the revenues the Transmission Owner has received to provide service.

**(d) Recovery of Transmission Enhancement Charges.**

(1) Responsible Customers shall pay Transmission Provider all applicable Transmission Enhancement Charges as required by this Schedule 12 in addition to all other charges for transmission service for which such Responsible Customers are responsible under the Tariff.

(2) Transmission Provider shall collect all applicable Transmission Enhancement Charges from each Responsible Customer on a monthly basis. Transmission Provider shall remit or credit all revenues received from Responsible Customers under this Schedule 12 to the Transmission Owner(s) that established such charge or to the appropriate authority in a region other than PJM in the case of Transmission Enhancement Charges established in such region in connection with a Required Transmission Enhancement constructed pursuant to an Appendix B Agreement, to be distributed in accordance with the applicable tariff or agreement governing the distribution of such charges in such region.

**(e) Crediting of Revenue from Transmission Enhancement Charges.** In recognition that a Transmission Owner's charges for Network Integration Transmission Service set forth in Tariff, Attachment H are established based upon the Transmission Owner's total cost of providing FERC-jurisdictional transmission service, including the costs associated with Required Transmission Enhancements, revenue from a Transmission Owner's Transmission Enhancement Charges for a billing month shall be credited pursuant to this Schedule 12 to the Network Customers in the Transmission Owner's Zone (including, where applicable, the Transmission Owner) and Transmission Customers purchasing Firm Point-to-Point Transmission Service for delivery in the Transmission Owner's Zone in proportion to their Demand Charges (including any imputed Demand Charges for bundled service to Native Load Customers) for Network Integration Transmission Service and Reserved Capacity for Firm Point-to-Point Transmission Service; provided that such credits shall be reduced by the amount of any applicable incentives included in such Transmission Enhancement Charges.

**(f) Recovery of Interconnection Reliability Reinforcement Costs.**

**(1) Customers Subject to Cost Responsibility for Interconnection Reliability Reinforcements**. For each Fast Energization Process Cycle, the Transmission Provider shall determine cost responsibility for Interconnection Reliability Reinforcements identified and designated for construction pursuant to this section (f) of this Schedule 12. Cost responsibility for Interconnection Reliability

Reinforcements in a Fast Energization Cycle shall be assigned to Responsible Customers in Zones containing Transmission Customers taking Firm Transmission Service on behalf of Eligible Loads and Large Loads ("Large Load Zones"). Generator Interconnection Customers in a given Cycle that are parties to a Generator Interconnection Agreement will pay a Generator Reliability Reinforcement Fee established in section (f)(vi) below.

**(2) Determination of Cost Responsibility and Generator Allocation for Interconnection Reliability Reinforcements.** The Transmission Provider shall determine cost responsibility for Interconnection Reliability Reinforcements and the Generator Reliability Reinforcement Fee based on a proportional impact approach that considers all of the constraints identified in the Fast Energization Process Cycle.

This proportional impact methodology will apply to thermal and non-thermal constraints, and will determine the pro rata share of impacts of Project Developers, Eligible Loads and Large Loads on the aggregate of constraints being alleviated by the portfolio of Interconnection Reliability Reinforcements as further described below and in the PJM Manuals.

The Transmission Provider shall determine each Project Developer, Eligible Load and Large Load's proportional impact as follows:

(A) With respect to the portfolio of Interconnection Reliability Reinforcements addressing thermal, stability and voltage constraints:

(1) The Transmission Provider shall apply aggregation and thresholds as set forth in the PJM Manuals to identify the set of constrained facilities identified as having violations requiring mitigation through Interconnection Reliability Reinforcements in the Fast Energization Process Cycle studies, resulting in distribution factors, represented as decimal values or percentages, which express the portions of impact on constrained facilities from each Project Developer, Eligible Customer seeking Long-Term Firm Point-to-Point Transmission Service, Eligible Load, or Large Load.

(2) For purposes of determining MW impacts, each calculated distribution factor, if it exceeds the threshold set forth in the PJM Manuals, shall first be multiplied, for each Project Developer, Eligible Customer seeking Long-Term Firm Point-to-Point Transmission Service, Eligible Load or Large Load, by its requested MW value as studied in the Fast Energization Process.

(3) No allocation relating to a constrained facility shall result unless the calculated MW impact exceeds the thresholds set forth in the PJM Manuals.

(4) All calculated MW impacts on constrained facilities above the relevant thresholds for each Project Developer, Eligible Customer seeking Long-Term Firm Point-to-Point Transmission Service, Eligible Load or Large Load are converted to proportional MW impacts representing the pro rata share of all MW impacts on the same constrained facility.

(5) The proportional MW impacts are weighted using values as further described in the PJM Manuals resulting in a weighted proportional MW impact.

(6) The percentage proportional impact values allocated for each Project Developer, Eligible Load or Large Load is based on its pro rata share of the weighted proportional MW impact relative to the total of weighted proportional MW impact for the Cycle. For Project Developers, this value is the Generation Interconnection Customer's Allocated Percentage (GCAP) as outlined in (f)(vi)(B).

(B) With respect to the portfolio of Interconnection Reliability Reinforcements addressing short-circuit constraints, allocation will be based on contributing fault current impact on the circuit breaker's applicable interrupting rating, as set forth in the PJM Manuals.

(C) The aggregate impact values calculated pursuant to subsection (f)(ii)(A) and (f)(ii)(B) above shall determine the relative assignment of cost responsibility for Interconnection Reliability Reinforcements and the Generator Reliability Reinforcement Fee subject to the following rules:

(1) The percentage proportional impacts of Eligible Load and Large Load Transmission Service Requests will be summed on a Zonal basis assigned to the relevant Transmission Owner Zones.

(2) For purposes of this proportional allocation, the entire cost responsibility calculated pursuant to this subsection (f)(ii) will be assigned to Transmission Owner Zones based on their summed percentage proportional impacts. Interconnection Reliability Reinforcement costs representing the relative contribution attributable to Generator Interconnection Customers shall be recovered from Generator Interconnection Customers through Generator Reliability Reinforcement Fees as set forth in subsection (f)(vi) below.

(D) The Transmission Provider shall complete the analysis described in this subsection (f)(ii) within 30 days before Transmission Service Agreements and Generator Interconnection Agreements have been executed. Within 30 days of

the completion of this analysis, the Transmission Provider shall post on the PJM Internet Site the cost responsibility assignments determined pursuant to this section (f).

**(3) Interconnection Reliability Reinforcements Charge.** The charge established to recover the revenue requirement with respect to an Interconnection Reliability Reinforcement is hereafter referred to as an "Interconnection Reliability Reinforcement Charge." Interconnection Reliability Reinforcement Charges of one or more Transmission Owners for Interconnection Reliability Reinforcements shall be established in accordance with this section (f) of Schedule 12. Transmission Provider shall assess an Interconnection Reliability Reinforcement Charge to Firm Transmission Customers in Zones based on the cost responsibility assignments determined pursuant to subsection (f)(ii) above. The Interconnection Reliability Reinforcement Charge shall recover the applicable Transmission Owner's annual transmission revenue requirement associated with the Interconnection Reliability Reinforcements constructed and owned and/or financed by that Transmission Owner for a period of 15 years after an Interconnection Reliability Reinforcement enters service. After this period, beginning with the next full calendar year, Transmission Provider will assign responsibility for and recover the remaining costs of the Interconnection Reliability Reinforcement in accordance with sections (a) through (e) of this Schedule 12.

(A) A Transmission Owner's annual transmission revenue requirement associated with an Interconnection Reliability Reinforcement shall be determined pursuant to the formula rate in effect applicable to the Transmission Owner's rates for Network Integration Transmission Service and Firm Contract Demand Transmission Service ("Firm Transmission Service"), including the costs associated with Interconnection Reliability Reinforcements.

(B) Each Interconnection Reliability Reinforcement Charge applicable to Firm Transmission Customers shall be recalculated annually to reflect the annual revisions to the billing determinants used by the Transmission Provider to calculate charges for Firm Transmission Service. The Transmission Provider shall post on its Internet site by October 31 of each calendar year each recalculated Interconnection Reliability Reinforcement Charge that shall be effective during the subsequent calendar year.

(C) Each Interconnection Reliability Reinforcement Charge applicable to customers using Point-To-Point Transmission Service shall be calculated monthly to reflect the billing determinants used by the Transmission Provider to determine charges for customers of Point-To-Point Transmission Service in accordance with Tariff, Part II, section 25.

**(4) Recovery of Interconnection Reliability Reinforcement Charges.**

(A) Transmission Customers shall pay the Transmission Provider all applicable Interconnection Reliability Reinforcement Charge as required by this Schedule 12 in addition to all other charges for transmission service for which such Transmission Customers are responsible under the Tariff.

(B) The Transmission Provider shall collect all applicable Interconnection Reliability Reinforcement Charges from each applicable Transmission Customer on a monthly basis. The Transmission Provider shall remit or credit all revenues received from Transmission Customers under this Schedule 12 to the Transmission Owner(s) owning the relevant Interconnection Reliability Reinforcements.

**(5) Crediting of Revenue from Interconnection Reliability Reinforcement Charges.** In recognition that a Transmission Owner's charges for Firm Transmission Service set forth in Tariff, Attachment H are established based upon the Transmission Owner's total cost of providing FERC-jurisdictional transmission service, including the costs associated with Interconnection Reliability Reinforcements, revenue Interconnection Reliability Reinforcement Charges for a billing month shall be credited pursuant to this Schedule 12 to the Firm Transmission Customers in the Transmission Owner's Zone (including, where applicable, the Transmission Owner) and Transmission Customers purchasing Firm Point-To-Point Transmission Service for delivery in the Transmission Owner's Zone in proportion to their Demand Charges (including any imputed Demand Charges for bundled service to Native Load Customers) for Network Integration Transmission Service and Reserved Capacity for Firm Contract Demand Transmission Service and Firm Point-To-Point Transmission Service; provided that such credits shall be reduced by the amount of any applicable incentives included in such Interconnection Reliability Reinforcement Charges.

**(6) Generator Reliability Reinforcement Fee.** The Transmission Provider shall recover the portion of the costs of Interconnection Reliability Reinforcements allocated to Generator Interconnection Customers in a Fast Energization Process Cycle, as determined pursuant to subsection (f)(ii) of this Schedule 12, through Generator Interconnection Reliability Reinforcement Fees as follows:

(A) The Transmission Provider shall assess and each Generator Interconnection Customer will pay the Generator Reliability Reinforcement Fee beginning on the earlier of: (1) in the calendar year when the Generator Interconnection Customer's facility achieves Commercial Operation, or (2) three years after the Commercial Operation date in the Customer's original Generator Interconnection Agreement, and continuing for a period of 15 years from the Commercial Operation Date.

(B) The Transmission Provider shall calculate the Generator Reliability Reinforcement Fee after each System Impact Study Phase as part of the Fast Energization Process as follows:

$$AGRRRF = GCAP \text{ X } TRRGP \text{ x } \{[ACCC \text{ X } (1 + ACCC)^{15}]/[(1 + ACCC)^{15} – 1]\}$$

Where:

GRRRF is the Generator Reliability Reinforcement Fee

GCAP is the Generator Interconnection Customer's Allocated Percentage, which is the Generator Interconnection Customer's allocated percentage for the portfolio of Interconnection Reliability Reinforcements from its New Service Request Cycle, determined pursuant to subsection (f)(ii) above.

TRRGP is the Total Reliability Reinforcement Gross Plant, which is based on the gross plant of all Interconnection Reliability Reinforcements included in the RTEP approved by the PJM Board with respect to the Generator Interconnection Customer's New Service Request Cycle, and for which it has been allocated a percentage pursuant to subsection (f)(ii) above. The gross plant amounts used in this calculation shall be based on the final estimated costs of the Interconnection Reliability Reinforcements as determined by the Transmission Provider through the Fast Energization Process.

ACCC is the Annual Carrying Charge Component, which shall be calculated as the weighted average of the Weighted Average Cost of Capital for all Transmission Owners with Interconnection Reliability Reinforcements included in the RTEP approved by the PJM Board with respect to the Generator Interconnection Customer's New Service Request Cycle. The Weighted Average Cost of Capital values shall be derived from the applicable Transmission Owner's formula rates, as set forth in Attachment H and in effect at the time the Annual Generator Reliability Reinforcement Fee is calculated. For purposes of calculating such weighted average, each applicable Transmission Owner's Weighted Average Cost of Capital shall be weighted based on the ratio of the final estimated costs of the Interconnection Reliability Reinforcements that it has been designated to construct and own and/or finance identified in the New Service Request Cycle that contains the Generator Interconnection Customer, to the final estimated costs for all Interconnection Reliability Reinforcements identified in the New Service Request Cycle that contains the Generator Interconnection Customer.

**SCHEDULE 20**
**Firm Contract Demand Transmission Service**
**For Eligible Load and Large Load**

1) Eligible Customer taking Firm Contract Demand Transmission Service in a Zone in which Network Integration Transmission Service rates are determined based on formula rates set forth in Attachment H shall pay a Monthly Demand Charge based on the Firm Contract Demand Transmission Service Amount (MW), as specified in Eligible Customer's Service Agreement, which shall be determined as follows:

MDC = FCDTSA X RTZ/12

Where:

MDC is the monthly demand charge

FCDTSA is the Firm Contract Demand Transmission Service Amount (MW), as specified in Eligible Customer's Service Agreement

RTZ is the rate for Network Integration Transmission Service from Attachment H for the Zone in which the Eligible Customer's Eligible Load or Large Load is located, stated in dollars per megawatt per year. For purposes of establishing the RTZ component in the relevant Attachment H, the annual peak of the Zone shall be based on the sum of Network Customer Loads in the Zone and Firm Contract Demand Transmission Service Amounts for all Eligible Customers taking Firm Contract Demand Transmission Service in the Zone for the applicable peak period.

2) Eligible Customers taking Firm Contract Demand Transmission Service in a Zone in which Network Integration Transmission Service rates are not established based on formula rates shall pay a Monthly Demand Charge based on the Firm Contract Demand Transmission Service Amount (MW), as specified in Eligible Customer's Service Agreement, multiplied by a Zonal-specific Firm Contract Demand Transmission Service rate filed with FERC pursuant to Section 205 of the Federal Power Act. Those rates will be posted on Transmission Provider's website.

3) **Revenue Crediting.** Each month, credits will be applied to the Eligible Customer's gross Monthly Demand Charge stated above associated with revenue collected from Non-Firm Contract Demand Transmission Service Charges in accordance with Schedule 19, based on each Eligible Customer's pro rata share of the Zone's annual peak load, from the most recent 12-month period ending October 31. The Eligible Customer's pro rata share shall be based on the ratio of its Firm Contract Demand Transmission Service Amount during the peak period to the sum of Network Customer Loads in the Zone and Firm Contract Demand Transmission Service Amounts for all Eligible Customers taking Firm Contract Demand Transmission Service in the Zone for the applicable peak period. The sum of these revenue credits will appear as a reduction to the gross monthly rate stated above on a Eligible Customer's bill in that month for service under this schedule.

4) **Transmission Enhancement Charges.** In addition to the rates set forth in section (1) of this Schedule and any other applicable charges, the Eligible Customer shall also pay any Transmission Enhancement Charges for which it is designated as a Responsible Customer under Schedule 12 appended to the Tariff.

5) **Determination of Monthly Charges for ComEd Zone**. On a monthly basis, revenue credits shall be calculated based on the sum of ComEd's share of revenues collected during the month from: (i) the PJM Border Rate under Schedule 7; (ii) Network Integration Transmission Service to Non-Zone Network Load under Attachment H-A; and (iii) any Point-To-Point Transmission Service where the Point of Receipt and the Point of Delivery are both internal to the ComEd Zone. On this basis, the sum of these revenues will appear as a reduction to the gross monthly rate stated above on a Transmission Customer's[1] bill in that month for service under this schedule.

6) **Determination of Monthly Charges for AEP Zone**. On a monthly basis, revenue credits shall be calculated based on the sum of AEP's share of revenues collected during the month from: (i) the PJM Border Rate under Schedule 7; (ii) Network Integration Transmission Service to Non-Zone Network Load under Attachment H-A; and (iii) Firm Point-To-Point Transmission Service where the Point of Delivery is internal to the AEP Zone. The sum of these revenue credits will appear as an adjustment (reduction) to the gross monthly rate stated above on a Eligible Customer's bill in that month for service under this schedule.

7) **Other Supporting Facilities and Taxes.** In addition to the charges set forth in section (1) of this schedule, the Eligible Customer shall pay charges determined on a case-by-case basis for facilities necessary to provide Transmission Service at voltages lower than those shown in Attachment H for the applicable Zone(s) and any amounts necessary to reimburse the Transmission Provider for any amounts payable as sales, excise, "Btu," carbon, value-added or similar taxes (other than taxes based upon or measured by net income) with respect to the amounts payable pursuant to the Tariff.

1/ Transmission Customer is defined as an Eligible Customer that executes a Service Agreement, or requests PJM file an unexecuted Service Agreement, to receive transmission service under the Tariff.

**SCHEDULE 21**
**Non-Firm Contract Demand Service**
**For Eligible Load and Large Load**

1) Eligible Customer taking Non-Firm Contract Demand Transmission Service in a Zone in which Network Integration Transmission Service rates are determined based on formula rates set forth in Attachment H shall pay for such service at a discounted reservation rate calculated by applying the Zone's Annual Load Factor to the applicable Zonal Firm Contract Demand Transmission Service rate as follows:

Monthly Rate ($/MW): Zonal Firm Contract Demand Transmission Rate (RTZ) multiplied by the Zone's Annual Load Factor, and divided by 12, where the Annual Load Factor is calculated as follows: Annual Load Factor = Zonal Annual Energy divided by (Zonal Peak Demand multiplied by 8,760 hours). For purposes of this Schedule, Zonal Annual Energy shall be the total net energy for load measured as net generation plus energy receipts minus energy deliveries for the Zone from the 12-month period ending October 31 preceding the calendar year during which Non-Firm Contract Demand Transmission Service is taken. For purposes of this Schedule, Zonal Peak Demand shall be the Zone's annual peak load from the 12-month period ending October 31 preceding the calendar year during which Non-Firm Contract Demand Transmission Service is taken.

Weekly Rate ($/MW): Zonal Firm Contract Demand Transmission Rate (RTZ) multiplied by the Zone's Annual Load Factor, and divided by 52, where the Annual Load Factor is calculated as follows: Annual Load Factor = Zonal Annual Energy divided by (Zonal Peak Demand multiplied by 8,760 hours).

Daily On-Peak Rate[1] ($/MW): Weekly Rate divided by 5.

Daily Off-Peak Rate[2] ($/MW): Weekly Rate divided by 7.

Hourly On-Peak Rate[3] ($/MWh): Zonal Firm Contract Demand Transmission Rate (RTZ), multiplied by the Zone's Annual Load Factor, and divided by 4,160.

Hourly Off-Peak Rate[4] ($/MWh): Zonal Firm Contract Demand Transmission Rate (RTZ), multiplied by the Zone's Annual Load Factor, divided by 8,760.

1/ Monday–Friday except the following holidays: New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.

2/ Saturday and Sunday and the following holidays: New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.

3/ 7:00 a.m. up to the hour ending 11:00 p.m.

4/ 11:00 p.m. up to the hour ending 7:00 a.m.

2) Eligible Customers taking Non-Firm Contract Demand Transmission Service in a Zone in which Network Integration Transmission Service rates are not established based on formula rates shall pay for Non-Firm Contract Demand Transmission Service based on the amount of Non-Firm Contract Demand Transmission Service reserved by the Eligible Customer in MW, multiplied by Zonal-specific Non-Firm Contract Demand Transmission Service rates filed with FERC pursuant to Section 205 of the Federal Power Act. Those rates will be posted on Transmission Provider's website.

3) **Discounts.** Three principal requirements apply to discounts for Non-Firm Contract Demand Transmission Service as follows: (1) any offer of a discount made by the Transmission Provider must be announced to all Eligible Customers solely by posting on the OASIS, (2) any customer-initiated requests for discounts (including requests for use by one's wholesale merchant or an Affiliate's use) must occur solely by posting on OASIS, and (3) once a discount is negotiated, details must be immediately posted on the OASIS. For any discount agreed to by Transmission Provider, Transmission Provider must offer the same discounted transmission service rate for the same time period to all Eligible Customers taking Non-Firm Contract Demand Transmission Service.

4) **Revenue Crediting.** Revenues collected from Non-Firm Contract Demand Transmission Service Charges shall be credited to Eligible Customers taking Network Integration Transmission Service, Firm Contract Demand Transmission Service, and Firm Point-to-Point Transmission Service based on each Eligible Customer's pro rata share of the Zone's annual peak load based on the most recent 12-month period ending October 31. The Eligible Customer's pro rata share shall be based on the ratio of its Zone Network Load, Firm Point-To-Point Transmission Service and Firm Contract Demand Transmission Service Amount to the sum of Network Customer Loads in the Zone and Firm Contract Demand Transmission Service Amounts for all Eligible Customers taking Firm Contract Demand Transmission Service in the Zone, for the applicable peak period. The sum of these revenue credits will appear as a reduction to the gross monthly rate for Firm Contract Demand Transmission Service on a Eligible Customer's bill in that month.

5) **Other Supporting Facilities and Taxes.** In addition to the charges set forth in section (1) of this schedule, the Eligible Customer shall pay charges determined on a case-by-case basis for facilities necessary to provide Transmission Service at voltages lower than those shown in Attachment H for the applicable Zone(s) and any amounts necessary to reimburse the Transmission Provider for any amounts payable as sales, excise, "Btu," carbon, value-added or similar taxes (other than taxes based upon or measured by net income) with respect to the amounts payable pursuant to the Tariff.

**SCHEDULE 22**
**Financial Penalty Charge for**
**Unreserved Use by Eligible Load and Large Load**

An Eligible Customer taking Firm Contract Demand Transmission Service, Non-Firm Contract Demand Transmission Service, or Interim Network Integration Transmission Service on behalf of Eligible Load or Large Load shall be subject to financial penalties for its unreserved use of the transmission system.

The financial penalty charge for unreserved use shall include two components: (1) a base penalty charge, which applies to each individual hour in which the reserved transmission service limit is exceeded, and (2) a penalty ratchet, which applies when such exceedances occur repeatedly.

**Base Penalty Charge**

When an Eligible Customer taking service on behalf of Eligible Load or Large Load exceeds its reserved transmission service limit, a base penalty charge shall be assessed for any hour in which at least one five-minute interval occurs during which the Eligible Customer's telemetered load at the Point of Delivery exceeds its reserved transmission service limit. This five-minute interval is defined as an Exceedance Interval, and such an hour is defined as an Exceedance Hour. The base penalty charge shall apply to each Exceedance Hour.

For an Eligible Customer taking only Firm Contract Demand Transmission Service, the reserved transmission service limit shall equal the Firm Contract Demand Transmission Service minus any curtailed MW.

For an Eligible Customer taking only Non-Firm Contract Demand Transmission Service, the reserved transmission service limit shall equal the approved Non-Firm Contract Demand Transmission Service minus any curtailed MW.

For an Eligible Customer taking Firm Contract Demand and Non-Firm Contract Demand Transmission Services, the reserved transmission service limit shall equal the Firm Contract Demand Transmission Service plus the approved Non-Firm Contract Demand Transmission Service minus any curtailed MW.

For an Eligible Customer taking Interim Network Integration Transmission Service, the reserved transmission service limit shall equal the Interim Network Integration Transmission Service demand minus any curtailed MW.

Each five-minute interval beginning with the first minute of each hour shall constitute a separate interval and each hour from 0100 through 2400 shall constitute a separate hour for purposes of determining whether one or more exceedances have occurred.

The base penalty charge shall be applied to each Exceedance Hour and shall be calculated as:

Hourly Exceedance MW × Equivalent Hourly Firm Contract Demand ("FCD") rate × number of Exceedance Intervals within the hour

Where:

Hourly Exceedance MW = Maximum telemetered load during the hour – Reserved Transmission Service Limit for the hour

Equivalent Hourly FCD rate = FCD rate / 8,760 hours

**Penalty Ratchet**

A penalty rachet shall apply when multiple Exceedance Hours occur during a particular time period in order to escalate the penalty charges as the frequency of unreserved transmission use increases.

If more than one Exceedance Hour occurs on the same calendar day, an additional daily penalty shall apply.

If exceedances occur on multiple calendar days within the same calendar week, an additional weekly penalty shall apply.

If exceedances occur in multiple calendar weeks within the same calendar month, an additional monthly penalty shall apply.

If exceedances occur in multiple calendar months within the same calendar year, an additional yearly penalty shall apply.

The penalty ratchet shall be based on an Eligible Customer's exceedance pattern and applies escalating FCD-equivalent rates as the frequency of unreserved transmission use increases. Depending on whether exceedances occur within the same calendar day, calendar week, calendar month, or calendar year, the penalty ratchet shall apply daily, weekly, monthly, or annual penalty charges, respectively, as follows:

| **Exceedance Pattern** | **Penalty Rate Applied** |
|---|---|
| Multiple Exceedance Hours in a single calendar day | Daily FCD-Equivalent Rate |
| Multiple Exceedance Days within a calendar week | Weekly FCD-Equivalent Rate |
| Multiple Exceedance Weeks within a calendar month | Monthly FCD-Equivalent Rate |
| Multiple Exceedance Months within a calendar year | FCD Annual Rate |

**Daily Penalty Charge**

The Daily Penalty Charge is calculated as:

Maximum Hourly Exceedance MW during the calendar day
× Daily FCD Equivalent Rate

× Number of Exceedance Hours in the calendar day

**Weekly Penalty Charge**

The Weekly Penalty Charge is calculated as:

Maximum Hourly Exceedance MW during the calendar week
× Weekly FCD Equivalent Rate
× Number of Exceedance Days in the calendar week

**Monthly Penalty Charge**

The Monthly Penalty Charge is calculated as:

Maximum Hourly Exceedance MW during the calendar month
× Monthly FCD Equivalent Rate
× Number of Exceedance Weeks in the calendar months

**Annual Penalty Charge**

The Annual Penalty Charge is calculated as:

Maximum Hourly Exceedance MW during the calendar year
× Annual FCD Rate
× Number of Exceedance Months in the calendar year

Revenues collected from Financial Penalty Charges shall be credited to Eligible Customers taking Firm Contract Demand Transmission Service, Non-Firm Contract Demand Transmission Service, Network Integration Transmission Service, and Interim Network Integration Transmission Service. The Transmission Provider shall return revenues collected from Financial Penalty Charges on a monthly and annual basis as bill credits to Eligible Customers taking Firm Contact Demand Service, Non-Firm Contract Demand Transmission Service, Network Integration Transmission Service, and Interim Network Integration Transmission Service, who were not assessed Financial Penalty Charges during the year based on each Eligible Customer's pro rata share of the Zone's annual peak load based on the most recent 12-month period ending October 31. The Eligible Customer's pro rata share shall be based on the ratio of its Zone Network Load, Firm Contract Demand Transmission Service Amount, and Non-Firm Contract Transmission Service Amount to the sum of Network Customer Loads in the Zone and Firm and Non-Firm Contract Demand Transmission Service Amounts for all Eligible Customers taking Firm and Non-Firm Contract Demand Transmission Service in the Zone, for the applicable peak period.

# Attachment B

# Revisions to the
# PJM Open Access Transmission Tariff

# (Marked Format)

**Definitions – R - S**

**Ramping Capability:**

"Ramping Capability" shall mean the sustained rate of change of generator output, in megawatts per minute.

**Real-time Congestion Price:**

"Real-time Congestion Price" shall mean the Congestion Price resulting from the Office of the Interconnection's dispatch of the PJM Interchange Energy Market in the Operating Day.

**Real-time Loss Price:**

"Real-time Loss Price" shall mean the Loss Price resulting from the Office of the Interconnection's dispatch of the PJM Interchange Energy Market in the Operating Day.

**Real-time Energy Market:**

"Real-time Energy Market" shall mean the purchase or sale of energy and payment of Transmission Congestion Charges for quantity deviations from the Day-ahead Energy Market in the Operating Day.

**Real-time Offer:**

"Real-time Offer" shall mean a new offer or an update to a Market Seller's existing cost-based or market-based offer for a clock hour, submitted for use after the close of the Day-ahead Energy Market.

**Real-time Prices:**

"Real-time Prices" shall mean the Locational Marginal Prices resulting from the Office of the Interconnection's dispatch of the PJM Interchange Energy Market in the Operating Day.

**Real-time Settlement Interval:**

"Real-time Settlement Interval" shall mean the interval used by settlements, which shall be every five minutes.

**Real-time System Energy Price:**

"Real-time System Energy Price" shall mean the System Energy Price resulting from the Office of the Interconnection's dispatch of the PJM Interchange Energy Market in the Operating Day.

**Reasonable Efforts:**

"Reasonable Efforts" shall mean, with respect to any action required to be made, attempted, or taken by an Interconnection Party or by a Construction Party under Tariff, Part IV or Part VI, an Interconnection Service Agreement, or a Construction Service Agreement, such efforts as are timely and consistent with Good Utility Practice and with efforts that such party would undertake for the protection of its own interests.

**Receiving Party:**

"Receiving Party" shall mean the entity receiving the capacity and energy transmitted by the Transmission Provider to Point(s) of Delivery.

**Referral:**

"Referral" shall mean a formal report of the Market Monitoring Unit to the Commission for investigation of behavior of a Market Participant, of behavior of PJM, or of a market design flaw, pursuant to Tariff, Attachment M, section IV.I.

**Reference Resource:**

"Reference Resource" shall mean a combustion turbine generating station, configured with a single General Electric Frame 7HA turbine with evaporative cooling, Selective Catalytic Reduction technology all CONE Areas, dual fuel capability, and a heat rate of 9.134 Mmbtu/ MWh.

**Regional Entity:**

"Regional Entity" shall have the same meaning specified in the Operating Agreement.

**Regional Transmission Expansion Plan:**

"Regional Transmission Expansion Plan" shall mean the plan prepared by the Office of the Interconnection pursuant to Operating Agreement, Schedule 6 for the enhancement and expansion of the Transmission System in order to meet the demands for firm transmission service in the PJM Region.

**Regional Transmission Group (RTG):**

"Regional Transmission Group" or "RTG" shall mean a voluntary organization of transmission owners, transmission users and other entities approved by the Commission to efficiently coordinate transmission planning (and expansion), operation and use on a regional (and interregional) basis.

**Regulation:**

"Regulation" shall mean the capability of a specific generation resource or Demand Resource with appropriate telecommunications, control and response capability to separately increase and

decrease its output or adjust load in response to a regulating control signal, in accordance with the specifications in the PJM Manuals. Regulation is inclusive of Regulation-Down Service and Regulation-Up Service.

**Regulation-Down Requirement:**

"Regulation-Down Requirement" shall mean the required megawatts of performance-adjusted Regulation-Down Service capability to be maintained in a Regulation Zone. The Regulation-Down Requirement is defined as a set megawatt value by hour in accordance with the PJM Manuals, and can increase to account for additional operational uncertainty.

**Regulation-Down Service**

"Regulation-Down Service" shall mean the capability of a specific generation resource or Demand Resource with appropriate telecommunications and response capability to increase and decrease its output in the downward range from a set point or adjust load in response to a regulating-down control signal, in accordance with the specification in the PJM Manuals.

**Regulation-Up Requirement:**

"Regulation-Up Requirement" shall mean the required megawatts of performance-adjusted Regulation-Up Service capability to be maintained in a Regulation Zone. The Regulation-Up Requirement is defined as a set megawatt value by hour in accordance with the PJM Manuals, and can increase to account for additional operational uncertainty.

**Regulation-Up Service**

"Regulation-Up Service" shall mean the capability of a specific generation resource or Demand Resource with appropriate telecommunications and response capability to increase and decrease its output in the upward range from a set point or adjust load in response to a regulating-up control signal, in accordance with the specification in the PJM Manuals.

**Regulation Zone:**

"Regulation Zone" shall mean any of those one or more geographic areas, each consisting of a combination of one or more Control Zone(s) as designated by the Office of the Interconnection in the PJM Manuals, relevant to provision of, and requirements for, regulation service.

**Relevant Electric Retail Regulatory Authority:**

"Relevant Electric Retail Regulatory Authority" shall mean an entity that has jurisdiction over and establishes prices and policies for competition for providers of retail electric service to end-customers, such as the city council for a municipal utility, the governing board of a cooperative utility, the state public utility commission or any other such entity.

**Reliability Assurance Agreement or PJM Reliability Assurance Agreement:**

"Reliability Assurance Agreement" or "PJM Reliability Assurance Agreement" shall mean that certain Reliability Assurance Agreement Among Load Serving Entities in the PJM Region, on file with FERC as PJM Interconnection L.L.C. Rate Schedule FERC No. 44, and as amended from time to time thereafter.

**Reliability Pricing Model Auction:**

"Reliability Pricing Model Auction" or "RPM Auction" shall mean the Base Residual Auction or any Incremental Auction, or, for the 2016/2017 and 2017/2018 Delivery Years, any Capacity Performance Transition Incremental Auction.

**Required Transmission Enhancements:**

"Regional Transmission Enhancements" shall mean enhancements and expansions of the Transmission System that (1) a Regional Transmission Expansion Plan developed pursuant to Operating Agreement, Schedule 6 or (2) any joint planning or coordination agreement between PJM and another region or transmission planning authority set forth in Tariff, Schedule 12-Appendix B ("Appendix B Agreement") designates one or more of the Transmission Owner(s) to construct and own or finance. Required Transmission Enhancements shall also include enhancements and expansions of facilities in another region or planning authority that meet the definition of transmission facilities pursuant to FERC's Uniform System of Accounts or have been classified as transmission facilities in a ruling by FERC addressing such facilities constructed pursuant to an Appendix B Agreement cost responsibility for which has been assigned at least in part to PJM pursuant to such Appendix B Agreement.

**Reserved Capacity:**

"Reserved Capacity" shall mean the maximum amount of capacity and energy that the Transmission Provider agrees to transmit for the Transmission Customer over the Transmission Provider's Transmission System between the Point(s) of Receipt and the Point(s) of Delivery under Tariff, Part II. Reserved Capacity shall be expressed in terms of whole megawatts on a sixty (60) minute interval (commencing on the clock hour) basis.

**Reserve Penalty Factor:**

"Reserve Penalty Factor" shall mean the cost, in $/MWh, associated with being unable to meet a specific reserve requirement in a Reserve Zone or Reserve Sub-zone. A Reserve Penalty Factor will be defined for each reserve requirement in a Reserve Zone or Reserve Sub-zone.

**Reserve Sub-zone:**

"Reserve Sub-zone" shall mean any of those geographic areas wholly contained within a Reserve Zone, consisting of a combination of a portion of one or more Control Zone(s) as designated by the Office of the Interconnection in the PJM Manuals, relevant to provision of, and requirements for, reserve service.

**Reserve Zone:**

"Reserve Zone" shall mean any of those geographic areas consisting of a combination of one or more Control Zone(s), as designated by the Office of the Interconnection in the PJM Manuals, relevant to provision of, and requirements for, reserve service.

**Residual Auction Revenue Rights:**

"Residual Auction Revenue Rights" shall mean incremental stage 1 Auction Revenue Rights created within a Planning Period by an increase in transmission system capability, including the return to service of existing transmission capability, that was not modeled pursuant to Operating Agreement, Schedule 1, section 7.5 and the parallel provisions of Tariff, Attachment K-Appendix, section 7.5 in compliance with Operating Agreement, Schedule 1, section 7.4.2 (h) and the parallel provisions of Tariff, Attachment K-Appendix, section 7.4.2(h), and, if modeled, would have increased the amount of stage 1 Auction Revenue Rights allocated pursuant to Operating Agreement, Schedule 1, section 7.4.2 and the parallel provisions of Tariff, Attachment K-Appendix, section 7.4.2; provided that, the foregoing notwithstanding, Residual Auction Revenue Rights shall exclude: 1) Incremental Auction Revenue Rights allocated pursuant to Tariff, Part VI; and 2) Auction Revenue Rights allocated to entities that are assigned cost responsibility pursuant to Operating Agreement, Schedule 6 for transmission upgrades that create such rights.

**Residual Metered Load:**

"Residual Metered Load" shall mean all load remaining in an electric distribution company's fully metered franchise area(s) or service territory(ies) after all nodally priced load of entities serving load in such area(s) or territory(ies) has been carved out.

**Resource Substitution Charge:**

"Resource Substitution Charge" shall mean a charge assessed on Capacity Market Buyers in an Incremental Auction to recover the cost of replacement Capacity Resources.

**Responsible Customer:**

"Responsible Customer" shall mean customers using Interim Network Integration Transmission Service, Firm Contract Demand Transmission Service, Non-Firm Contract Demand Transmission Service, Point-to-Point Transmission Service and/or Network Integration Transmission Service and Merchant Transmission Facility owners, which are assigned cost responsibility for Transmission Enhancement Charges as determined pursuant to Tariff, Schedule 12.

**Revenue Data for Settlements:**

"Revenue Data for Settlements" shall mean energy quantities used in accounting and billing as determined pursuant to Tariff, Attachment K-Appendix and the corresponding provisions of Operating Agreement, Schedule 1.

**RPM Seller Credit:**

"RPM Seller Credit" shall mean an additional form of Unsecured Credit defined in Tariff, Attachment Q, section IV.

**Scheduled Incremental Auctions:**

"Scheduled Incremental Auctions" shall refer to the First, Second, or Third Incremental Auction.

**Schedule of Work:**

"Schedule of Work" shall mean that schedule attached to the Interconnection Construction Service Agreement setting forth the timing of work to be performed by the Constructing Entity pursuant to the Interconnection Construction Service Agreement, based upon the Facilities Study and subject to modification, as required, in accordance with Transmission Provider's scope change process for interconnection projects set forth in the PJM Manuals.

**Scope of Work:**

"Scope of Work" shall mean that scope of the work attached as a schedule to the Interconnection Construction Service Agreement and to be performed by the Constructing Entity(ies) pursuant to the Interconnection Construction Service Agreement, provided that such Scope of Work may be modified, as required, in accordance with Transmission Provider's scope change process for interconnection projects set forth in the PJM Manuals.

**Seasonal Capacity Performance Resource:**

"Seasonal Capacity Performance Resource" shall have the same meaning specified in Tariff, Attachment DD, section 5.5A.

**Seasonal Facility Rating:**

"Seasonal Facility Rating" shall mean a Transmission Facility Rating that:

(a) Applies to a specified season, where seasons are defined by the Office of the Interconnection to include not fewer than four seasons in each year, and to reasonably reflect portions of the year where expected high temperatures are relatively consistent.

(b) Reflects an up-to-date forecast of ambient air temperature across the relevant season over which the rating applies.

(c) Is evaluated annually, if not more frequently, for each season in the future for which Transmission Service can be requested

**Secondary Reserve:**

"Secondary Reserve" shall mean the reserve capability of generation resources that can be converted fully into energy or Economic Load Response Participant resources whose demand can be reduced within 30 minutes (less the capability of such resources to provide Primary Reserve), from the request of the Office of the Interconnection, regardless of whether the equipment providing the reserve is electrically synchronized to the Transmission System or not.

**Secondary Systems:**

"Secondary Systems" shall mean control or power circuits that operate below 600 volts, AC or DC, including, but not limited to, any hardware, control or protective devices, cables, conductors, electric raceways, secondary equipment panels, transducers, batteries, chargers, and voltage and current transformers.

**Second Incremental Auction:**

"Second Incremental Auction" shall mean an Incremental Auction conducted ten months before the Delivery Year to which it relates**.**

**Security:**

"Security" shall mean the security provided by the New Service Customer pursuant to Tariff, section 212.4 or Tariff, Part VI, section 213.4 to secure the New Service Customer's responsibility for Costs under the Interconnection Service Agreement or Upgrade Construction Service Agreement and Tariff, Part VI, section 217.

**Segment:**
"Segment" shall have the same meaning as described in Operating Agreement, Schedule 1, section 3.2.3(e).

**Self-Supply:**

"Self-Supply" shall mean Capacity Resources secured by a Load-Serving Entity, by ownership or contract, outside a Reliability Pricing Model Auction, and used to meet obligations under this Attachment or the Reliability Assurance Agreement through submission in a Base Residual Auction or an Incremental Auction of a Sell Offer indicating such Market Seller's intent that such Capacity Resource be Self-Supply. Self-Supply may be either committed regardless of clearing price or submitted as a Sell Offer with a price bid. A Load Serving Entity's Sell Offer with a price bid for an owned or contracted Capacity Resource shall not be deemed "Self-Supply," unless it is designated as Self-Supply and used by the LSE to meet obligations under this Attachment or the Reliability Assurance Agreement.

**Self-Supply Entity:**

"Self-Supply Entity" shall mean the following types of Load Serving Entity that operate under long-standing business models: single customer entity, public power entity, or vertically integrated utility, where "vertically integrated utility" means a utility that owns generation, includes such generation in its regulated rates, and earns a regulated return on its investment in such generation or receives any cost recovery for such generation through bilateral contracts; "single customer entity" means a Load Serving Entity that serves at retail only customers that are under common control with such Load Serving Entity, where such control means holding 51% or more of the voting securities or voting interests of the Load Serving Entity and all its retail customers; and "public power entity" means cooperative and municipal utilities, including public power supply entities comprised of either or both of the same and rural electric cooperatives, and joint action agencies.

**Self-Supply Seller:**

"Self-Supply Seller" shall mean, for purposes of evaluating Buyer-Side Market Power, the following types of Load Serving Entities that operate under long-standing business models: vertically integrated utility or public power entity, where "vertically integrated utility" means a utility that owns generation, includes such generation in its state-regulated rates, and earns a state-regulated return on its investment in such generation; and "public power entity" means electric cooperatives that are either rate regulated by the state or have their long-term resource plan approved or otherwise reviewed and accepted by a Relevant Electric Retail Regulatory Authority and municipal utilities or joint action agencies that are subject to direct regulation by a Relevant Electric Retail Regulatory Authority.

**Sell Offer:**

"Sell Offer" shall mean an offer to sell Capacity Resources in a Base Residual Auction, Incremental Auction, or Reliability Backstop Auction.

**Service Agreement:**

"Service Agreement" shall mean the initial agreement and any amendments or supplements thereto entered into by the Transmission Customer and the Transmission Provider for service under the Tariff.

**Service Commencement Date:**

"Service Commencement Date" shall mean the date the Transmission Provider begins to provide service pursuant to the terms of an executed Service Agreement, or the date the Transmission Provider begins to provide service in accordance with Tariff, Part II, section 15.3 or Tariff, Part III, section 29.1.

**Short-Term Firm Point-To-Point Transmission Service:**

"Short-Term Firm Point-To-Point Transmission Service" shall mean Firm Point-To-Point Transmission Service under Tariff, Part II with a term of less than one year.

**Short-term Project:**

"Short-term Project" shall have the same meaning provided in the Operating Agreement.

**Short-Term Resource Procurement Target:**

"Short-Term Resource Procurement Target" shall mean, for Delivery Years through May 31, 2018, as to the PJM Region, for purposes of the Base Residual Auction, 2.5% of the PJM Region Reliability Requirement determined for such Base Residual Auction, for purposes of the First Incremental Auction, 2% of the of the PJM Region Reliability Requirement as calculated at the time of the Base Residual Auction; and, for purposes of the Second Incremental Auction, 1.5% of the of the PJM Region Reliability Requirement as calculated at the time of the Base Residual Auction; and, as to any Zone, an allocation of the PJM Region Short-Term Resource Procurement Target based on the Preliminary Zonal Forecast Peak Load, reduced by the amount of load served under the FRR Alternative. For any LDA, the LDA Short-Term Resource Procurement Target shall be the sum of the Short-Term Resource Procurement Targets of all Zones in the LDA.

**Short-Term Resource Procurement Target Applicable Share:**

"Short-Term Resource Procurement Target Applicable Share" shall mean, for Delivery Years through May 31, 2018: (i) for the PJM Region, as to the First and Second Incremental Auctions, 0.2 times the Short-Term Resource Procurement Target used in the Base Residual Auction and, as to the Third Incremental Auction for the PJM Region, 0.6 times such target; and (ii) for an LDA, as to the First and Second Incremental Auctions, 0.2 times the Short-Term Resource Procurement Target used in the Base Residual Auction for such LDA and, as to the Third Incremental Auction, 0.6 times such target.

**Site:**

"Site" shall mean all of the real property, including but not limited to any leased real property and easements, on which the Customer Facility is situated and/or on which the Customer Interconnection Facilities are to be located.

**Small Commercial Customer:**

"Small Commercial Customer," as used in RAA, Schedule 6 and Tariff, Attachment DD-1, shall mean a commercial retail electric end-use customer of an electric distribution company that participates in a mass market demand response program under the jurisdiction of a RERRA and satisfies the definition of a "small commercial customer" under the terms of the applicable RERRA's program, provided that the customer has an annual peak demand no greater than 100kW.

**Small Generation Resource:**

"Small Generation Resource" shall mean an Interconnection Customer's device of 20 MW or less for the production and/or storage for later injection of electricity identified in an Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities. This term shall include Energy Storage Resources and/or other devices for storage for later injection of energy.

**Small Inverter Facility:**

"Small Inverter Facility" shall mean an Energy Resource that is a certified small inverter-based facility no larger than 10 kW.

**Small Inverter ISA:**

"Small Inverter ISA" shall mean an agreement among Transmission Provider, Interconnection Customer, and Interconnected Transmission Owner regarding interconnection of a Small Inverter Facility under Tariff, Part IV, section 112B.

**Special Member:**

"Special Member" shall mean an entity that satisfies the requirements of Operating Agreement, Schedule 1, section 1.5A.02, and the parallel provisions of Tariff, Attachment K-Appendix, section 1.5A.02, or the special membership provisions established under the Emergency Load Response and Pre-Emergency Load Response Programs.

**Spot Market Backup:**

"Spot Market Backup" shall mean the purchase of energy from, or the delivery of energy to, the PJM Interchange Energy Market in quantities sufficient to complete the delivery or receipt obligations of a bilateral contract that has been curtailed or interrupted for any reason.

**Spot Market Energy:**

"Spot Market Energy" shall mean energy bought or sold by Market Participants through the PJM Interchange Energy Market at System Energy Prices determined as specified in Operating Agreement, Schedule 1, section 2, and the parallel provisions of Tariff, Attachment K-Appendix, section 2.

**Start Additional Labor Costs:**

"Start Additional Labor Costs" shall mean additional labor costs for startup required above normal station manning levels.

**Start Fuel:**

For units without a soak process, “Start Fuel” shall consist of fuel consumed from first fire of the start process to first breaker closing, plus any fuel expended from last breaker opening to shutdown.

For units with a soak process, “Start Fuel” is fuel consumed from first fire of the start process (initial reactor criticality for nuclear units) to dispatchable output (including auxiliary boiler fuel), plus any fuel expended from last breaker opening to shutdown, excluding normal plant heating/auxiliary equipment fuel requirements. Start Fuel included for each temperature state from breaker closure to dispatchable output shall not exceed the unit specific soak time period reviewed and approved as part of the unit-specific parameter process detailed in Tariff, Attachment K-Appendix, section 6.6(c) or the defaults below:

- Cold Soak Time = 0.73 * unit specific Minimum Run Time (in hours)
- Intermediate Soak Time = 0.61 * unit specific Minimum Run Time (in hours)
- Hot Soak Time = 0.43 * unit specific Minimum Run Time (in hours)

**Start-Up Costs:**

“Start-Up Costs” shall consist primarily of the cost of fuel, as determined by the unit’s start heat input (adjusted by the performance factor) times the fuel cost. It also includes operating costs, Maintenance Adders, emissions allowances/adders, and station service cost. Start-Up Costs can vary with the unit offline time being categorized in three unit temperature conditions: hot, intermediate and cold.

For units with a steam turbine and a soak process (nuclear, steam, and combined cycle), “Start Fuel” is fuel consumed from first fire of start process (initial reactor criticality for nuclear units): Start-Up Costs shall mean the net unit costs from PJM’s notification to the level at which the unit can follow PJM’s dispatch, and from last breaker open to shutdown.

For units without a steam turbine and no soak process (engines, combustion turbines, Intermittent Resources, and Energy Storage Resources): Start-Up Costs shall mean the unit costs from PJM’s notification to first breaker close and from last breaker open to shutdown.

**State:**

“State” shall mean the District of Columbia and any State or Commonwealth of the United States.

**State Commission:**

**“**State Commission**”** shall mean any state regulatory agency having jurisdiction over retail electricity sales in any State in the PJM Region.

**State Estimator:**

"State Estimator" shall mean the computer model of power flows specified in Operating Agreement, Schedule 1, section 2.3 and the parallel provisions of Tariff, Attachment K-Appendix, section 2.3.

**State Subsidy:**

"State Subsidy" shall mean a direct or indirect payment, concession, rebate, subsidy, non-bypassable consumer charge, or other financial benefit that is as a result of any action, mandated process, or sponsored process of a state government, a political subdivision or agency of a state, or an electric cooperative formed pursuant to state law, and that

(1) is derived from or connected to the procurement of (a) electricity or electric generation capacity sold at wholesale in interstate commerce, or (b) an attribute of the generation process for electricity or electric generation capacity sold at wholesale in interstate commerce; or

(2) will support the construction, development, or operation of a new or existing Capacity Resource; or

(3) could have the effect of allowing the unit to clear in any PJM capacity auction.

Notwithstanding the foregoing, State Subsidy shall not include (a) payments, concessions, rebates, subsidies, or incentives designed to incent, or participation in a program, contract or other arrangement that utilizes criteria designed to incent or promote, general industrial development in an area or designed to incent siting facilities in that county or locality rather than another county or locality; (b) state action that imposes a tax or assesses a charge utilizing the parameters of a regional program on a given set of resources notwithstanding the tax or cost having indirect benefits on resources not subject to the tax or cost (e.g., Regional Greenhouse Gas Initiative); (c) any indirect benefits to a Capacity Resource as a result of any transmission project approved as part of the Regional Transmission Expansion Plan; (d) any contract, legally enforceable obligation, or rate pursuant to the Public Utility Regulatory Policies Act or any other state-administered federal regulatory program (e.g., the Cross-State Air Pollution Rule); (e) any revenues from the sale or allocation, either direct or indirect, to an Entity Providing Supply Services to Default Retail Service Provider where such entity's obligations was awarded through a state default procurement auction that was subject to independent oversight by a consultant or manager who certifies that the auction was conducted through a non-discriminatory and competitive bidding process, subject to the below condition, and provided further that nothing herein would exempt a Capacity Resource that would otherwise be subject to the minimum offer price rule pursuant to this Tariff; (f) any revenues for providing capacity as part of an FRR Capacity Plan or through bilateral transactions with FRR Entities; or (g) any voluntary and arm's length bilateral transaction (including but not limited to those reported pursuant to Tariff, Attachment DD, section 4.6), such as a power purchase agreement or other similar contract where the buyer is a Self-Supply Entity and the transaction is (1) a short term transaction (one-year or less) or (2) a long-term transaction that is the result of a competitive process that was not fuel-specific and is not used for the purpose of supporting uneconomic construction, development, or operation of the subject Capacity Resource, provided however that if the Self-Supply Entity is responsible for offering the Capacity Resource into an RPM Auction, the specified amount of installed capacity purchased by such Self-Supply Entity shall be considered to receive a State Subsidy in the same manner, under the same conditions, and to the same extent as any other Capacity Resource of a Self-Supply Entity. For purposes of subsection (e) of this

definition, a state default procurement auction that has been certified to be a result of a non-discriminatory and competitive bidding process shall:

(i) have no conditions based on the ownership (except supplier diversity requirements or limits), location (except to meet PJM deliverability requirements), affiliation, fuel type, technology, or emissions of any resources or supply (except state-mandated renewable portfolio standards for which Capacity Resources are separately subject to the minimum offer price rule or eligible for an exemption);

(ii) result in contracts between an Entity Providing Supply Services to Default Retail Service Provider and the electric distribution company for a retail default generation supply product and none of those contracts require that the retail obligation be sourced from any specific Capacity Resource or resource type as set forth in subsection (i) above; and

(iii) establish market-based compensation for a retail default generation supply product that retail customers can avoid paying for by obtaining supply from a competitive retail supplier of their choice.

**State of Charge:**

"State of Charge" shall mean the quantity of physical energy stored in an Energy Storage Resource Model Participant or in the storage component of a Hybrid Resource in proportion to its maximum State of Charge capability. State of Charge is quantified as defined in the PJM Manuals.

**State of Charge Management:**

"State of Charge Management" shall mean the control of State of Charge of an Energy Storage Resource Market Participant or Hybrid Resource using minimum and maximum discharge (and, as applicable, charge) limits, changes in operating mode (as applicable), discharging (and, as applicable, charging) offer curves, and self-scheduling of non-dispatchable sales (and, as applicable, purchases) of energy in the PJM markets. State of Charge Management shall not interfere with the obligation of a Market Seller of an Energy Storage Resource Model Participant or of a Hybrid Resource to follow PJM dispatch, consistent with all other resources.

**Station Power:**

"Station Power" shall mean energy used for operating the electric equipment on the site of a generation facility located in the PJM Region or for the heating, lighting, air-conditioning and office equipment needs of buildings on the site of such a generation facility that are used in the operation, maintenance, or repair of the facility. Station Power does not include any energy (i) used to power synchronous condensers; (ii) used for pumping at a pumped storage facility; (iii) used in association with restoration or black start service; or (iv) that is Direct Charging Energy.

**Sub-Annual Resource Constraint:**

"Sub-Annual Resource Constraint" shall mean, for the 2017/2018 Delivery Year and for FRR Capacity Plans the 2017/2018 and 2018/2019 Delivery Years, for the PJM Region or for each LDA for which the Office of the Interconnection is required under Tariff, Attachment DD, section 5.10(a) to establish a separate VRR Curve for a Delivery Year, a limit on the total amount of Unforced Capacity that can be committed as Limited Demand Resources and Extended Summer Demand Resources for the 2017/2018 Delivery Year in the PJM Region or in such LDA, calculated as the Sub-Annual Resource Reliability Target for the PJM Region or for such LDA, respectively, minus the Short-Term Resource Procurement Target for the PJM Region or for such LDA, respectively.

**Sub-Annual Resource Price Decrement:**

"Sub-Annual Resource Price Decrement" shall mean, for the 2017/2018 Delivery Year, a difference between the clearing price for Extended Summer Demand Resources and the clearing price for Annual Resources, representing the cost to procure additional Annual Resources out of merit order when the Sub-Annual Resource Constraint is binding.

**Sub-Annual Resource Reliability Target:**

"Sub-Annual Reliability Target" for the PJM Region or an LDA, shall mean the maximum amount of the combination of Extended Summer Demand Resources and Limited Demand Resources in Unforced Capacity determined by PJM to be consistent with the maintenance of reliability, stated in Unforced Capacity, that shall be used to calculate the Minimum Annual Resource Requirement for Delivery Years through May 31, 2017 and the Sub-Annual Resource Constraint for the 2017/2018 and 2018/2019 Delivery Years. As more fully set forth in the PJM Manuals, PJM calculates the Sub-Annual Resource Reliability Target, by first determining a reference annual loss of load expectation ("LOLE") assuming no Demand Resources. The calculation for the unconstrained portion of the PJM Region uses a daily distribution of loads under a range of weather scenarios (based on the most recent load forecast and iteratively shifting the load distributions to result in the Installed Reserve Margin established for the Delivery Year in question) and a weekly capacity distribution (based on the cumulative capacity availability distributions developed for the Installed Reserve Margin study for the Delivery Year in question). The calculation for each relevant LDA uses a daily distribution of loads under a range of weather scenarios (based on the most recent load forecast for the Delivery Year in question) and a weekly capacity distribution (based on the cumulative capacity availability distributions developed for the Capacity Emergency Transfer Objective study for the Delivery Year in question). For the relevant LDA calculation, the weekly capacity distributions are adjusted to reflect the Capacity Emergency Transfer Limit for the Delivery Year in question.

For both the PJM Region and LDA analyses, PJM then models the commitment of varying amounts of DR (displacing otherwise committed generation) as interruptible from May 1 through October 31 and unavailable from November 1 through April 30 and calculates the LOLE at each DR level. The Extended Summer DR Reliability Target is the DR amount, stated as a percentage of the unrestricted peak load, that produces no more than a ten percent increase in the LOLE, compared to the reference value. The Sub-Annual Resource Reliability Target shall be expressed as a percentage of the forecasted peak load of the PJM Region or such LDA and is

converted to Unforced Capacity by multiplying [the reliability target percentage] times [the Forecast Pool Requirement] times [the DR Factor] times [the forecasted peak load of the PJM Region or such LDA, reduced by the amount of load served under the FRR Alternative].

**Sub-meter:**

"Sub-meter" shall mean a metering point for electricity consumption that does not include all electricity consumption for the end-use customer as defined by the electric distribution company account number. PJM shall only accept sub-meter load data from end-use customers for measurement and verification of Regulation service as set forth in the Economic Load Response rules and PJM Manuals.

**Summer-Period Capacity Performance Resource:**

"Summer-Period Capacity Performance Resource" shall have the same meaning specified in Tariff, Attachment DD, section 5.5A.

**Surplus Interconnection Customer:**

"Surplus Interconnection Customer" shall mean either an Interconnection Customer whose Generating Facility is already interconnected to the PJM Transmission System or one of its affiliates, or an unaffiliated entity that submits a Surplus Interconnection Request to utilize Surplus Interconnection Service within the Transmission System in the PJM Region. A Surplus Interconnection Customer is not a New Service Customer.

**Surplus Interconnection Request:**

"Surplus Interconnection Request" shall mean a request submitted by a Surplus Interconnection Customer, pursuant to Tariff, Attachment RR, to utilize Surplus Interconnection Service within the Transmission System in the PJM Region. A Surplus Interconnection Request is not a New Service Request.

**Surplus Interconnection Service:**

"Surplus Interconnection Service" shall mean any unneeded portion of Interconnection Service established in an Interconnection Service Agreement, such that if Surplus Interconnection Service is utilized, the total amount of Interconnection Service at the Point of Interconnection would remain the same.

**Switching and Tagging Rules:**

"Switching and Tagging Rules" shall mean the switching and tagging procedures of Interconnected Transmission Owners and Interconnection Customer as they may be amended from time to time.

**Synchronized Reserve:**

"Synchronized Reserve" shall mean the reserve capability of generation resources that can be converted fully into energy or Economic Load Response Participant resources whose demand can be reduced within ten minutes from the request of the Office of the Interconnection dispatcher, and is provided by equipment that is electrically synchronized to the Transmission System.

**Synchronized Reserve Event:**

"Synchronized Reserve Event" shall mean a request from the Office of the Interconnection to generation resources and/or Economic Load Response Participant resources able, assigned or self-scheduled to provide Synchronized Reserve in one or more specified Reserve Zones or Reserve Sub-zones, within ten minutes, to increase the energy output or reduce load by the amount of assigned or self-scheduled Synchronized Reserve capability.

**Synchronized Reserve Requirement:**

"Synchronized Reserve Requirement" shall mean the megawatts required to be maintained in a Reserve Zone or Reserve Sub-zone as Synchronized Reserve, absent any increase to account for additional reserves scheduled to address operational uncertainty. The Synchronized Reserve Requirement is calculated in accordance with the PJM Manuals. This requirement can only be satisfied by Synchronized Reserve resources.

**System Condition:**

"System Condition" shall mean a specified condition on the Transmission Provider's system or on a neighboring system, such as a constrained transmission element or flowgate, that may trigger Curtailment of Long-Term Firm Point-to-Point Transmission Service using the curtailment priority pursuant to Tariff, Part II, section 13.6. Such conditions must be identified in the Transmission Customer's Service Agreement.

**System Energy Price:**

"System Energy Price" shall mean the energy component of the Locational Marginal Price, which is the price at which the Market Seller has offered to supply an additional increment of energy from a resource, calculated as specified in Operating Agreement, Schedule 1, section 2 and the parallel provisions of Tariff, Attachment K-Appendix, section 2.

**System Impact Study:**

"System Impact Study" shall mean an assessment by the Transmission Provider of (i) the adequacy of the Transmission System to accommodate a Completed Application, an Interconnection Request or an Upgrade Request, (ii) whether any additional costs may be incurred in order to provide such transmission service or to accommodate an Interconnection Request, and (iii) with respect to an Interconnection Request, an estimated date that an Interconnection Customer's Customer Facility can be interconnected with the Transmission

System and an estimate of the Interconnection Customer's cost responsibility for the interconnection; and (iv) with respect to an Upgrade Request, the estimated cost of the requested system upgrades or expansion, or of the cost of the system upgrades or expansion, necessary to provide the requested incremental rights.

**System Protection Facilities:**

"System Protection Facilities" shall refer to the equipment required to protect (i) the Transmission System, other delivery systems and/or other generating systems connected to the Transmission System from faults or other electrical disturbance occurring at or on the Customer Facility, and (ii) the Customer Facility from faults or other electrical system disturbance occurring on the Transmission System or on other delivery systems and/or other generating systems to which the Transmission System is directly or indirectly connected. System Protection Facilities shall include such protective and regulating devices as are identified in the Applicable Technical Requirements and Standards or that are required by Applicable Laws and Regulations or other Applicable Standards, or as are otherwise necessary to protect personnel and equipment and to minimize deleterious effects to the Transmission System arising from the Customer Facility.

**Tariff, Part VIII, Subpart A, section 400**
**Definitions F**

**Facilities Study:**

"Facilities Study" shall be an engineering study conducted by the Transmission Provider (in coordination with the affected Transmission Owner(s)) to: (1) determine the required modifications to the Transmission Provider's Transmission System necessary to implement the conclusions of the System Impact Studies; and (2) complete any additional studies or analyses documented in the System Impact Studies or required by PJM Manuals, and determine the required modifications to the Transmission Provider's Transmission System based on the conclusions of such additional studies.

**Federal Power Act:**

"Federal Power Act" shall mean the Federal Power Act, as amended, 16 U.S.C. §§ 791a, et seq.

**FERC or Commission:**

"FERC" or "Commission" shall mean the Federal Energy Regulatory Commission or any successor federal agency, commission or department exercising jurisdiction over the Tariff, Operating Agreement and Reliability Assurance Agreement.

**Final Agreement Negotiation Phase:**

"Final Agreement Negotiation Phase" shall mean the phase set forth in Tariff, Part VIII, Subpart D, section 411 to tender, negotiate, and execute any service agreement in Tariff, Part IX.

**Firm Transmission Service:**

"Firm Transmission Service" shall mean any or a combination of Network Integration Transmission Service, Firm Point-To-Point Transmission Service, or Firm Contract Demand Transmission Service taken by an Eligible Customer.

**Tariff, Part VIII, Subpart N**

**COST RECOVERY PROTECTION AND AGREEMENT**

**Tariff, Part VIII, Subpart N, section 441**
**Cost Recovery Protection for Firm Transmission Service**

**(a) Cost Recovery Assurances:** With respect to Eligible Customers that intend to request any form of Firm Transmission Service from Transmission Provider on behalf of an Eligible Load or Large Load, a Transmission Owner shall either:

(i) Enter into a Cost Recovery Agreement in the form found in Tariff, Part IX, Subpart P with the applicable Eligible Customer and Eligible Load or Large Load. The Transmission Owner counterparty shall be the Transmission Owner that owns the transmission facilities with which the Eligible Load or Large Load will interconnect. In the case of an Eligible Load or Large Load that will not directly interconnect with a Transmission Owner, the Transmission Owner counterparty shall be the Transmission Owner to which the applicable Eligible Customer is connected and from whom the Eligible Customer intends to take Firm Transmission Service. The purpose of the Cost Recovery Agreement is to ensure the Eligible Customer takes a minimum level of Firm Transmission Service on behalf of the Eligible Load or Large Load based on the committed load level and the applicable rate for the Firm Transmission Service, or, if not, the Eligible Load or Large Load shall be required to make a shortfall payment representing any difference between the committed minimum level of service and the actual level of service taken.

(ii) Enter into, subject to FERC acceptance, a separate agreement between at least the Transmission Owner and an Eligible Load or Large Load to prevent cost shifting among transmission customers. Such separate agreement will be determined to adequately prevent cost shifts if such agreement, in conjunction with relevant federal and state regulatory requirements, including applicable retail service tariffs, results in minimum Firm Transmission Service and credit standards, or other comparable protections.

An Eligible Customer and/or Eligible Load or Large Load will be required to enter into and execute a Cost Recovery Agreement or an agreement that meets the standards set forth in subsection (a)(ii) in order to proceed past the Soft Close Date associated with the applicable PJM Fast Energization Cycle, and obtain any form of Firm Transmission Service from the Transmission Provider.

**(b) Preservation of Legacy Treatment:** No Cost Recovery Agreement or separate agreement under subsection (a) above shall be required with respect to Eligible Load or Large Loads covered by existing agreements that meet the criteria set forth in subsection (a)(ii) that have already been filed and are pending acceptance, or that have been accepted by FERC. Any agreement entered into prior to the effective date of this subsection not filed with FERC will not be required to be filed and accepted by FERC; provided, however, in any complaint filed pursuant to Section 206 of the Federal Power Act in which it is claimed that such agreement is not just and reasonable or is unduly discriminatory within the meaning of the Federal Power Act, such agreement shall not be determined to be unjust and unreasonable or unduly discriminatory if it meets the standard set forth in subsection (a)(ii).

**(c) Tender and Negotiation of Cost Recovery Agreement:** As applicable, consistent with subsections (a) and (b) above, Transmission Owner shall tender a draft of the Cost Recovery

Agreement to Eligible Customer and Eligible Load or Large Load within 30 days of the completion of the Transmission Owner's retail load interconnection study.

Upon receipt of the draft Cost Recovery Agreement, Eligible Customer, as well as the Eligible Load or Large Load, shall provide the Transmission Owner with any written comments on the draft Cost Recovery Agreement within seven (7) days. The parties will conduct further negotiations as required, with such negotiations to be completed within twenty-five (25) days of the Transmission Owner's tender of the draft Cost Recovery Agreement.

**(d) Execution and Filing of Cost Recovery Agreement:** Not later than ten (10) days after the end of the negotiation period set forth in subsection (c) above, Eligible Customer and the Eligible Load or Large Load shall (i) execute the Cost Recovery Agreement and return it to Transmission Owner; and (ii) provide the Credit Support specified in the Cost Recovery Agreement.

If the Eligible Load or Large Load fails to execute the Cost Recovery Agreement or provide the required Credit Support in the specified time period, Eligible Customer shall not be permitted to proceed through the applicable Fast Energization Cycle.

The Transmission Owner shall file any executed Cost Recovery Agreement, if required, with FERC within twenty-one (21) days of the other parties executing the Cost Recovery Agreement.

**(e) Crediting of Termination Amounts:** If the effective date of an Early Termination or Partial Termination, as defined in a Cost Recovery Agreement, occurs prior to the first Service Date specified in such agreement, and the Eligible Load or Large Load that is a party to that agreement is required to make a termination payment, as applicable, such termination payment or other amounts received pursuant to such obligation, including any security drawn on by Transmission Owner, shall be divided amongst the pool of Transmission Owners constructing facilities needed to provide the related transmission service, but which will no longer be constructed, including the Transmission Owner that is a party to the Cost Recovery Agreement, as follows:

(i) Within thirty (30) days of such termination, the Transmission Owner that is party to the Cost Recovery Agreement (referred to herein as the "contracting Transmission Owner") shall notify all other Transmission Owners that have been designated to construct and own Interconnection Reliability Reinforcements necessary to provide Firm Transmission Service to an Eligible Customer on behalf of the terminating Eligible Load or Large Load (referred to herein as the "third party Transmission Owners") of such termination. For purposes of this subsection, third party Transmission Owners shall include all Transmission Owners designated to construct and own Interconnection Reliability Reinforcements identified in the PJM Fast Energization Cycle in which the terminating Eligible Load or Large Load was studied, and for which the contracting Transmission Owner's Zone received a cost responsibility share.

(ii) Each third-party Transmission Owner shall, within thirty (30) days of the deadline for filings its FERC Form 1 that includes all Eligible Costs, provide an account of such Eligible Costs to the contracting Transmission Owner. For purposes of this subsection "Eligible Costs" consist of all expenditures, costs, and cancellation fees incurred or due to commitments made by the third-party Transmission Owner to engineer, design, procure, construct, own, operate,

maintain, and service the Interconnection Reliability Reinforcements needed to serve the Eligible Customer taking transmission service on behalf of the Eligible Load or Large Load, but which will no longer be constructed, which (a) are incurred through the end of the calendar year in which notice of termination was received from the contracting Transmission Owner, and (b) are included in amounts reported in the Transmission Owner's FERC Form 1 covering that calendar year.

Any failure by a third-party Transmission Owner to provide such information within the timeframe above shall bar said Transmission Owner from receiving a portion of amounts paid by Eligible Load or Large Load as set forth below.

(iii) Within thirty (30) days of (a) receiving all Transmission Owner accountings in accordance with subsection (ii) above, and (b) receipt of termination amounts from the Eligible Load or Large Load that is party to the Cost Recovery Agreement, the contracting Transmission Owner shall divide such termination amounts among itself and the pool of third-party Transmission Owners based on each Transmission Owner's *pro rata* share of the total amount of applicable expenditures, costs and cancellation fees, and disburse such amounts to the third-party Transmission Owners accordingly.

For purposes of determining these *pro rata* shares, the contracting Transmission Owner shall be permitted to include Eligible Costs associated not only with its applicable Interconnection Reliability Reinforcements but also any other transmission facilities, including Supplemental Projects and Direct Connection Facilities, that it was constructing in order to provide interconnection or transmission service to the Eligible Load or Large Load, or Eligible Customer taking transmission service on behalf of the Eligible Load or Large Load.

To the extent that additional termination funds are received or collected from the Eligible Load or Large Load after an initial distribution is made under this subsection, contracting Transmission Owner will make additional disbursements using the same methodology within fifteen (15) days of receipt of such amounts.

(iv) Nothing in this subsection (e) is intended or shall be interpreted to prevent any Transmission Owner from seeking cost recovery through an abandoned plant recovery filing made with FERC or through any other proceeding, except insofar as the Transmission Owner has received amounts pursuant to the process set forth in this subsection (e), it shall be prohibited from requesting recovery of such amounts in any future proceeding.

(v) To the extent a Transmission Owner elects to satisfy its obligation under subsection (a) above through a separate agreement as described in subsection (a)(ii), it shall include in such separate agreement reasonably comparable termination payment crediting provisions as set forth in this subsection (e), as determined by FERC.

(vi) Any disputes under this subsection (e) shall be subject to the dispute resolution procedure set forth in Schedule 5 of the Operating Agreement.

**Tariff, Part IX, Subpart P**

**FORM OF**
**COST RECOVERY AGREEMENT**

# COST RECOVERY AGREEMENT

**Between**

**[TRANSMISSION OWNER]**
**Transmission Owner**

**and**

**[LARGE LOAD CUSTOMER]**

**Large Load Customer**

**and**

**[ELIGIBLE CUSTOMER]**
**Eligible Customer**

## COST RECOVERY AGREEMENT

This Cost Recovery Agreement ("Agreement" or "**CRA**") is made and entered into as of [Insert Date] by and among [Transmission Owner], a [State and Entity Type] ("**Transmission Owner**") and [Large Load Customer], a [State and Entity Type] ("Large Load Customer"), and [Eligible Customer], a [State and Entity Type] ("**Eligible Customer**"). Transmission Owner, Eligible Customer, and Large Load Customer are referred to individually as a "Party" and collectively as the "Parties."

Large Load Customer will be responsible for all payment and Credit Support obligations assigned to Large Load Customer under this CRA. Eligible Customer will remain responsible for the transmission-service, information-sharing, and administrative obligations expressly assigned to Eligible Customer under this CRA.

## RECITALS

**WHEREAS**, Large Load Customer intends to construct, maintain, and operate new or modified facilities located at or near [Facility Address] that will constitute a Large Load (the "**Large Load Facilities**"), with an anticipated initial service date of [Date] (the "Commercial Operation Date");

**WHEREAS**, Large Load Customer has completed retail interconnection studies conducted by Transmission Owner and/or one or more of its affiliates;

**WHEREAS**, following completion of the applicable Transmission Owner's interconnection study process, the Parties are entering into this CRA based on the Initial Load Commitment, proposed load ramp, and anticipated Service Dates identified in Exhibit A;

**WHEREAS**, Eligible Customer intends to request Network Integration Transmission Service ("NITS"), Firm Point-to-Point Transmission Service, or Firm Contract Demand Transmission Service ("FCDS") under the PJM Open Access Transmission Tariff ("PJM Tariff") on behalf of the Large Load Customer to serve the Large Load Facilities , each of which constitutes "Firm Transmission Service" under this CRA;

**WHEREAS**, Exhibit A identifies the initial amount and type of Firm Transmission Service to be requested by Eligible Customer on behalf of Large Load Customer, together with the load ramp and anticipated Service Dates;

**WHEREAS**, following completion of the applicable application and study process to obtain the Firm Transmission Service, Exhibit A and the related calculations under this CRA will be updated to reflect the type, amount, and timing of Firm Transmission Service established in the Final PJM Agreement;

**WHEREAS**, in reliance on the Firm Load Commitment and in accordance with the PJM Tariff and other applicable agreements, the Transmission Owner intends to construct, own,

operate, maintain, service, and recover the costs associated with transmission facilities necessary to serve the Large Load Facilities;

**WHEREAS**, this CRA establishes the payment and Credit Support obligations described herein and allocates the financial risk arising if Firm Transmission Service-related revenues attributable to service actually taken for the Large Load Facilities are less than the Committed Revenue Contribution.

**NOW**, **THEREFORE**, in consideration of the premises and the mutual covenants and undertakings set forth herein, the receipt and sufficiency of which are acknowledged, the Parties, intending to be legally bound, agree as follows:

## ARTICLE 1
## DEFINITIONS

### 1.0 Defined Terms

Capitalized terms used in this CRA have the meanings set forth below. Capitalized terms used but not defined in this CRA have the meanings set forth in the PJM Tariff.

(a) "Actual Revenue Contribution" means, for each Measurement Period, the Firm Transmission Service-related revenues attributable to Firm Transmission Service actually taken by Eligible Customer to serve the Large Load Facilities, as calculated in accordance with Section 5.2 and Exhibit B.

(b) "Agreement" or "CRA" means this Cost Recovery Agreement, including its Exhibits and any amendments that become effective in accordance with this CRA and applicable law.

(c) "Applicable Credits" means the amounts identified in Article 9 and Exhibit D, Section 4, that are deducted in calculating the Early Termination Amount or Partial Termination Amount, without duplication.

(d) "Applicable Firm Transmission Service Rate" means, for each Measurement Period, the Transmission Owner's rate or rates then in effect under the PJM Tariff for the applicable Firm Transmission Service in the applicable Transmission Zone, as used to calculate the charges corresponding to the Firm Load Commitment.

(e) "Applicable Termination Percentage" means the percentage set forth in Exhibit D for the period in which the termination or Partial Termination becomes effective.

(f) "Business Day" means any day other than a Saturday, Sunday, or holiday recognized by the North American Electric Reliability Corporation.

(g) "Commercial Operation Date" means the anticipated initial service date for the Large Load Facilities identified in Exhibit A.

(h) "Committed Revenue Contribution" means, for each Measurement Period, the contractually required portion of the Full Firm Transmission Service Benchmark, calculated by applying the Minimum Commitment Percentage in accordance with Section 5.1 and Exhibit B.

(i) "Credit Support" means the financial security that Large Load Customer is required to provide and maintain under Section 6.1 to secure Large Load Customer's payment and other financial obligations under this CRA.

(j) "Credit Support Requirement" means the amount of Credit Support that Large Load Customer is required to cause to be provided and maintained, as calculated in accordance with Section 6.5 and Exhibit C based on the aggregate Projected Full Firm Transmission Service Benchmarks for all Measurement Periods remaining in the Term, including any portion of the applicable Measurement Period that remains incomplete. Before the recalculation required under Section 3.2, the Credit Support Requirement shall be the Initial Credit Support Requirement.

(k) "Effective Date" means the date on which this CRA becomes effective as set forth in Section 4.1.

(l) "Early Termination Amount" means the amount payable by Large Load Customer upon a termination of this CRA for which an Early Termination Amount is required under Article 9, as calculated in accordance with Exhibit D.

(m) "Early Termination Offset Amount" means the Firm Transmission Service-related revenues received by Transmission Owner during the period corresponding to the remaining fixed period from incremental replacement load served at the same Point of Delivery, to the extent those revenues correspond to the revenue exposure included in the Early Termination Amount or Partial Termination Amount, as determined in accordance with Section 9.9.

(n) "Eligible Customer" means the Person identified as Eligible Customer in the preamble to this CRA, which is an Eligible Customer under the PJM Tariff and the entity responsible for taking Firm Transmission Service on behalf of Large Load Customer to serve the Large Load Facilities. Eligible Customer is responsible only for the obligations expressly assigned to Eligible Customer under this CRA and is not responsible for Large Load Customer's payment or Credit Support obligations.

(o) "FERC" means the Federal Energy Regulatory Commission or any successor agency.

(p) "Final PJM Agreement" means the final Transmission Service Agreement or other agreement executed under the PJM Tariff that identifies the Firm Transmission Service to be taken by Eligible Customer on behalf of Large Load Customer.

(q) "Firm Load Commitment" means the amount of firm load identified in Exhibit A, together with the corresponding level of Firm Transmission Service that Eligible Customer has committed to take on behalf of Large Load Customer and any associated load-ramp milestones and Service Dates.

(r) "Firm Transmission Service" means NITS, Firm Point-to-Point Transmission Service, or FCDS, as applicable, requested or taken by Eligible Customer under the PJM Tariff on behalf of Large Load Customer to serve the Large Load Facilities.

(s) "Full Firm Transmission Service Benchmark" means, for each Measurement Period, the charges that would apply under the Applicable Firm Transmission Service Rate and applicable billing determinants if Eligible Customer took Firm Transmission Service corresponding to the Firm Load Commitment scheduled to apply during that Measurement Period, as calculated in accordance with Section 5.1 and Exhibit B.

(t) "Force Majeure" has the meaning set forth in Article 12.

(u) "FCDS" means Firm Contract Demand Transmission Service under the PJM Tariff.

(v) "Initial Load Commitment" means the initial amount of Firm Transmission Service to be requested by Eligible Customer on behalf of Large Load Customer, together with the proposed load ramp and anticipated Service Dates identified in Exhibit A at execution of this CRA.

(w) "Initial Credit Support Requirement" means the amount of Credit Support identified in Exhibit C at execution by the Parties of this CRA based on the Initial Load Commitment, anticipated Service Dates, and aggregate Projected Full Firm Transmission Service Benchmarks for the Term, calculated in accordance with the methodology specified in Exhibit C.

(x) "Large Load" shall mean end-use customer(s) load that has a cumulative peak load of 50 megawatts or greater at a single electrical site behind one or more points of interconnection, where for configurations involving multiple affiliated load facilities or multiple points of interconnection with affiliated load facilities behind them, all affiliated load facilities within a one-mile radius will be considered a single electrical site as further described in the PJM Manuals.

(y) "Large Load Customer" means the Person identified in Exhibit A that owns, operates, leases, or otherwise controls the Large Load Facilities and on whose behalf Eligible Customer takes Firm Transmission Service to serve the Large Load Facilities. Large Load Customer is a Party to this CRA and is directly responsible for the payment and Credit Support obligations assigned to Large Load Customer under this CRA.

(z) "Large Load Facilities" means the new or modified facilities identified in Exhibit A that constitute the Large Load.

(aa) "Measurement Period" means each period, not to exceed one year, corresponding to Transmission Owner's applicable formula rate cycle, or portion thereof, beginning on the first Service Date and continuing through the end of the Term, as specified in Exhibit A.

(bb) "Minimum Commitment Percentage" means the percentage specified in Exhibit A that is applied to the Full Firm Transmission Service Benchmark to calculate the Committed Revenue Contribution, which percentage shall be no less than 80% and no greater than 100%, per the schedule set forth in Exhibit A below.

(cc) "MW" means megawatts.

(dd) "NITS" means Network Integration Transmission Service provided pursuant to the PJM Tariff, Part III.

(ee) "Partial Termination Amount" means the amount payable by Large Load Customer upon a permanent reduction of a specified portion of the Firm Load Commitment under Section 9.2, as calculated in accordance with Section 9.8 and Exhibit D.

(ff) "Person" means an individual, corporation, limited liability company, partnership, association, trust, governmental authority, or other legal entity.

(gg) "PJM" means PJM Interconnection, L.L.C. or its successor.

(hh) "PJM Tariff" means the PJM Open Access Transmission Tariff, as accepted by FERC and effective from time to time.

(ii) "Projected Committed Revenue Contributions" means the aggregate amounts projected to constitute Committed Revenue Contributions during the applicable period, calculated by applying the Minimum Commitment Percentage to the Projected Full Firm Transmission Service Benchmark for each applicable Measurement Period.

(jj) "Project Development Costs" means all expenditures, costs, and cancellation fees incurred, or due to commitments made by the Transmission Owner or other transmission owners to engineer, design, procure, construct, own, operate, maintain, and service the necessary transmission facilities needed to serve the Large Load Customer that are intended to be placed into transmission rate base and recovered through transmission rates.

(kk) "Projected Full Firm Transmission Service Benchmark" means, for each applicable Measurement Period, 100% of the Firm Transmission Service-related charges projected to apply if Eligible Customer takes Firm Transmission Service corresponding to the Initial Load Commitment or Firm Load Commitment, as applicable, calculated in accordance with Exhibit C.

(ll) "Service Date" means (i) before execution of the Final PJM Agreement, each anticipated date identified in Exhibit A on which the Initial Load Commitment, or a portion thereof, is expected to become effective; and (ii) after execution of the Final PJM Agreement, each date identified in Exhibit A as updated pursuant to Section 3.2 on which the Firm Load Commitment, or a specified portion thereof under an applicable load ramp, is scheduled to become effective..

(mm) "Shortfall Amount" means, for each Measurement Period, the amount, if any, by which the Committed Revenue Contribution exceeds the Actual Revenue Contribution, as calculated in accordance with Section 5.3 and Exhibit B.

(nn) "Term" has the meaning set forth in Section 4.2.

(oo) "Transmission Owner" means the PJM Transmission Owner identified in the preamble to this CRA.

(pp) "Transmission System" shall mean the facilities controlled or operated by PJM that are used to provide transmission service under Part II and Part III of the PJM Tariff.

(qq) "Transmission Zone" means the transmission zone identified in Exhibit A in which the Large Load Facilities are located.

## ARTICLE 2
## RECITALS

### 2.1 Recitals

The statements set forth in the recitals above are hereby incorporated herein into the terms and conditions of this CRA as if fully set forth herein.

## ARTICLE 3
## FIRM LOAD COMMITMENT

### 3.1 Initial Load Commitment and Firm Load Commitment

At execution of this CRA, the Initial Load Commitment shall be established using the amount and type of Firm Transmission Service that Eligible Customer intends to request from PJM on behalf of Large Load Customer through the applicable application and study process, together with the proposed load ramp and anticipated Service Dates identified in Exhibit A.

Following execution of the Final PJM Agreement, the Firm Load Commitment applicable during each Measurement Period shall be the amount and type of Firm Transmission Service that the Eligible Customer takes on behalf of the Large Load during each Measurement Period, as set forth in Exhibit A. This amount shall be based on the amount of load for the Large Load scheduled to be in service during each Measurement Period, or the amount of Firm Transmission Service that the Eligible Customer has contracted for on behalf of the Large Load.

If Exhibit A establishes a load ramp, consistent with the amount of Firm Transmission Service that the Eligible Customer has contracted for on behalf of the Large Load, each scheduled load level becomes part of the Firm Load Commitment on the applicable Service Date.

Except as expressly provided in this CRA, Eligible Customer's failure to begin taking Firm Transmission Service to serve the Large Load Facilities, take Firm Transmission Service corresponding to a scheduled load level, or maintain that level of Firm Transmission Service does not reduce or defer the Firm Load Commitment or the Committed Revenue Contribution, or excuse Large Load Customer from any payment or Credit Support obligation under this CRA.

### 3.2 Post-Final PJM Agreement Update and Subsequent Modification

Within thirty (30) days after execution of the Final PJM Agreement, Transmission Owner shall update Exhibit A to reflect the Firm Transmission Service, load ramp, and Service Dates established through or consistent with the Final PJM Agreement. Transmission Owner shall also update the Applicable Firm Transmission Service Rate, Projected Committed Revenue Contributions, Projected Full Firm Transmission Service Benchmarks, Credit Support Requirement, the applicable schedules in Exhibits A and C, and the calculations under Exhibit B using the information then available.

The information reflected in the Final PJM Agreement shall control over the corresponding preliminary information included in Exhibit A at execution. If the Final PJM Agreement establishes less Firm Transmission Service than the Initial Load Commitment, the Firm Load Commitment shall be reduced accordingly. A reduction required by this paragraph shall not constitute a Partial Termination and shall not result in a Partial Termination Amount.

An update required by this Section shall become effective without further agreement of the Parties and shall not constitute an amendment to this CRA. Transmission Owner shall provide the updated Exhibits and reasonable supporting calculations to Eligible Customer and Large Load Customer.

After the update required by this Section, a further modification to the Firm Load Commitment or a Service Date shall become effective only if the Parties execute any amendment required under this CRA and the amendment receives any required PJM or FERC acceptance or approval. A customer-requested reduction remains subject to Article 9.

### 3.3 No Transmission Owner Obligation

Except as otherwise explicitly provided herein, nothing in this Agreement shall constitute an obligation on the part of Transmission Owner to provide any service to any Party or place into service any transmission facilities by any specific date or dates.

## ARTICLE 4
## EFFECTIVE DATE AND TERM

### 4.1 Effective Date

This CRA will become effective on the later of : (1) the date executed by all Parties, or (2) the date accepted or approved by FERC, if such acceptance or approval is required, or (3) on such other date as FERC may establish in an order accepting or approving the CRA (the "Effective Date").

### 4.2 Term

Unless terminated earlier in accordance with this CRA, the term of this CRA (the "Term") shall commence on the Effective Date and continue until the later of: (i) the date that is at least ten (10) years after the first Service Date as specified in Exhibit A; and (ii) the date on which all outstanding obligations under this CRA have been satisfied.

## ARTICLE 5
## REVENUE CONTRIBUTIONS AND SHORTFALL AMOUNT

### 5.1 Committed Revenue Contribution

For each Measurement Period during the Term, Transmission Owner shall calculate the Committed Revenue Contribution in accordance with this Section and Exhibit B, using the applicable rates, billing determinants, and other information available in accordance with the PJM Tariff. The Committed Revenue Contribution shall equal the Minimum Commitment Percentage multiplied by the Firm Transmission Service-related charges that would apply if Eligible Customer took Firm Transmission Service corresponding to the Firm Load Commitment applicable during the Measurement Period.

The calculation shall use:

(a) the Firm Load Commitment that applies during each Measurement Period;
(b) the Applicable Firm Transmission Service Rate and the generally applicable billing determinants under the PJM Tariff; and
(c) the portion of the Measurement Period during which each scheduled Firm Load Commitment amount and Applicable Firm Transmission Service Rate applies.

If more than one Firm Load Commitment amount or Applicable Firm Transmission Service Rate applies during a Measurement Period, Transmission Owner shall calculate separately the amount applicable to each portion of the Measurement Period and aggregate those amounts to determine the Committed Revenue Contribution for the applicable Measurement Period.
Eligible Customer shall be responsible for timely payment of charges for Firm Transmission Service in a given calendar year on a monthly basis in accordance with the PJM Tariff.

### 5.2 Actual Revenue Contribution

For each Measurement Period during the Term, Transmission Owner shall calculate the Actual Revenue Contribution attributable to Firm Transmission Service actually taken to serve the Large Load Facilities in accordance with Exhibit B. To the extent that the Large Load Customer has made separate payments through a retail tariff or other retail mechanism that reflect the assignment of Firm Transmission Service or related costs to the Large Load Customer, such

payments shall be taken into account in determining its Actual Revenue Contribution, insofar as doing so does not result in costs being shifted to other Eligible Customers taking service in the Transmission Owner's Zone. To the extent that the applicable Firm Transmission Service methodology calculates charges using an assigned Network Service Peak Load contribution or another allocated billing determinant, the Actual Revenue Contribution shall be calculated using the billing determinant assigned to the Large Load Facilities for the applicable Measurement Period and the same categories of rates used to calculate the Committed Revenue Contribution.

**5.3 Shortfall Amount**

For each Measurement Period, the Shortfall Amount shall equal the amount, if any, by which the Committed Revenue Contribution exceeds the Actual Revenue Contribution in accordance with Exhibit B.

Large Load Customer shall pay each Shortfall Amount in accordance with Article 7.

**5.4 Separate Measurement Periods**

Each Measurement Period shall be calculated independently.

**5.5 Commencement of Committed Revenue Contribution**

The determination of the Committed Revenue Contribution and any corresponding Shortfall Amounts shall begin on the corresponding Service Date, as set forth in Exhibit A, regardless of whether: (i) Eligible Customer has begun taking the corresponding level of Firm Transmission Service; (ii) the amount of Firm Transmission Service taken by Eligible Customer corresponds to the load level scheduled to apply on that Service Date; or (iii) the Large Load Facilities are operating at a lower load level than the one scheduled to apply on that Service Date.

Notwithstanding the foregoing, if Eligible Customer cannot begin taking the applicable Firm Transmission Service on a Service Date solely because the necessary transmission facilities have not been completed, and such delay was not caused in whole or in part by Large Load Customer's or Eligible Customer's failure or lack of reasonable diligence in satisfying its obligations under this CRA or under any other binding agreement, tariff, regulatory order, or other legal requirement, the Service Date and commencement of the corresponding Committed Revenue Contribution shall be extended on a day-for-day basis until the Firm Transmission Service becomes available. Large Load Customer's obligations include, without limitation (a) construction, testing, commissioning and readiness of any facilities being constructed by Large Load Customer, and (b) prompt and reasonable responses to Transmission Owner's or Transmission Owners' affiliate(s)' requests for information, approvals, or other communications necessary for Transmission Owner's or Transmission Owners' affiliate(s)' work.

**5.6 Access to Information**

Eligible Customer shall provide, or authorize access to, the service, billing, settlement, and allocation information from PJM or any other entity reasonably necessary for Transmission Owner to calculate the Actual Revenue Contribution, Shortfall Amount, or any other calculation

required under this Agreement.

## ARTICLE 6
## CREDIT SUPPORT

### 6.1 Obligation to Post and Maintain Credit Support

In accordance with Tariff, Part VIII, Subpart N, section 441(d), Large Load Customer shall, at its own expense, cause Credit Support equal to the Initial Credit Support Requirement identified in Exhibit C to be provided in favor of Transmission Owner not later than ten (10) days after the end of the negotiation period specified in Tariff, Part VIII, Subpart N, section 441(c).

If Large Load Customer fails to provide the required Credit Support within that period, the consequences specified in Tariff, Part VIII, Subpart N, section 441(d) shall apply.

Within five (5) Business Days after receipt of the post-PJM recalculation required under Section 3.2, Large Load Customer shall cause the Credit Support to be increased, reduced, amended, or replaced as necessary to equal the recalculated Credit Support Requirement.

The Credit Support shall secure Large Load Customer's payment and other financial obligations under this CRA and shall at all times equal or exceed the Credit Support Requirement set forth in Exhibit C, subject to any reduction or treatment of prior draws expressly provided in this CRA.

The Credit Support Requirement shall be based on 100% of the Projected Full Firm Transmission Service Benchmarks for the applicable remaining Measurement Periods and shall not be reduced by the Minimum Commitment Percentage.

Large Load Customer shall cause the Credit Support to be maintained throughout the Term and thereafter until:

(a) all Shortfall Amounts and other amounts due under this CRA have been paid;
(b) the final reconciliation required under this CRA has been completed; and
(c) Transmission Owner has no remaining right to draw on the Credit Support under this CRA.

### 6.2 Form of Credit Support

Credit Support shall be a Letter of Credit in the form specified in Exhibit C and related attachments to Exhibit C.

### 6.3 Replacement of Credit Support

Large Load Customer shall cause compliant replacement Credit Support to be provided within five (5) Business Days after notice from Transmission Owner if: (i) the issuer ceases to satisfy the requirements of Exhibit C; (ii) the Credit Support ceases to satisfy this Article 6; (iii) the Credit Support will expire or terminate before Large Load Customer's obligation to maintain Credit Support ends; or (iv) the issuer gives notice of nonrenewal.

Replacement Credit Support provided under this Section shall be in an amount equal to the then-applicable Credit Support Requirement, as determined under Section 6.5 and Exhibit C as of the replacement date to reflect any completed Measurement Period that has been excluded from the Credit Support Requirement in accordance with Section 6.5, less the amount of any cash security then held by Transmission Owner and legally available to secure the same obligations.

**6.4 Preservation Draw**

If Large Load Customer fails to cause timely replacement Credit Support to be provided under Section 6.3, Transmission Owner may draw the lesser of: (i) the full amount then available under the existing Credit Support; and (ii) the then-applicable Credit Support Requirement, less any cash security then held by Transmission Owner and legally available to secure the same obligations. Transmission Owner may hold the proceeds as cash security for Large Load Customer's obligations under this CRA.

A preservation draw does not constitute payment of an obligation unless and until Transmission Owner applies the proceeds to an amount due under this CRA.

Transmission Owner shall release cash security held under this Section after Large Load Customer causes compliant replacement Credit Support to be provided, except to the extent the cash has been applied to an amount due.

**6.5 Adjustment of Credit Support Requirement**

The Credit Support Requirement for each applicable period shall be calculated in accordance with Exhibit C.

Transmission Owner shall also recalculate the Credit Support Requirement following the update required under Section 3.2. That recalculation shall replace the Initial Credit Support Requirement and shall reflect the Firm Load Commitment, Service Dates, Applicable Firm Transmission Service Rate, Projected Full Firm Transmission Service Benchmarks, and other information established following the Final PJM Agreement.

Transmission Owner shall recalculate the Credit Support Requirement after completion of each Measurement Period and upon any other recalculation event specified in Exhibit C. The recalculated Credit Support Requirement shall equal the aggregate Projected Full Firm Transmission Service Benchmarks for the Measurement Periods remaining in the Term, including any incomplete portion of the applicable Measurement Period. A completed Measurement Period shall be excluded from the Credit Support Requirement only after: (i) the Committed Revenue Contribution, Actual Revenue Contribution, and any resulting Shortfall Amount for that Measurement Period have been finally calculated; and (ii) Large Load Customer has paid all amounts due for that Measurement Period.

If the Credit Support Requirement increases, Large Load Customer shall cause the Credit Support to be increased to the recalculated Credit Support Requirement within five (5) Business Days after receipt of the calculation.

If the Credit Support Requirement decreases, Transmission Owner shall authorize a corresponding reduction within five (5) Business Days of a request by the financial institution issuing the Credit Support for such authorization, provided that no payment default or other Event of Default exists and the remaining Credit Support, together with any cash security held by Transmission Owner, will equal or exceed the adjusted Credit Support Requirement.

Actual Revenue Contributions for a completed Measurement Period shall be used to determine the Shortfall Amount for that completed Measurement Period but shall not reduce the Projected Full Firm Transmission Service Benchmarks used to calculate the Credit Support Requirement for future Measurement Periods.

**6.6 Draws for Unpaid Amounts**

Except for a preservation draw under Section 6.4, Transmission Owner may draw on Credit Support only after: (i) Transmission Owner has issued an invoice identifying an amount due under this CRA and the basis for that amount; and (ii) Large Load Customer has failed to pay the invoiced amount within the payment period specified in Article 7.

A draw shall not exceed the amount due and unpaid.

Transmission Owner shall apply the proceeds of a draw to the unpaid amount for which the draw was made. Proceeds applied to a Shortfall Amount shall be credited in accordance with Section 7.6, and proceeds applied to an Early Termination Amount or Partial Termination Amount shall be applied and credited in accordance with Section 9.12. Large Load Customer's payment default shall be cured to the extent Transmission Owner receives and applies proceeds sufficient to satisfy the unpaid amount.

**6.7 Replenishment**

Following a draw applied to satisfy an unpaid amount, Large Load Customer shall cause the Credit Support to be restored to the applicable Credit Support Requirement within five (5) Business Days after notice from Transmission Owner.

**6.8 Release of Credit Support**

Transmission Owner shall release the remaining Credit Support within ninety (90) days after the latest of: (i) expiration or termination of the Term; (ii) completion of all calculations, invoices, and reconciliations required under this CRA; (iii) payment of all undisputed amounts determined to be due under this CRA; or (iv) resolution of any pending dispute that could result in an additional amount payable by Large Load Customer .

Transmission Owner shall provide release or cancellation documentation relating to Credit Support to Large Load Customer, with a copy to Eligible Customer.

## ARTICLE 7

## INVOICING AND PAYMENT

### 7.1 Determination and Invoice

After the end of each Measurement Period, Transmission Owner shall calculate the Committed Revenue Contribution, Actual Revenue Contribution, and resulting Shortfall Amount in accordance with Article 5 and Exhibit B.

If a Shortfall Amount exists, Transmission Owner shall inform the other Parties and issue an invoice to Large Load Customer for the Shortfall Amount within sixty (60) days after the end of the applicable Measurement Period. Transmission Owner shall provide Eligible Customer with a copy of the invoice.

### 7.2 Payment

Large Load Customer shall timely pay all amounts invoiced and due under this CRA by no later than thirty (30) days after the date of receipt of the applicable invoice. Any payment made after thirty (30) days, including any draw made by a Transmission Owner pursuant to Sections 6.6 and 7.3 below shall include interest at the FERC rate set forth in 18 CFR Section 35.19.

### 7.3 Draw on Credit Support

If Large Load Customer fails to timely pay an invoiced amount, Transmission Owner may draw on the Credit Support for the unpaid amount in accordance with Section 6.6.

### 7.4 Review of Supporting Documentation

Upon Large Load Customer's timely request, Transmission Owner and if applicable, Eligible Customer, shall provide documentation reasonably necessary to enable Large Load Customer to verify the accuracy of an invoice, subject to applicable confidentiality requirements. For purposes of this section, a request shall be considered timely if made no more than five (5) Business Days after the date of receipt of the applicable invoice.

Eligible Customer shall provide or authorize access to any service, billing, settlement, or allocation information reasonably necessary to support that review.

A request under this section shall not act to defer or extend the date on which payment is due under Section 7.2.

### 7.5 Disputed Amounts

Large Load Customer shall timely pay each invoiced amount notwithstanding any dispute, and Transmission Owner's right to draw on Credit Support shall not be suspended by the dispute. If the final resolution determines that Large Load Customer paid, or Transmission Owner drew, more than the amount properly due, Transmission Owner shall promptly return the excess amount. Any dispute must be made by no later than the date payment is due and conform to the

requirements set forth in Section 15.1 below.

### 7.6 Crediting of Shortfall Amounts

All Shortfall Amounts collected by Transmission Owner shall be credited against the Transmission Revenue Requirement of the Transmission Owner for the Transmission Zone in which the Eligible Customer is taking Firm Transmission Service. Transmission Owner shall account for and credit all amounts received under this CRA in accordance with this Section 7.6, Section 9.12, as applicable, the PJM Tariff, and its applicable FERC-jurisdictional rate. Transmission Owner's calculation, collection, accounting, and crediting of Shortfall Amounts shall be reflected in, and remain subject to review under, Transmission Owner's applicable FERC-jurisdictional formula rate and related protocols.

## ARTICLE 8
## DEFAULT AND REMEDIES

### 8.1 Events of Default

Each of the following constitutes an "Event of Default" by the applicable Party:

(a) failure by Large Load Customer to cause the initial Credit Support to be timely provided in the amount and form required under this CRA;

(b) failure by Large Load Customer to cause to be timely provided replacement or additional Credit Support required under Article 6;

(c) failure by Large Load Customer to cause Credit Support to be replenished when required under Section 6.7;

(d) a material misrepresentation by a Party concerning the Firm Load Commitment, Actual Revenue Contribution, Credit Support, or another material matter under this CRA;

(e) assignment or attempted assignment of this CRA by a Party in violation of Article 10;

(f) repudiation of this CRA by a Party;

(g) failure by Eligible Customer to take any PJM Tariff action expressly required of Eligible Customer under this CRA or a default by Eligible Customer under any PJM agreement relating to the provision of Firm Transmission Service; or

(h) failure by Eligible Customer or Large Load Customer to take an action expressly required under this CRA to request, pursue, or complete the applicable PJM process; or

(i) a default by Large Load Customer under any agreement with Transmission Owner or its Affiliates relating to the Large Load Facilities, including any failure to comply with any retail service tariffs, retail agreements, or other retail obligations that would prevent the Large Load Customer from meeting its obligations under this CRA;

(j) the bankruptcy or insolvency of Large Load Customer; or

(k) any other material breach by a Party that remains uncured after the applicable period provided in Section 8.2.

### 8.2 Notice and Cure

Except as otherwise expressly provided in this CRA, Transmission Owner shall provide the Defaulting Party with written notice of an Event of Default describing the default in reasonable detail.

The Defaulting Party shall have: (i) five (5) Business Days after receipt of notice to cure a Credit Support default; and (ii) fifteen (15) days after receipt of notice to cure any other curable Event of Default.

### 8.3 Remedies

Following an Event of Default that has not been timely cured, the non-Defaulting Party or Parties may, in their sole discretion:

(a) if Transmission Owner is a non-Defaulting Party, draw on Credit Support in accordance with this CRA;
(b) recover any amount due and unpaid under this CRA;
(c) require specific performance of Large Load Customer's obligation to cause Credit Support to be provided or maintained;
(d) exercise any right or remedy available under the PJM Tariff to the extent applicable to that Party;
(e) terminate this CRA only as expressly permitted under Article 9; and
(f) exercise any other right or remedy available under applicable law.

Transmission Owner shall credit all payments and Credit Support proceeds against the obligation for which they were received and shall not obtain duplicative recovery of the same amount.

### 8.4 Effect of Credit Support Draw

Receipt and application of Credit Support proceeds sufficient to satisfy an unpaid amount shall cure the applicable payment default to the extent of the proceeds received and applied.

## ARTICLE 9
## EARLY AND PARTIAL TERMINATION

### 9.1 Termination or Reduction by Large Load Customer; Withdrawal from PJM Process

Before execution of the Final PJM Agreement, Eligible Customer's withdrawal or abandonment of the request for Firm Transmission Service from the applicable PJM process on behalf of Large Load Customer, or refusal to execute the Final PJM Agreement shall constitute an early termination of this CRA by Large Load Customer. Large Load Customer shall pay the Early Termination Amount calculated under Section 9.7 and Exhibit D. Termination under this paragraph shall become effective upon the applicable withdrawal, abandonment, or refusal and shall not be subject to the 120-day notice period below.

After execution of the Final PJM Agreement, Large Load Customer may terminate this CRA before expiration of the Term by providing Transmission Owner and Eligible Customer with at least 120 days' prior written notice. Notwithstanding the foregoing, termination shall not become effective unless and until (a) the Large Load Customer has paid in full the applicable Early Termination Amount or Partial Termination Amount, as determined pursuant to this CRA, or (b)

if such amount remains unpaid, the Transmission Owner has drawn on the Credit Support and recovered the full amount of such unpaid Early Termination Amount or Partial Termination Amount.

Large Load Customer shall pay the Early Termination Amount calculated under Section 9.7 and Exhibit D.

Large Load Customer's obligation to pay the Early Termination Amount shall survive termination and remain secured by Credit Support until paid in full.

**9.2 Partial Termination**

Before execution of the Final PJM Agreement, a reduction by Large Load Customer or Eligible Customer in the amount of Firm Transmission Service requested through the PJM process shall constitute a Partial Termination.

Large Load Customer may permanently reduce a specified portion of the Firm Load Commitment by providing Transmission Owner and Eligible Customer with at least 120 days' prior written notice and paying the Partial Termination Amount calculated under Section 9.8 and Exhibit D.

A Partial Termination shall become effective only after: (i) PJM has approved, directed, or otherwise recognized the reduction to the extent required under the PJM Tariff; (ii) the Parties have executed an amendment to Exhibit A; and (iii) the amendment has become effective under applicable FERC requirements.

If the Large Load Facilities have not achieved the state of readiness necessary to take Firm Transmission Service corresponding to the applicable Firm Load Commitment by 120 days after each Service Date, such occurrence will constitute a Partial Termination.

**9.3 Project Abandonment or Cessation**

Each Party shall notify the other Parties within five (5) Business Days after becoming aware that:

(a) the Large Load Customer has determined that it will not construct or complete the Large Load Facilities or proceed with the applicable request for Firm Transmission Service;
(b) the Large Load Facilities have not achieved the state of readiness necessary to take Firm Transmission Service by 120 days after the initial Service Date;
(c) the Large Load Customer intends to permanently cease operations at the Large Load Facilities; or
(d) Eligible Customer intends to permanently cease taking Firm Transmission Service to serve the Large Load Facilities.

Upon notice or occurrence of an event described in this Section, Transmission Owner may terminate this CRA upon thirty (30) days' written notice to the other Parties, and Large Load Customer shall pay the Early Termination Amount. Large Load Customer's obligation to pay

the Early Termination Amount shall survive termination and remain secured by Credit Support until paid in full.

### 9.4 Termination for Default

Transmission Owner may terminate this CRA upon written notice to other Parties if a Party:

(a) commits an Event of Default that is not capable of cure; or

(b) fails to cure an Event of Default within the applicable period under Article 8.

Upon termination, Large Load Customer shall pay:

(a) all Shortfall Amounts and other amounts accrued through the termination date;

(b) the Early Termination Amount; and

(c) any other amount due under this CRA, subject to the prohibition against duplicative recovery.

Transmission Owner may apply Credit Support or cash security to those amounts in accordance with Articles 6, 7 and 9.

### 9.5 Termination by Mutual Agreement

The Parties may terminate this CRA by mutual written agreement, subject to applicable FERC requirements.

Any such agreement shall specify the treatment of the Early Termination Amount, any outstanding Shortfall Amounts, and the remaining Credit Support provided by Large Load Customer.

### 9.6 Termination Due to Transmission Facility-Related Delay

If any extension of a Service Date or Committed Revenue Contribution under the second paragraph of Section 5.5 results in a forecasted or actual extension of [Insert number of months] months or more to either the first Service Date or any subsequent Service Date, Large Load Customer may, at its option, either (1) terminate this CRA; or (2) accept the timing and resulting adjustment to the applicable Service Date(s).

If Large Load Customer elects to terminate this CRA pursuant to this Section 9.6, Large Load Customer shall be responsible for paying an Early Termination Amount calculated pursuant to Exhibit D. However, for purposes of determining the Applicable Termination Percentage under Exhibit D the number of days in any forecasted or actual extension to the Service Date or Committed Revenue Contribution shall not be counted.

To invoke this termination right, Large Load Customer must provide written notice to Transmission Owner and Eligible Customer within 60 days of receipt of notice that any forecasted or actual extension will equal or exceed [Insert number of months] months. Moreover, Large Load Customer will not be permitted to invoke this termination right if the delay is caused in whole or part by Large Load Customer's failure or lack of reasonable

diligence in meeting its obligations under this Agreement or any other binding agreement, tariff, regulatory order or other legal requirement, as set forth in Section 5.5.

**9.7 Early Termination Amount**

The "Early Termination Amount" shall be calculated in accordance with Exhibit D.

**9.8 Partial Termination Amount**

The "Partial Termination Amount" shall be calculated in accordance with Exhibit D. After the Partial Termination becomes effective, the Committed Revenue Contribution and Credit Support Requirement shall be calculated using the remaining Firm Load Commitment, provided that the Credit Support Requirement shall continue to be based on 100% of the Projected Full Firm Transmission Service Benchmarks corresponding to that remaining Firm Load Commitment.

**9.9 Early Termination Offset Amount**

If the Early Termination Offset Amount is quantifiable when Transmission Owner issues the termination invoice, it shall be included as an Applicable Credit.

If the offset becomes quantifiable afterward, Transmission Owner shall reflect it in a subsequent reconciliation and promptly return any resulting excess payment to Large Load Customer.

Nothing in this Section requires Transmission Owner to market the Point of Delivery, solicit replacement load, modify its transmission planning or service processes, or enter into a service arrangement with another Person.

**9.10 Invoice and Payment**

Transmission Owner shall promptly invoice Large Load Customer for the Early Termination Amount or Partial Termination Amount and provide reasonable substantiation of the calculation. For the avoidance of doubt, in the event that the Large Load Customer fails to timely pay an invoice for the Early Termination Amount or Partial Termination Amount, the Transmission Owner shall be permitted to draw on the Credit Support for the unpaid amount.

**9.11 Effect of Termination**

Any full termination of this CRA for any reason shall result in (i) before execution of the Final PJM Agreement, withdrawal or cancellation of the applicable request for Firm Transmission Service; and (ii) after execution of the Final PJM Agreement, cancellation of the Firm Transmission Service taken by Eligible Customer on behalf of Large Load Customer and the related Transmission Service Agreement, except where FERC has accepted a replacement or substitute agreement that contains terms reasonably comparable to this CRA pursuant to PJM Tariff, Part VIII, Section 438(b).

A Partial Termination shall result in the corresponding reduction of the request for Firm Transmission Service or the Firm Transmission Service, as applicable.

For avoidance of doubt, termination of this CRA and related cancellation of Firm Transmission Service shall not prohibit Large Load Customer from seeking Firm Transmission Service in the future.

### 9.12 Crediting of Termination Amount

If the effective date of an Early Termination or Partial Termination occurs prior to the first Service Date and the Large Load Customer is required to pay an Early Termination Amount or Partial Termination Amount, as applicable, such amount shall first be applied to the Project Development Costs as of the effective date of such termination in accordance with PJM Tariff, Part VIII, Subpart N, section 441(e). Any remaining amounts from the applicable Termination Amount shall be credited to the Transmission Owner's Transmission Revenue Requirement for the Transmission Zone in which the Eligible Customer would have taken Transmission Service. For the avoidance of doubt, if Transmission Owner allocates any of the applicable Termination Amount to the Project Development Costs, such amount shall not be recovered in Transmission rates.

If the effective date of an Early Termination or Partial Termination occurs on or after the first Service Date and the Large Load Customer is required to pay an Early Termination Amount or Partial Termination Amount, as applicable, such amount shall be credited to the Transmission Owner's Transmission Revenue Requirement for the Transmission Zone in which the Eligible Customer would have taken Firm Transmission Service.

## ARTICLE 10
## ASSIGNMENT

### 10.1 Assignment by Eligible Customer

Eligible Customer may not assign or transfer this CRA, or any right or obligation arising under this CRA, in whole or in part, without the prior written consent of Transmission Owner and Large Load Customer, which consent shall not be unreasonably withheld, conditioned, or delayed.

Notwithstanding the foregoing, Eligible Customer may assign its rights and obligations under this CRA to an Affiliate without Transmission Owner's prior written consent, if:

(a) Eligible Customer provides the other Parties with prior written notice of the proposed assignment;

(b) the proposed assignee is an Eligible Customer under the PJM Tariff and is authorized to take Firm Transmission Service on behalf of the Large Load Customer;

(c) the proposed assignee assumes in writing all obligations of Eligible Customer under this CRA;

(d) the assignment has received any acceptance, approval, or recognition required from PJM or FERC; and

(e) all disputes between Transmission Owner and existing Eligible Customer as to invoice outstanding have been reconciled.

An assignment by Eligible Customer shall not change Large Load Customer's status or release, reduce, or otherwise modify Large Load Customer's obligations under this CRA.

An assignment shall not become effective until all applicable requirements of this Section have been satisfied.

**10.2 Effect of Assignment**

Except as expressly provided in a written assignment agreement accepted by Transmission Owner and Large Load Customer, an assignment shall not release the assigning Eligible Customer from: (i) any breach or Event of Default occurring before the effective date of assignment; (ii) any obligation arising from information, service, or conduct occurring before the effective date of assignment but calculated or invoiced afterward; or (iii) any obligation that expressly survives assignment.

After the effective date of a permitted assignment, the assignee shall be treated as the Eligible Customer for purposes of this CRA and shall perform all obligations assigned to Eligible Customer under this CRA on and after the effective date of assignment.

**10.3 Assignment by Large Load Customer**

Large Load Customer may not assign or transfer this CRA or any right or obligation arising under this CRA, in whole or in part, without the prior written consent of Transmission Owner and Eligible Customer, which consent shall not be unreasonably withheld, conditioned, or delayed.

An assignment by Large Load Customer shall not become effective unless:

(a) the proposed assignee assumes in writing all obligations of Large Load Customer under this CRA;

(b) compliant replacement Credit Support is provided that directly secures the proposed assignee's obligations under this CRA;

(c) the assignment is documented through a written amendment or assignment executed by the applicable Parties;

(d) the assignment has received any acceptance, approval, or recognition required from PJM or FERC; and

(e) All disputes between Transmission Owner and existing Large Load Customer as to invoice outstanding have been reconciled.

A transfer of ownership, operation, leasehold rights, or control of the Large Load Facilities does not, by itself, assign this CRA or release Large Load Customer from its obligations under this CRA.

**10.4 Assignment by Transmission Owner**

Transmission Owner may assign this CRA, in whole or in part, without the other Parties' consent: (i) to a successor to all or substantially all of the transmission assets or obligations relevant to this CRA; (ii) in connection with a merger, consolidation, reorganization, or other corporate transaction; (iii) to an Affiliate that assumes Transmission Owner's obligations under

this CRA; or (iv) as required or authorized by the PJM Tariff, FERC, or another governmental authority with jurisdiction.

Transmission Owner shall provide the other Parties with written notice of the assignment.

Any other assignment by Transmission Owner requires the prior written consent of the other Parties, which consent shall not be unreasonably withheld, conditioned, or delayed.

## ARTICLE 11
## REGULATORY PROVISIONS

### 11.1 Regulatory Effectiveness

This CRA shall be submitted, reported, designated, posted, or filed only to the extent required by the PJM Tariff, a FERC order, regulation, or applicable law.

Completion of project-specific information, dates, amounts, percentages, schedules, and other elections expressly contemplated by the FERC-accepted form of CRA shall not constitute a nonconforming term or condition.

Updates to Exhibits A and C and calculations under Exhibit B required under Section 3.2 are expressly contemplated by this CRA and shall not constitute nonconforming terms or amendments, except to the extent a further filing with or acceptance by FERC is required.

### 11.2 Required FERC Filing

If this CRA is required to be filed with FERC under the PJM Tariff, a FERC order, or applicable law, Transmission Owner shall submit this CRA for acceptance under Section 205 of the Federal Power Act in accordance with PJM Tariff, Part VIII, Subpart N.

Transmission Owner shall take the lead in preparing and prosecuting the filing and shall use reasonable efforts to obtain FERC's acceptance of this CRA.

Each Party shall reasonably cooperate in connection with the filing and refrain from taking a position inconsistent with the acceptance of this CRA, except as required by applicable law or expressly permitted under this CRA.

Each Party shall bear its own costs incurred in connection with the filing unless the Parties otherwise agree in writing.

### 11.3 Relationship to Other Tariffs and Agreements

Nothing in this CRA shall be construed to grant, provide, guarantee, or otherwise convey transmission service under the PJM Tariff, distribution or retail service under state-regulated tariffs or agreements, or any other service or rate, term or condition of such service, except as expressly provided herein.

Nothing in this CRA limits any obligation under the PJM Tariff or another applicable agreement to pay study costs, directly assigned facility costs, Network Upgrade costs, or other costs associated with transmission service.

## ARTICLE 12
## FORCE MAJEURE

### 12.1 Definition and Scope of Force Majeure

"Force Majeure" means an event or circumstance that:

(a) physically and directly impacts the Large Load Facilities, new transmission facilities, or modifications to existing transmission facilities, and/or
(b) prevents the Affected Party from performing its obligations under this CRA,

which event or circumstance (i) could not have been reasonably anticipated as of the Effective Date and (ii) which is not within the reasonable control of, or the result of negligence or misconduct by, the Affected Party, and (iii) which the Affected Party is unable to overcome or avoid or cause to be avoided, by the exercise of reasonable care. Subject to meeting the requirements of the prior sentence, Force Majeure events shall include, but not be limited to, acts of God; fire; flood; earthquake; war; explosions; labor disputes; lightning; hurricanes; tornadoes; pandemics or epidemics; riots; or acts of terrorism that affect one or more Parties. With respect to a Party's obligation to make payments hereunder, Force Majeure will be only an event or act that on any day disables the banking system through which a Party makes such payments. Nothing herein shall be construed so as to require a Party to settle any strike or labor dispute in which it may be involved. Economic hardship of any Party shall not constitute a Force Majeure under this CRA, even if that economic hardship is caused by an event or condition that would have been a Force Majeure event if it has physically and directly impacted the Large Load Facilities, new transmission facilities, or modifications to existing transmission facilities.

No event affecting only the Large Load Customer, the Large Load Facilities, or the amount of Firm Transmission Service taken to serve the Large Load Facilities shall constitute Force Majeure with respect to Large Load Customer's payment or Credit Support obligations under this CRA.

The Party claiming Force Majeure bears the burden of establishing that the event satisfies every requirement of this Section.

If a Party is rendered unable, wholly or in part, by Force Majeure to carry out its obligations with respect to this CRA (the "Affected Party"), then the obligations of the Affected Party will, to the extent they are affected by such Force Majeure event, be suspended during the period of time that the Force Majeure event renders the Affected Party unable, wholly or in part, to carry out its obligations. The Affected Party will not be liable for breach of this CRA due to a Force Majeure event nor shall the Affected Party be liable to the other Parties for, or on account of, any loss, damage, injury, or expense resulting from, or arising out of such Force Majeure event. The Affected Party must give written notice and full particulars of such Force Majeure event as soon

as practical after the occurrence of the Force Majeure event. If a Force Majeure event continues for over 180 days in the aggregate during any 12 month period, the Parties will meet and in good faith attempt to renegotiate the terms and conditions of this CRA to address and account for the Force Majeure event. If the Parties are thereafter unable to mutually agree in writing on an amendment to this CRA to address issues arising out of the Force Majeure event, Transmission Owner or Large Load Customer may terminate this CRA upon ten (10) days' written notice to the other Parties, subject to Section 12.2, Article 9, and any obligations that accrued or survive under this CRA.

**12.2 Termination Due to Force Majeure**

In the event that Large Load Customer terminates this Agreement pursuant to Section 12, the Large Load Customer shall remain obligated to pay the Early Termination Amount. However, if the Transmission Owner terminates this Agreement pursuant to Section 12, Large Load Customer shall not be required to pay the Early Termination Amount.

**12.3 Effect of Force Majeure**

If a Party is prevented by Force Majeure from performing an obligation under this CRA, that obligation shall be suspended only: (i) to the extent performance is physically impossible because of the Force Majeure; (ii) for the period during which performance remains physically impossible; and (iii) while the affected Party complies with Section 12.4.

The affected Party shall not be in breach of this CRA solely because it fails to perform an obligation properly suspended under this Section.

Force Majeure does not:

(a) excuse or delay an obligation to pay an amount due under this CRA, except solely to the extent expressly provided in Section 12.1;
(b) excuse or delay Large Load Customer's obligation to cause Credit Support to be provided, maintained, increased, renewed, replaced, or replenished;
(c) except for an extension of a Service Date expressly permitted under Section 5.5, reduce, defer, or otherwise modify the Firm Load Commitment, any Service Date, or the Minimum Commitment Percentage;
(d) reduce or defer the calculation of the Committed Revenue Contribution, Actual Revenue Contribution, Shortfall Amount, Early Termination Amount, or Partial Termination Amount;
(e) excuse Eligible Customer's failure to take Firm Transmission Service corresponding to the Firm Load Commitment;
(f) require Transmission Owner to release or reduce Credit Support;
(g) prevent Transmission Owner from issuing an invoice, completing a calculation or reconciliation, or drawing on Credit Support in accordance with this CRA;
(h) excuse any obligation that arose before the Force Majeure began; or
(i) affect the application of Article 9 to any abandonment, permanent cessation, permanent reduction, or termination associated with the Force Majeure.

For the avoidance of doubt, a Force Majeure affecting the Large Load Customer, the Large Load

Facilities, or the amount of Firm Transmission Service taken to serve the Large Load Facilities shall not reduce, defer, or otherwise modify Large Load Customer's payment or Credit Support obligations under this CRA. If circumstances associated with a Force Majeure result in abandonment, permanent cessation, permanent reduction, or termination, Article 9 shall govern the availability, effectiveness, and financial consequences of that abandonment, cessation, reduction, or termination.

### 12.4 Notice

A Party claiming Force Majeure shall provide the other Parties with written notice as soon as reasonably practicable after becoming aware of the event.

Failure to provide timely notice shall not prevent an event from qualifying as Force Majeure, but the affected Party shall not be excused from performance to the extent the delay in notice materially prejudices another Party.

## ARTICLE 13
## REPRESENTATIONS AND WARRANTIES

### 13.1 Mutual Representations and Warranties

Each Party represents and warrants to the other Parties, as of the date it executes this CRA and as of the Effective Date, that:

(a) it is duly organized, validly existing, and in good standing under the laws of its jurisdiction of organization, to the extent such concepts apply;

(b) it has the power and authority to execute, deliver, and perform this CRA;

(c) its execution by the Parties, delivery, and performance of this CRA have been duly authorized by all necessary organizational action;

(d) the individual executing this CRA on its behalf has authority to bind it;

(e) this CRA constitutes its legal, valid, and binding obligation, enforceable against it in accordance with its terms, subject to applicable bankruptcy, insolvency, reorganization, moratorium, and similar laws affecting creditors' rights generally and to general principles of equity;

(f) its execution by the Parties, delivery, and performance of this CRA do not violate its organizational documents, applicable law, or any agreement binding on it in a manner that would materially impair its performance under this CRA; and

(g) except for any acceptance, approval, filing, or other action expressly contemplated by this CRA, the PJM Tariff, or applicable law, no consent or approval is required for its execution by the Parties, delivery, or performance of this CRA that has not been obtained or will not be obtained when required.

### 13.2 Eligible Customer Representations and Warranties

Eligible Customer represents and warrants to the other Parties, as of the date it executes this CRA and as of the Effective Date, that:

(a) it is an Eligible Customer under the PJM Tariff;

(b) it is authorized under the PJM Tariff and applicable law to take Firm Transmission

Service on behalf of the Large Load Customer to serve the Large Load Facilities;
(c) it has obtained, or will obtain when required, all authority, consent, and information necessary to perform its obligations under this CRA;
(d) all information provided by or on behalf of Eligible Customer for purposes of calculating the Actual Revenue Contribution, Shortfall Amount, Credit Support Requirement, Early Termination Amount, or Partial Termination Amount is and shall be materially accurate and complete;
(e) it has not relied on any representation or warranty by Transmission Owner concerning whether the Large Load Facilities shall be constructed, completed, achieve commercial operation, operate at any load level, or remain economically viable;
(f) it will provide or authorize access to the service, billing, settlement, and allocation information reasonably necessary to administer this CRA;
(g) Eligible Customer's obligations under this CRA are limited to the transmission-service, information-sharing, cooperation, and administrative obligations expressly assigned to Eligible Customer and do not include Large Load Customer's payment or Credit Support obligations;
(h) Eligible Customer shall timely perform its expressly assigned obligations notwithstanding any dispute with Large Load Customer;
(i) it has agreed to request and pursue the Firm Transmission Service initially identified in Exhibit A on behalf of Large Load Customer through the applicable PJM process; and
(j) neither the failure of the Large Load Customer to perform nor a dispute between Eligible Customer and the Large Load Customer will excuse Eligible Customer's performance under this CRA.

**13.3 Large Load Customer Representations and Warranties**

Large Load Customer represents and warrants to the other Parties, as of the date it executes this CRA and as of the Effective Date, that:
(a) it owns, operates, leases, or otherwise controls the Large Load Facilities;
(b) the information it provides concerning the Large Load Facilities, Firm Load Commitment, Service Dates, load ramp, construction status, anticipated operations, and cessation or reduction of operations, and any other information required by or necessary to administer this CRA is and shall be materially accurate and complete;
(c) it has not relied on any representation or warranty by Transmission Owner concerning whether the Large Load Facilities will be constructed, completed, achieve commercial operation, operate at any load level, or remain economically viable;
(d) its payment and Credit Support obligations under this CRA are direct obligations to Transmission Owner and do not depend on the performance of Eligible Customer or any other Person;
(e) Credit Support provided under Article 6 directly secures Large Load Customer's obligations under this CRA and, to Large Load Customer's knowledge, is valid and enforceable in accordance with its terms;
(f) it has designated Eligible Customer to request and take Firm Transmission Service on its behalf and has obtained Eligible Customer's agreement to participate in the applicable PJM process; and

(g) Large Load Customer has not created or permitted any undisclosed lien, competing claim, restriction, or other interest that would materially impair Transmission Owner's rights in the Credit Support.

### 13.4 Transmission Owner Representations and Warranties

Transmission Owner represents and warrants to the other Parties, as of the date it executes this CRA and as of the Effective Date, that: (i) it is a PJM Transmission Owner; (ii) it is authorized to enter into this CRA and receive amounts and Credit Support payable or provided under this CRA, subject to the PJM Tariff and applicable FERC requirements.

## ARTICLE 14
## CONFIDENTIALITY

### 14.1 Confidential Information

For purposes of this Article, "Confidential Information" means nonpublic commercial, financial, operational, technical, customer-specific, or proprietary information disclosed by or on behalf of one Party to another Party in connection with this CRA, whether disclosed orally, electronically, or in writing, including nonpublic information concerning:

(a) the Large Load Customer or the Large Load Facilities;

(b) the Firm Load Commitment, Service Dates, anticipated or actual load, or operating status of the Large Load Facilities;

(c) Firm Transmission Service taken to serve the Large Load Facilities;

(d) the calculation of the Actual Revenue Contribution, Shortfall Amount, Credit Support Requirement, Early Termination Amount, or Partial Termination Amount;

(e) Credit Support, the financial condition of Large Load Customer , and communications with an issuer; and

(f) any invoice, supporting documentation, or other information exchanged in administering this CRA.

Information shall constitute Confidential Information only if: (i) it is identified as confidential when disclosed; or (ii) its nature or the circumstances of disclosure would reasonably indicate that it is confidential.

### 14.2 Exclusions

Confidential Information does not include information that the receiving Party can demonstrate: (i) is or becomes publicly available other than through a breach of this CRA; (ii) was lawfully known to the receiving Party without a confidentiality restriction before disclosure by the disclosing Party; (iii) is lawfully received from another Person without a confidentiality restriction and without breach of an obligation owed to the disclosing Party; (iv) is independently developed by or for the receiving Party without use of or reliance on the Confidential Information; or (v) is approved for disclosure by the disclosing Party in writing.

### 14.3 Use and Protection of Confidential Information

A Party receiving Confidential Information shall: (i) use the Confidential Information only as reasonably necessary to perform, administer, enforce, or exercise its rights under this CRA; (ii) protect the Confidential Information using at least the same degree of care that it uses to protect its own confidential information of a similar nature, but in no event less than reasonable care; (iii) disclose the Confidential Information only as permitted under this Article; and (iv) promptly notify the disclosing Party upon becoming aware of an unauthorized use or disclosure of the Confidential Information.

The receiving Party may disclose Confidential Information to its Affiliates, employees, officers, directors, attorneys, accountants, auditors, consultants, insurers, lenders, issuers of Credit Support, and other representatives that have a need to know the Confidential Information and are subject to confidentiality obligations or professional duties of confidentiality.

**14.4 Tariff and Regulatory Requirements**

Confidential Information shall be protected and disclosed in accordance with: (i) applicable FERC regulations and orders; (ii) applicable state law and any applicable retail-service tariff; (iii) any protective order or confidentiality agreement binding on the Parties; and (iv) this Article.

**14.5 Permitted Regulatory and Administrative Disclosures**

A Party may disclose Confidential Information to the extent reasonably necessary: (i) to comply with the PJM Tariff, a FERC order, applicable law, legal process, or a request or requirement of a governmental authority with jurisdiction; (ii) to prepare, submit, support, or prosecute a filing, report, audit, formula-rate update, rate proceeding, tariff proceeding, or other regulatory submission; (iii) to administer a service request, study, billing determination, settlement, calculation, reconciliation, or Credit Support requirement relating to this CRA; (iv) to enforce this CRA or resolve a dispute arising under it; (v) to provide information to PJM reasonably necessary for Tariff administration, study, billing, settlement, or other administrative purposes relating to the Firm Transmission Service or this CRA; (vi) to provide information to an applicable state regulatory authority to the extent reasonably necessary in connection with retail service, retail Credit Support, or another state-jurisdictional arrangement relating to the Large Load Facilities; or (vii) with the written consent of the disclosing Party.

With respect to disclosures identified in clauses (i)-(vi), the Party making the disclosure shall notify the other Party so that such Party may seek a protective order or such other relief as such Party may deem appropriate under the circumstances. The Party making the disclosure may disclose only that portion of the Confidential Information which such Party is required to disclose.

**14.6 No Limitation on Required Information Sharing**

Eligible Customer may not withhold information reasonably required to calculate, verify, invoice, reconcile, or dispute an amount under this CRA solely because the information is

confidential.

Large Load Customer may not withhold facility, project, load-ramp, operational, Credit Support, or other information within its possession or control that is reasonably required to administer this CRA solely because the information is confidential.

Transmission Owner's receipt or use of such information shall remain subject to this Article and any other applicable confidentiality requirement.

### 14.7 Survival

The obligations under this Article shall survive expiration or termination of this CRA for five (5) years; provided that (i) information constituting a trade secret shall remain protected for so long as it qualifies as a trade secret under applicable law; and (ii) information protected for a longer period under applicable law, the PJM Tariff, a regulatory order, or a binding confidentiality agreement shall remain protected for that longer period.

## ARTICLE 15
## DISPUTE RESOLUTION

### 15.1 Notice of Dispute

A Party disputing an invoice, calculation, Credit Support Requirement, or other matter arising under this CRA shall provide the other Parties with written notice. The disputing Party shall provide available supporting information reasonably necessary for the other Parties to evaluate the dispute. A notice under this Section shall not excuse or delay performance except as expressly provided in this CRA. Notwithstanding the foregoing and for the avoidance of doubt, the Large Load Customer is not entitled to dispute resolution for its breach of Section 6.1.

### 15.2 Good-Faith Negotiation

Within ten (10) Business Days after receipt of a notice under Section 15.1, representatives of the Parties with responsibility for administering this CRA shall meet or confer and attempt in good faith to resolve the dispute.

If a Party does not request or participate in the Dispute resolution set forth in this Article 15 within 10 Business Days following the delivered date of the written request initiating the process, such Party waives any further right to this Dispute resolution process. The Dispute resolution process set forth in this Article 15 shall, in any event, be concluded within 30 days following the delivered date of the written request initiating the process or such longer period as the Parties may mutually agree. Thereafter, any Party may exercise all remedies available at law or in equity under this CRA, including the initiation of court proceedings.

### 15.3 Continuation of Performance

While a dispute remains pending:

(a) each Party shall continue performing its obligations under this CRA to the maximum extent practicable;
(b) Large Load Customer shall timely pay each invoiced amount in accordance with Section 7.2, notwithstanding the dispute;
(c) Large Load Customer shall continue to cause Credit Support to be provided, maintained, increased, renewed, replaced, and replenished as required under Article 6;
(d) Transmission Owner may exercise its rights with respect to Credit Support in accordance with Articles 6 and 7; and
(e) no Party shall take action inconsistent with a final and binding determination resolving the dispute.

Payment or performance during a dispute shall not waive the paying or performing Party's position or right to seek return of an overpayment or other appropriate relief.

### 15.4 No Suspension of Credit Support Rights

The initiation or pendency of a dispute shall not: (i) prevent Transmission Owner from making a preservation draw under Section 6.4; (ii) suspend Transmission Owner's right to draw on Credit Support for an invoiced amount not timely paid; (iii) relieve Large Load Customer of its obligation to cause compliant Credit Support to be maintained; or (iv) extend the expiration, nonrenewal, replacement, or replenishment deadline applicable to Credit Support.

If the final resolution of a dispute determines that Large Load Customer paid, or Transmission Owner drew, more than the amount properly due, Transmission Owner shall return the excess to Large Load Customer or, if applicable, restore the excess Credit Support in accordance with Section 6.5.

If a Party receiving a written request to initiate the dispute-resolution process does not participate in that process within 10 Business Days after delivery of the written request, that Party waives its right to require completion of the informal dispute-resolution process before another Party pursues available remedies. The dispute resolution process set forth in this Article 15 shall, in any event, be concluded within 30 days following the delivered date of the written request initiating the process or such longer period as the Parties may mutually agree.

Thereafter, any Party may exercise all remedies available at law or in equity under this CRA, including the initiation of court proceedings.

## ARTICLE 16
## NOTICES

### 16.1 General Notices

All notices, demands, and other formal communications required or permitted under this CRA shall be in writing, and delivered to the applicable contacts identified in Section 16.2.

### 16.2 Notice Contacts

**Eligible Customer**
[Eligible Customer Name]
[Address]
[City, State ZIP Code]
Attention: [Name or Title]
Email: [Email Address]

With a copy to:
[Legal Department or Counsel]
[Address]
[City, State ZIP Code]
Attention: [Name or Title]
Email: [Email Address]

**Large Load Customer,**

**[Large Load Customer Name]**
**[Address]**
**[City, State ZIP Code]**
**Attention: [Name or Title]**
**Email: [Email Address]**

**With a copy to:**
**[Legal Department or Counsel]**
**[Address]**
**[City, State ZIP Code]**
**Attention: [Name or Title]**
**Email: [Email Address]**

**Transmission Owner**
[Transmission Owner Name]
[Address]
[City, State ZIP Code]
Attention: [Name or Title]
Email: [Email Address]
With a copy to:
[Legal Department or Counsel]
[Address]
[City, State ZIP Code]
Attention: [Name or Title]
Email: [Email Address]

Delivery of a copy shall not be required for a notice to become effective unless expressly stated

otherwise in this CRA.

### 16.3 Credit Support Notices

All notices, demands, and communications concerning the issuance, amendment, increase, reduction, renewal, replacement, nonrenewal, expiration, disqualification, transfer, draw, or release of Credit Support shall also be delivered to the following designated Credit Support contacts:

**Transmission Owner Credit Contact**
[Name or Department]
[Address]
[City, State ZIP Code]
Attention: [Name or Title]
Email: [Email Address]

**Large Load Customer Credit Contact**
[Name or Department]
[Address]
[City, State ZIP Code]
Attention: [Name or Title]
Email: [Email Address]

Such notices may be sent by overnight courier, personal delivery, or electronic mail. A notice from an issuer shall be effective only if delivered as required by the letter of credit.

## ARTICLE 17
## GENERAL PROVISIONS

### 17.1 Amendment

This CRA may be amended only by a written instrument executed by authorized representatives of all Parties.

An amendment shall become effective only upon: (i) acceptance or approval by FERC, if required; (ii) any approval or recognition required under the PJM Tariff; and (iii) satisfaction of any other requirement of applicable law.

An update to an Exhibit required under Section 3.2 shall not constitute an amendment for purposes of this Section.

### 17.2 Entire Agreement; Relationship to Other Agreements

This CRA and its Exhibits constitute the entire agreement between the Parties concerning the Firm Load Commitment and the payment, Credit Support, early-termination, and related administrative obligations established under this CRA.

This CRA supersedes prior oral or written communications, negotiations, and understandings between the Parties concerning the subject matter of this agreement. This CRA does not supersede or otherwise impact other agreements (which may include security or cost recovery provisions) that relate to the Large Load Facilities and that do not address matters set forth in this CRA related to Firm Load Commitments.

**17.3 Severability**

If a provision of this CRA is held invalid, unlawful, or unenforceable by FERC or another governmental authority or tribunal having jurisdiction, the remaining provisions shall remain in effect to the maximum extent permitted by law.

The Parties shall cooperate in good faith to replace the affected provision with a lawful and enforceable provision that preserves, to the greatest extent permitted by law, the original provision's purpose and the economic protections established by this CRA.

If the affected provision cannot be replaced and its invalidity defeats the essential purpose of this CRA, the Parties' rights shall be governed by the remaining enforceable provisions of this CRA and applicable law.

**17.4 Governing Law**

This CRA shall be governed by: (i) federal law, including the Federal Power Act, and the PJM Tariff with respect to matters within federal jurisdiction; and (ii) the laws of the State of [State], without regard to its conflict-of-laws principles, with respect to matters not governed by federal law.

Nothing in this Section limits FERC's jurisdiction or alters the allocation of jurisdiction between FERC, any state commission, and any court or other tribunal.

**17.5 No Third-Party Beneficiaries**

This CRA is entered into solely for the benefit of the Parties and their permitted successors and assigns.

Except as expressly provided in this CRA, no other Person, including PJM, another transmission customer, a Load Serving Entity, an issuer of Credit Support, or a governmental authority, shall have a right to enforce this CRA or be deemed a third-party beneficiary.

**17.6 Relationship of the Parties**

Nothing in this CRA creates or shall be construed to create: (i) a partnership; (ii) a joint venture; (iii) an agency relationship; (iv) a fiduciary relationship; or (v) an employment relationship among any of the Parties..

## 17.7 Counterparts; Electronic Signatures

This CRA may be executed in any number of counterparts, each of which shall be deemed an original and all of which together shall constitute one instrument.

## 17.8 Indemnification

Eligible Customer and Large Load Customer shall, jointly and severally, to the fullest extent permitted by law, indemnify, defend upon request, and hold harmless Transmission Owner and its Representatives from and against all claims, damages, expenses, liabilities, and losses (including, without limitation, reasonable attorneys' fees and expenses) asserted against, sustained, or incurred by Transmission Owner or its Representatives for any damage, harm, injury, or loss, of any kind, direct or indirect, to any property or person (including death), including, without limitation:

(a) claims for injuries or loss to employees of Transmission Owner, Eligible Customer, Large Load Customer, or their respective Representatives, arising out of or relating to any act, omission, conduct, negligence or breach by Large Load Customer, or Eligible Customer, or their respective Representatives;

(b) arising out of or relating to the work performed under or in connection with this CRA by Large Load Customer, Eligible Customer, or their respective Representatives; and/or

(c) claims arising out of or relating to Large Load Customer's, Eligible Customer's, or their respective Representatives, contact or encounter with, compromise or disruption of, or loss or damage to any property of Transmission Owner or its Representatives' property.

Large Load Customer and Eligible Customer each specifically agree, to the fullest extent permitted by law, to assume liability for all personal injury claims brought by their respective employees or the employees of their respective Representatives in connection with this CRA and waive any limitation of liability defense based upon the applicable worker's compensation law and cases decided thereunder. Eligible Customer and Large Load Customer agree to indemnify and defend Transmission Owner and its Representatives from and against all such loss, expense damage or injury, including, without limitation, reasonable attorneys' fees, which Transmission Owner's Representatives may sustain as a result of personal injury claims by Eligible Customer's or Large Load Customer's employees or their respective Representatives' employees or representatives.

## 17.9 Enforcement Costs

Each of Eligible Customer and Large Load Customer shall reimburse Transmission Owner for all reasonable attorneys' fees and expenses incurred in enforcing that Party's obligations under this CRA, to the extent Transmission Owner prevails in the applicable action or proceeding. Notwithstanding the foregoing, Large Load Customer shall be solely responsible for all reasonable attorneys' fees and expenses incurred by Transmission Owner in enforcing Large Load Customer's payment or Credit Support obligations or collecting any amount due from Large Load Customer under this CRA.

## 17.10 Rules of Interpretation

The Parties intend that any grouping of words or phrases in a series of three or more shall be interpreted to include the use of the Oxford (or serial) comma regardless of whether such Oxford (or serial) comma is actually present in the series.

## 17.11 Survival

Expiration or termination of this CRA shall not affect: (i) any payment obligation accrued or arising from a period before expiration or termination; (ii) any obligation to complete a calculation, invoice, reconciliation, refund, or return of an excess draw; (iii) any continuing right concerning Credit Support; (iv) Large Load Customer's obligation to pay any Shortfall Amount, Early Termination Amount, Partial Termination Amount, or other amount that survives expiration or termination; (v) Transmission Owner's right to draw upon or apply Credit Support and its obligation to provide any required credit, refund, release, or reconciliation; (vi) the confidentiality and dispute-resolution provisions of Articles 14 and 15; or (vii) any other provision that expressly survives or that by its nature must survive to give effect to the Parties' rights and obligations.

*[Signature page follows]*

IN WITNESS WHEREOF, the Parties, intending to be legally bound, have caused this CRA to be executed by their duly authorized representatives as of the date first written above.

**TRANSMISSION OWNER:**

[Name of Transmission Owner]

By: _____

Name: _____

Title: _____

Date: _____

**ELIGIBLE CUSTOMER:**

[Name of Eligible Customer]

By: _____

Name: _____

Title: _____

Date: _____

**LARGE LOAD CUSTOMER:**
**[Name of Large Load Customer]**

**By: _____**
**Name: _____**
**Title: _____**
**Date: _____**

## EXHIBIT A

## LARGE LOAD FACILITIES AND FIRM LOAD COMMITMENT

### 1. Parties and Large Load Information

**Transmission Owner:**
[Name of Transmission Owner]

**Eligible Customer:**
[Name of Eligible Customer]

**Large Load Customer:**
[Name of Large Load Customer]

**Large Load Facilities:**
[Name and general description of the Large Load Facilities]

**Facility Location:**
[Street Address]
[City, State, ZIP Code]

**Transmission Zone:**
[Applicable PJM Transmission Zone]

**Point of Delivery:**
[Point of Delivery or other applicable delivery-point identifier]

### 2. Term of Agreement: [__] Years

### 3. Minimum Commitment Percentage: [___] [add reduction schedule as applicable]%

### 4. Initial Load and Firm Load Commitments

Eligible Customer's Initial Load Commitment and Firm Load Commitment will be set forth in the following schedule:

| Load-Ramp Stage | Service Date | Load Commitment / Associated Firm Transmission Service Benchmark |
|---|---|---|
| 1 | [Date] | [___] MW |
| 2 | [Date] | [___] MW |

| | | |
|---|---|---|
| 3 | [Date] | [___] MW |
| [Additional Stage] | [Date] | [___] MW |
| Final | [Date] | [___] MW |

Following the update required under Section 3.2, the information in this Section 4 shall replace the Initial Load Commitment and shall establish the Firm Load Commitment for purposes of this CRA.

The Firm Load Commitment applicable during any Measurement Period is the amount of total load from the Large Load Facilities that is anticipated to be in service under the foregoing schedule if the Eligible Customer is taking NITS on behalf of the Large Load. If the Eligible Customer is taking FCDS or Firm Point-to-Point Transmission Service on behalf of the Large Load, the Firm Load Commitment applicable during any Measurement Period is the amount of such Firm Transmission Service for which the Eligible Customer has contracted or reserved, as applicable, during such period.

If a subsequent Service Date occurs during a Measurement Period, the Firm Load Commitment applicable before and after that Service Date shall be determined separately for the applicable portions of the Measurement Period in accordance with Exhibit B.

## 5. Service Dates

The first Service Date under this Exhibit A is [Date].

The final Service Date under this Exhibit A is [Date].

## 6. Commercial Operation Date

The anticipated Commercial Operation Date for the Large Load Facilities is [Date]. The anticipated Commercial Operation Date is not a guarantee of service on such date.

Except as expressly provided in the CRA, a change in the anticipated or actual Commercial Operation Date does not modify:

a Service Date;
the Firm Load Commitment;
the Committed Revenue Contribution;
the Credit Support Requirement; or
any other obligation under the CRA.

## 7. Relationship to Actual Load and Firm Transmission Service

The Firm Load Commitment is a contractual benchmark reflecting the anticipated load associated with the Large Load Facilities and the corresponding Firm Transmission Service

commitment on which the CRA is based. It is not a statement of the Large Load Facilities' actual demand during any Measurement Period.

### 8. Update and Amendment History

The following table will identify each update or amendment of this Exhibit A that becomes effective under Section 3.2 or Article 17 of the CRA:

| Update or Amendment No. | Effective Date | Description of Update or Amendment | Final PJM Agreement Identifier or FERC Docket No./Order Date, as Applicable |
|---|---|---|---|
| [___] | [Date] | [Description] | [Final PJM Agreement Identifier or Docket No./Order Date] |
| [___] | [Date] | [Description] | [Final PJM Agreement Identifier or Docket No./Order Date] |
| [___] | [Date] | [Description] | [Final PJM Agreement Identifier or Docket No./Order Date] |

An update required under Section 3.2 shall become effective without further agreement or signature of the Parties and shall not constitute an amendment to the CRA, except to the extent a filing with or acceptance by FERC is required. Any other change to this Exhibit A shall be made in accordance with Article 17.

Unless and until an update or amendment becomes effective in accordance with the CRA, the then-effective Firm Load Commitment and Service Dates will continue to control.

## EXHIBIT B
## REVENUE CONTRIBUTION AND SHORTFALL CALCULATION

### 1. Applicable Firm Load Commitment

For each Measurement Period, the "Applicable Firm Load Commitment" shall mean each amount of the Firm Load Commitment scheduled to apply during that Measurement Period under Exhibit A.

If more than one load level is scheduled to apply during a Measurement Period, each load level shall apply for the portion of the Measurement Period during which it is scheduled to be effective.

The Applicable Firm Load Commitment shall not be reduced or deferred based on:

the amount of load that actually materializes;
the amount of Firm Transmission Service actually taken to serve the Large Load Facilities; or
the actual operating level of the Large Load Facilities.

### 2. Full Firm Transmission Service Benchmark

For each Measurement Period, the "Full Firm Transmission Service Benchmark" shall equal 100% of the Firm Transmission Service-related charges that would apply if Eligible Customer took Firm Transmission Service corresponding to the Applicable Firm Load Commitment during that Measurement Period.

The Full Firm Transmission Service Benchmark shall be calculated using:

the Applicable Firm Load Commitment;
the Applicable Firm Transmission Service Rate;
the generally applicable rate components and billing determinants used under the PJM Tariff and Transmission Owner's applicable FERC-jurisdictional rate to calculate charges for Firm Transmission Service; and
the portion of the Measurement Period during which each applicable load level and Applicable Firm Transmission Service Rate applies.

If the Applicable Firm Load Commitment or Applicable Firm Transmission Service Rate changes during a Measurement Period, the Full Firm Transmission Service Benchmark shall equal the sum of the amounts separately calculated for each applicable portion of the Measurement Period.

### 3. Committed Revenue Contribution

For each Measurement Period, the Committed Revenue Contribution = Minimum Commitment Percentage × Full Firm Transmission Service Benchmark

The Minimum Commitment Percentage shall be the percentage specified in Exhibit A.

The Minimum Commitment Percentage shall be applied only to the Full Firm Transmission Service Benchmark and shall not be applied to the Actual Revenue Contribution.

**4. Actual Revenue Contribution**

For each Measurement Period, the Actual Revenue Contribution shall equal the Firm Transmission Service-related revenues paid or payable to PJM for remittance or allocation to Transmission Owner, or otherwise paid or payable to Transmission Owner, that are attributable to transmission service actually taken to serve the Large Load Facilities.

The Actual Revenue Contribution shall include amounts to the extent those amounts:

are attributable to Firm Transmission Service taken by Eligible Customer to serve the Large Load Facilities;
correspond to the same categories of rate components included in the Full Firm Transmission Service Benchmark; and
have not been refunded, reversed, or otherwise credited to the payer.

To the extent the applicable Firm Transmission Service methodology uses an assigned Network Service Peak Load contribution or another allocated billing determinant, the Actual Revenue Contribution shall be calculated using:

the billing determinant assigned to the Large Load Facilities for the applicable Measurement Period; and
the same categories of rates and rate components used to calculate the Full Firm Transmission Service Benchmark.

**5. Actual Billing Determinant and Allocation**

If Firm Transmission Service-related charges or billing determinants attributable to the Large Load Facilities are aggregated with charges or billing determinants attributable to other load, Transmission Owner shall determine the portion attributable to the Large Load Facilities using, in the following order of priority:

PJM billing and settlement data that separately identifies the Large Load Facilities;
metering or other load data for the Large Load Facilities, applied in accordance with the generally applicable billing and allocation methodology under the PJM Tariff; and
if the foregoing information is insufficient, other information supplied by Eligible Customer or the applicable billing or service entity that Transmission Owner reasonably determines is sufficient to identify and verify the portion attributable to the Large Load Facilities.

Eligible Customer shall provide, or cause the applicable billing or service entity to provide, information reasonably necessary to identify and verify the portion attributable to the Large Load Facilities.

**6. Included Rate Components**

The same categories of Firm Transmission Service rate components shall be used to calculate the Full Firm Transmission Service Benchmark and the Actual Revenue Contribution. The included rate components shall be derived from the applicable zonal Firm Transmission Service rate.

The following amounts shall be excluded:

charges for electric energy;
charges for generation capacity;
retail electric service or distribution-service charges;
penalties or charges for unreserved transmission use;
administrative-service or ancillary-service charges, unless expressly included above;
interest, late-payment charges, taxes, and fees unrelated to the included Firm Transmission Service rate components; and
amounts attributable to load other than the Large Load Facilities.

**7. Applicable Firm Transmission Service Rate**

The Applicable Firm Transmission Service Rate for each Measurement Period shall be the applicable zonal rate then in effect under the PJM Tariff and Transmission Owner's FERC-jurisdictional rate for Firm Transmission Service in the applicable Transmission Zone.

If an applicable zonal Firm Transmission Service Rate changes during a Measurement Period, each rate shall apply to the portion of the Measurement Period during which it was in effect.

**8. Shortfall Amount**

For each Measurement Period, the Shortfall Amount = Committed Revenue Contribution • Actual Revenue Contribution

If the Actual Revenue Contribution equals or exceeds the Committed Revenue Contribution, the Shortfall Amount shall be zero.

**9. Separate Measurement Periods**

Each Measurement Period shall be calculated independently. Any amount by which the Actual Revenue Contribution exceeds the Committed Revenue Contribution for one Measurement Period shall not reduce a Shortfall Amount for another Measurement Period, be carried forward or backward, or entitle Large Load Customer to any payment, refund, or credit.

**10. Partial Measurement Periods**

For any partial Measurement Period, the Full Firm Transmission Service Benchmark, Committed Revenue Contribution, Actual Revenue Contribution, and Shortfall Amount shall be calculated for the portion of the Measurement Period falling within the Term.

The Full Firm Transmission Service Benchmark shall be prorated in accordance with the billing interval applicable to the Applicable Firm Transmission Service Rate, based on the portion of the

Measurement Period during which each applicable load level and Applicable Firm Transmission Service Rate was effective.

# EXHIBIT C
# CREDIT SUPPORT REQUIREMENT AND SCHEDULE

## 1. Credit Support Requirement

The Credit Support Requirement is intended to secure Large Load Customer's projected financial exposure under the CRA for the remaining Term and does not determine or limit any amount otherwise payable by Large Load Customer under the CRA.

At execution by the Parties, the Initial Credit Support Requirement shall be calculated using the Initial Load Commitment, anticipated Service Dates, estimated Applicable Firm Transmission Service Rate, and other information then available, and the methodology specified below.

The Initial Credit Support Requirement shall equal the aggregate Projected Full Firm Transmission Service Benchmarks for the full Term of this CRA beginning on the first Service Date through the end of the Term.

Following the update required under Section 3.2 after execution of the Final PJM Agreement, Transmission Owner shall recalculate the Credit Support Requirement using the updated Firm Load Commitment, Service Dates, Applicable Firm Transmission Service Rate, and Projected Full Firm Transmission Service Benchmarks for the remainder of the Term. The recalculated Credit Support Requirement shall replace the Initial Credit Support Requirement.

At the end of each Measurement Period, Transmission Owner shall recalculate Large Load Customer's Credit Support Requirement. The recalculation shall equal the aggregate Projected Full Firm Transmission Service Benchmarks for the remaining Term. Transmission Owner shall exclude a completed Measurement Period from the Credit Support Requirement only after:

(i) Transmission Owner has finally calculated the Committed Revenue Contribution, Actual Revenue Contribution, and any resulting Shortfall Amount for that Measurement Period; and

(ii) Large Load Customer has paid all amounts due for that Measurement Period.

Transmission Owner shall provide Large Load Customer with notice after each recalculation, and the revised Credit Support Requirement shall become effective in accordance with Section 6.5 of the CRA. These recalculations shall not constitute an amendment to this Exhibit or the CRA.

## 2. Calculation of Projected Full Firm Transmission Service Benchmarks

For each Measurement Period included in the Credit Support Requirement, the Projected Full Firm Transmission Service Benchmark shall equal 100% of the Firm Transmission Service-related charges that would apply if Eligible Customer took Firm Transmission Service corresponding to the Initial Load Commitment or Firm Load Commitment, as applicable, scheduled to apply during that Measurement Period.

The Credit Support Requirement shall equal the aggregate Projected Full Firm Transmission Service Benchmarks for all Measurement Periods included in the applicable calculation.

The Projected Full Firm Transmission Service Benchmark shall be calculated using:

the Initial Load Commitment or Firm Load Commitment, as applicable, and set forth in Exhibit A;
the Applicable Firm Transmission Service Rate in effect or estimated to apply, as applicable, at the time of calculation;
any rate change accepted by FERC and scheduled to become effective during the applicable Measurement Period;
the rate components and billing determinants identified in Exhibit B; and
the portion of each Measurement Period during which each applicable load level and Applicable Firm Transmission Service Rate is scheduled to apply.

**3. No Reduction for Minimum Commitment Percentage or Projected Actual Revenues**

The Credit Support Requirement shall be calculated using 100% of the Projected Full Firm Transmission Service Benchmarks and shall not be reduced by:

the Minimum Commitment Percentage; or
any projected or estimated Actual Revenue Contribution.

Actual Revenue Contributions shall be credited in determining the Shortfall Amount for a completed Measurement Period in accordance with Article 5 and Exhibit B.

After the calculation for a completed Measurement Period has been finalized and Large Load Customer has paid all amounts due for that Measurement Period, that Measurement Period shall be excluded from the Credit Support Requirement in accordance with Sections 1 and 4 of this Exhibit.

For avoidance of doubt, Actual Revenue Contributions attributable to a completed Measurement Period shall not reduce the Projected Full Firm Transmission Service Benchmark for any future Measurement Period.

**4. Recalculation**

Transmission Owner shall recalculate the Credit Support Requirement:

following the update required under Section 3.2 after execution of the Final PJM Agreement;
after the Committed Revenue Contribution, Actual Revenue Contribution, and any resulting Shortfall Amount for a completed Measurement Period have been finally calculated and Large Load Customer has paid all amounts due for that Measurement Period in accordance with Section 1 of this Exhibit;;
following an effective modification to the Firm Load Commitment or a Service Date;
following an effective Partial Termination;
following a change in the Applicable Firm Transmission Service Rate that has become effective, or a rate change that has been accepted by FERC and is scheduled to become effective during a Measurement Period included in the Credit Support Requirement;

upon replacement of Credit Support following an issuer downgrade, disqualification, expiration, termination, or notice of nonrenewal; and
as otherwise expressly required under the CRA.

Transmission Owner shall provide notice of each such recalculation, and the revised Credit Support Requirement shall become effective in accordance with Section 6.5 of the CRA. These updates shall not constitute an amendment to this Exhibit or the CRA generally.

**5. Letter of Credit Issuer Requirements**

A financial institution issuing a letter of credit under the CRA shall:

maintain a long-term unsecured credit rating of [at least "A-" from S&P Global Ratings or Fitch Ratings or "A3" from Moody's Investors Service] [insert alternative credit rating requirement if applicable];
satisfy the requirements of Article 6 and any attachments to this Exhibit; and
otherwise satisfy Transmission Owner's generally applicable credit requirements.

**6. Treatment of Prior Draws**

A draw applied to an unpaid amount shall not reduce the Credit Support Requirement. Large Load Customer shall cause the Credit Support to be restored to the then-applicable Credit Support Requirement in accordance with Section 6.7 of the CRA.

A preservation draw under Section 6.4 shall not reduce the Credit Support Requirement because the proceeds continue to be held as cash security securing Large Load Customer's obligations under the CRA.

In determining the amount of replacement or additional Credit Support required, cash security held by Transmission Owner and legally available to secure the same obligations shall be credited against the otherwise applicable Credit Support Requirement.

**7. Relationship to Amounts Payable**

The Credit Support Requirement is a measure of secured exposure and does not determine or limit:

the actual Committed Revenue Contribution;
the Actual Revenue Contribution;
the Shortfall Amount for a completed Measurement Period; or
any amount otherwise payable under the CRA.

**EXHIBIT C, ATTACHMENT [__]**

## EXHIBIT D

## EARLY AND PARTIAL TERMINATION AMOUNT SCHEDULE

### 1. Applicable Termination Percentage

The Applicable Termination Percentage for an Early Termination or Partial Termination shall be determined based on the date on which the termination or Partial Termination becomes effective, as follows:

| Effective Date of Termination or Partial Termination | Applicable Termination Percentage |
|---|---|
| On or after the Effective Date and before execution of the Final PJM Agreement | 25% |
| On or after execution of the Final PJM Agreement through the 180th day after execution of the Final PJM Agreement | 50% |
| After the 180th day after execution of the Final PJM Agreement but before the first Service Date | 75% |
| On or after the first Service Date | 100% |

### 2. Early Termination Amount

The Early Termination Amount shall be calculated in accordance with Article 9 and this Exhibit of the CRA as follows:

Early Termination Amount = (Applicable Termination Percentage × Present Value of Remaining Projected Committed Revenue Contributions) • Applicable Credits

The Applicable Termination Percentage used in the calculation shall be the percentage specified in Section 1 of this Exhibit for the date on which the termination becomes effective.

Before execution of the Final PJM Agreement, the Early Termination Amount shall be calculated using the Initial Load Commitment, anticipated Service Dates, estimated Applicable Firm Transmission Service Rate, and other information then reflected in Exhibits A and C. After execution of the Final PJM Agreement, the calculation shall use the updated information provided pursuant to Section 3.2.

The Early Termination Amount shall not be less than zero.

### 3. Present Value of Remaining Projected Committed Revenue Contributions

The Present Value of Remaining Projected Committed Revenue Contributions shall be calculated as of the effective date of termination for the period beginning on the effective date of termination and ending on the date the fixed period specified in Section 4.2(i) of the CRA would have expired absent the termination.

The calculation shall be based on:

the Initial Load Commitment or Firm Load Commitment, as applicable, and Service Dates in effect immediately before termination;
the Minimum Commitment Percentage;
the Projected Full Firm Transmission Service Benchmark determined in accordance with Exhibit C;
the Applicable Firm Transmission Service Rate in effect or estimated to apply, as applicable, on the effective date of termination;
any rate change accepted by FERC and scheduled to become effective during the remaining fixed period;
the rate components and billing determinants identified in Exhibit B; and
Transmission Owner's then-effective FERC-approved weighted average cost of capital as the discount rate.

No rate escalation or other projected rate change shall be included unless the rate change has been accepted by FERC and is scheduled to become effective during the remaining fixed period.

**4. Applicable Credits**

Applicable Credits shall include, without duplication:

any Actual Revenue Contribution attributable to the portion of the Measurement Period occurring before the effective date of termination that has been paid or is payable and has not otherwise been credited;
any Shortfall Amount, Credit Support proceeds, or other amount previously collected and applied to the same revenue exposure; and
any Early Termination Offset Amount determined under Section 9.9 of the CRA.

No amount shall be treated as an Applicable Credit unless it has been paid, received, or applied to the revenue exposure included in the Early Termination Amount.

**5. Partial Termination Amount**

Unless the permanently reduced portion of the Firm Load Commitment consists of a separately identifiable load tranche, the Partial Termination Amount shall equal:

Partial Termination Amount = Early Termination Amount × (Permanently Reduced MW ÷ applicable Initial Load Commitment or Firm Load Commitment immediately before reduction)

The Applicable Termination Percentage shall be the percentage specified in Section 1 of this Exhibit for the effective date of the Partial Termination.

If the permanently reduced portion consists of one or more separately identifiable load tranches, the Partial Termination Amount shall be calculated using the Projected Committed Revenue Contributions attributable to the terminated tranche or tranches, including the applicable MW amount and Service Date for each terminated tranche.

The Partial Termination Amount shall not be less than zero.

### 6. Treatment After the First Service Date

On and after the first Service Date, the Applicable Termination Percentage shall remain 100%.

The Present Value of Remaining Projected Committed Revenue Contributions will decline as the remaining portion of the fixed period decreases. Accordingly, the Applicable Termination Percentage will not be separately reduced based solely on the passage of time after the first Service Date.

### 7. Early Termination Offset Amount

If an Early Termination Offset Amount is quantifiable when Transmission Owner issues the applicable termination invoice, Transmission Owner shall include that amount as an Applicable Credit.

If all or part of the Early Termination Offset Amount becomes quantifiable after the termination invoice is issued, Transmission Owner shall reflect the amount in a subsequent reconciliation and promptly return any resulting excess payment to Large Load Customer in accordance with Articles 7 and 9 of the CRA.

Nothing in this Exhibit requires Transmission Owner to market the Point of Delivery, solicit replacement load, modify its transmission planning or service processes, or enter into a transmission-service arrangement with another Person.

### 8. No Duplicate Recovery

The Early Termination Amount and Partial Termination Amount are forward-looking amounts intended to address projected revenue exposure arising after the effective date of termination or Partial Termination.

Transmission Owner shall not recover the same revenue exposure through both:

a Shortfall Amount; and
an Early Termination Amount or Partial Termination Amount.

Amounts collected before termination or Partial Termination shall be credited only to the extent required under Article 9 and this Exhibit to prevent duplicate recovery.

## 706 Rates and Charges

Eligible Customers taking Interim Network Integration Transmission Service shall pay the charges set forth in this Section 706.

### 706.1 Monthly Demand Charge

Eligible Customer shall pay a Monthly Demand Charge for Zone Network Load and Non-Zone Network Load, which shall be determined as follows: Eligible Customer's measured demand amount (in MWs) multiplied by the applicable zonal Network Integration Transmission Service rate established pursuant to Section 34.1.

**Revenue Crediting.** Each month, revenue credits will be applied to the gross monthly Demand Charge to determine the actual charge to the Transmission Customer. Revenue credits shall be calculated based on the sum of the applicable Zone's share of revenues collected during the month from the Non-Firm Contract Demand Charge under Schedule 19. The sum of these revenues will appear as a reduction to the gross monthly rate stated above on a Transmission Customer's bill in that month for service under this schedule.

### 706.2 Redispatch Charge

The Eligible Customer 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.

## 714 Rates and Charges for Firm Contract Demand Transmission Service

Eligible Customers taking Firm Contract Demand Transmission Service on behalf of Eligible Load or Large Load shall pay the charges set forth in this Section 714.

### 714.1 Monthly Demand Charge

Eligible Customer taking service on behalf of Eligible Load or Large Load shall pay a Monthly Demand Charge based on the Firm Contract Demand Transmission Service amount (MW), as specified in Eligible Customer's Service Agreement, in accordance with Tariff, Schedule 18.

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

Eligible Customers taking Non-Firm Contract Demand Transmission Service shall pay the charges set forth in this Section 715.

### 715.1 Monthly Demand Charge

Eligible Customer shall pay a discounted reservation rate set as a function of the Zonal Firm Contract Demand Transmission Service rate and the transmission system load factor for a Zone, as specified in Eligible Customer's Service Agreement, in accordance with Tariff, Schedule 19.

**SCHEDULE 7**
**Long-Term Firm and Short-Term Firm Point-To-Point**
**Transmission Service**

1) The Transmission Customer shall pay each month for Reserved Capacity at the sum of the applicable charges set forth below for the Point of Delivery:

**Summary of Charges**
(in $/kW)

| **Point of Delivery** | **Yearly Charge** | **Monthly Charge** | **Weekly Charge** | **Daily On-Peak[1/] Charge** | **Daily Off-Peak[2/] Charge** |
|---|---|---|---|---|---|
| Border of PJM[3/] | Border Yearly Charge established pursuant to section 11 below | Yearly Charge /12 | Yearly Charge /52 | Weekly Charge /5 | Weekly Charge /7 |
| AE Zone | 23.809 | 1.984 | 0.4580 | 0.0920 | 0.0650 |
| BGE Zone | 15.675 | 1.306 | 0.3010 | 0.0600 | 0.0430 |
| Delmarva Zone | 19.378 | 1.615 | 0.3730 | 0.0750 | 0.0530 |
| JCPL Zone | 15.112 | 1.259 | 0.2906 | 0.0581 | 0.0414 |
| MetEd Zone | 15.112 | 1.259 | 0.2906 | 0.0581 | 0.0414 |
| Penelec Zone | 15.112 | 1.259 | 0.2906 | 0.0581 | 0.0414 |
| PECO Zone | 26.264 | 2.189 | 0.5051 | 0.1010 | 0.0722 |
| PPL Zone: Total charge is the sum of the components | PPL: *<br>AEC: 0.463<br>UGI: * | PPL: *<br>AEC: 0.039<br>UGI: * | PPL: *<br>AEC: 0.0089<br>UGI: * | PPL: *<br>AEC: 0.0018<br>UGI: * | PPL: *<br>AEC: 0.0013<br>UGI: * |

| Point of Delivery | Yearly Charge | Monthly Charge | Weekly Charge | Daily On-Peak[1/] Charge | Daily Off-Peak[2/] Charge |
|---|---|---|---|---|---|
| Pepco Zone | 20.999 | 1.750 | 0.4040 | 0.0810 | 0.0580 |
| PSE&G Zone | 23.696 | 1.975 | 0.4557 | 0.0911 | 0.0651 |
| AP Zone | Rate Pursuant to Attachment H-11 and Attachment H-34 | Rate Pursuant to Attachment H-11 and Attachment H-34 | Rate Pursuant to Attachment H-11 and Attachment H-34 | Rate Pursuant to Attachment H-11 and Attachment H-34 | Rate Pursuant to Attachment H-11 and Attachment H-34 |
| Rockland Zone | 53.766 | 4.481 | 1.0340 | 0.2068 | 0.1477 |
| ComEd Zone[4/] | [5/] | | | | |
| AEP East Zone[6/] | Rate Pursuant to Attachment H-14 and Attachment H-20 | Rate Pursuant to Attachment H-14 and Attachment H-20 | Rate Pursuant to Attachment H-14 and Attachment H-20 | Rate Pursuant to Attachment H-14 and Attachment H-20 | Rate Pursuant to Attachment H-14 and Attachment H-20 |
| Dayton Zone | Rate Pursuant to Attachment H-15 | Rate Pursuant to Attachment H-15 | Rate Pursuant to Attachment H-15 | Rate Pursuant to Attachment H-15 | Rate Pursuant to Attachment H-15 |
| Duquesne Zone | 14.17 | 1.18 | 0.27 | 0.0540 | 0.0386 |
| Dominion Zone[7/] | | | | | |
| ATSI Zone | Rate Pursuant to Attachment H-21 | Rate Pursuant to Attachment H-21 | Rate Pursuant to Attachment H-21 | Rate Pursuant to Attachment H-21 | Rate Pursuant to Attachment H-21 |
| DEOK Zone | Rate Pursuant to Attachment H-22 | Rate Pursuant to Attachment H-22 | Rate Pursuant to Attachment H-22 | Rate Pursuant to Attachment H-22 | Rate Pursuant to Attachment H-22 |
| EKPC Zone | Rate Pursuant to Attachment H-24 | Rate Pursuant to Attachment H-24 | Rate Pursuant to Attachment H-24 | Rate Pursuant to Attachment H-24 | Rate Pursuant to Attachment H-24 |

| | | | | | |
|---|---|---|---|---|---|
| OVEC Zone | 5.16 | 0.43 | 0.10 | 0.02 | 0.014 |

* PPL Electric Utilities Corporation's and UGI Utilities' respective component of the total charge is posted on the PJM Internet website.

1/ Monday – Friday except the following holidays: New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.

2/ Saturday and Sunday and the following holidays: New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.

3/ The charge for Points of Delivery at the Border of PJM shall not apply to any Reserved Capacity with a Point of Delivery of the Midcontinent Independent Transmission System Operator, Inc.

4/ Each month, revenue credits will be applied to the gross charge in accordance with section 8 below to determine the actual charge to the Transmission Customer.

5/ The charges for the ComEd zone are posted on PJM's website. In addition to other rates set forth in this schedule, customers within the ComEd zone shall be charged for recovery of RTO start-up costs at the following rates, each computed to four decimal places:

Annual Rate - $/kW/year = $1,523,039, divided by the 1 CP demand for the ComEd zone for the prior calendar year;

Monthly Rate - $/kW/month. = Annual Rate divided by 12;

Weekly Rate - $/kW/week = Annual Rate divided by 52;

Daily Rate - $/kW/day = Weekly Rate divided by 5.

In order to ensure that the charge does not result in either an over-recovery or under-recovery of ComEd's start-up costs, PJM will institute an annual true-up mechanism in the month of May of each of the years 2008-2014. In May of each of those years, PJM will compare the amount collected under this charge for the previous 12 months with the target annual amount of $1,523,039 and calculate any credits or surcharges that would be needed to ensure that $1,523,039 is collected for each year. Any credit or surcharge will be assessed in the June bills for years 2008-2014, consistent with the above methodology.

6/ The rates for firm point-to-point transmission service in the AEP Zone will be charged at the yearly, monthly, weekly or daily rate equivalent to the rate effective in such period under Attachments H-14 and H-20. In addition to other rates set forth in this schedule, customers within the AEP East Zone shall be charged for recovery of RTO start-up costs at the following rates, each computed to four decimal places:

Annual Rate - $/kW/year = $2,362,185, plus any applicable true-up adjustment, divided by the 1 CP demand for the AEP East Zone for the prior calendar year;

Monthly Rate - $/kW/month. = Annual Rate divided by 12;

Weekly Rate - $/kW/week = Annual Rate divided by 52;

Daily Rate - $/kW/day = Weekly Rate divided by 5.

For the period November 1, 2005 through March 31, 2006, the rate shall be $8.94/MW-month; for the period April 1 through December 31, 2006, the rate shall be $8.60/MW-month, thereafter, the rate will be subject to the following true-up:

In order to ensure that the charge does not result in either over-recovery or under-recovery of AEP's start-up costs, PJM will institute an annual true-up mechanism and implement revised charges as of January 1st of each of the years 2007-2019. In January of each of those years, PJM will compare the amount collected under this charge for the previous year or part thereof with the target annual amount of $2,362,185 and calculate the rates that would be needed, given the expected billing demands, to collect $2,362,185, adjusted for any prior year over-collection or under-collection. In the final year that the rate is collected, PJM will calculate the rate to collect five-twelfths of the annual amount ($984,244), plus or minus any prior year true up amount, by May 31 of that year, and shall charge such rate until that amount is collected, whether that date be before or after May 31, 2020.

7/ The service period charges rounded to four decimal places for the Dominion Zone are as follows:

Yearly Charge - $/kW/year = the formula rate for Network Integration Transmission Service as described in Attachment H-16 and Attachment H-16A divided by 1000 kW/MW

Monthly Charge - $/kW/month. = Yearly Charge divided by 12;

Weekly Charge - $/kW/week = Yearly Charge divided by 52;

Daily On-Peak Charge - $/kW/day = Weekly Charge divided by 5;

Daily Off-Peak Charge - $/kW/day = Weekly Charge divided by 7.

On a monthly basis, revenue credits shall be calculated based on the sum of VEPCO's share of revenues collected during the month from Schedule 7 and Network Integration Transmission Service to Non-Zone Network Load under Attachment H-A. The sum of these revenue credits will appear as an adjustment to the to the gross monthly service period charges produced by the above formula.

2) The total demand charge in any week, pursuant to a reservation for Daily On-Peak Delivery, or Daily Off-Peak Delivery shall not exceed the Weekly Delivery rate specified in section (1) above for weekly service times the highest amount in kilowatts of Reserved Capacity and any additional transmission service, if any, in any day during such week.

3) **Discounts:** Three principal requirements apply to discounts for transmission service as follows: (1) any offer of a discount made by the Transmission Provider must be announced to all Eligible Customers solely by posting on the OASIS, (2) any customer-initiated requests for discounts (including requests for use by one's wholesale merchant or an Affiliate's use) must occur solely by posting on the OASIS, and (3) once a discount is negotiated, details must be immediately posted on the OASIS. For any discount agreed upon for service on a path, from point(s) of receipt to point(s) of delivery, the Transmission Provider must offer the same discounted transmission service rate for the same time period to all Eligible Customers on all unconstrained transmission paths that go to the same point(s) of delivery on the Transmission System.

4) **Congestion, Losses and Capacity Export:** In addition to any payment under this Schedule, the Transmission Customer shall pay Redispatch Costs as specified in Section 27 of the Tariff. The Transmission Customer shall be responsible for losses as specified in the Tariff. Any Transmission Customer that is a Capacity Export Transmission Customer, shall pay any applicable charges, and receive any applicable credits, for such a customer pursuant to Attachment DD.

5) **Other Supporting Facilities and Taxes:** In addition to the rates set forth in section (1) of this schedule, the Transmission Customer shall pay charges determined on a case-by-case basis for facilities necessary to provide Transmission Service at voltages lower than those shown in Attachment H for the applicable Zone(s) and any amounts necessary to reimburse PJMSettlement for any amounts payable as sales, excise, "Btu," carbon, value-added or similar taxes (other than taxes based upon or measured by net income) with respect to the amounts payable pursuant to the Tariff.

6) **[Reserved]**

7) **Transmission Enhancement Charges.** Except for Points of Delivery at the Border of PJM, which are subject to the Border Yearly Charge determined under section 11, in addition to the rates set forth in section (1) of this Schedule and any other applicable charges, the Transmission Customer shall also pay any Transmission Enhancement Charges for which it is designated as a Responsible Customer under Schedule 12 appended to the Tariff.

8) **Determination of monthly charges for ComEd Zone:** On a monthly basis, revenue credits shall be calculated based on the sum of ComEd's share of revenues collected during the month from: (i) the PJM Border Rate under Schedule 7; (ii) Network Integration Transmission Service to Non-Zone Network Load under Attachment H-A; (iii) Seams Elimination Charge/Cost Adjustment/Assignment ("SECA") revenues allocable to ComEd under the Tariff; and (iv) any Point-To-Point Transmission Service where the Point of Receipt and the Point of Delivery are both internal to the ComEd Zone. On this basis, the sum of these revenues will appear as a reduction to the gross monthly rate stated above on a Transmission Customer's bill in that month for service under this schedule.

9) **Determination of monthly charges for AEP Zone:** On a monthly basis, revenue credits shall be calculated based on the sum of AEP's share of revenues collected during the month from: (i) the PJM Border Rate under Schedule 7; (ii) Network Integration Transmission Service to Non-Zone Network Load under Attachment H-A; and (iii) Firm Point-To-Point Transmission Service where the Point of Delivery is internal to the AEP Zone. The sum of these revenue credits will appear as an adjustment (reduction) to the gross monthly rate stated above on a Transmission Customer's bill in that month for service under this schedule.

10) **Resales:** The rates and rules governing charges and discounts stated above shall not apply to resales of transmission service, compensation for which shall be governed by section 23.1 of the Tariff.

11) **Determining the Border Yearly Charge**

(A) Formula for Determining the Border Yearly Charge

(i) Beginning with the calendar year 2020, the Border Yearly Charge shall be based on the following formula:

BYC = SHRR/SZPL

Where:

BYC is the Border Yearly Charge stated in dollars per kW of Reserved Capacity;

SHRR is the sum of the Revenue Requirements for each Transmission Owner used to determine charges for Network Integration Transmission Service either (a) stated in Attachment H for a Transmission Owner or (b) determined pursuant to a formula rate set forth in Attachment H, both as adjusted in accordance with this section (11)(A).

SZPL is the sum of each Zone's annual peak load (in kW) plus the peak day firm reservations for Point-to-Point service at the Border of PJM (in kW) subject to the charges set forth in section (1) herein (prior to any applicable discount) from the most recently completed 12-month period ending October 31.

(ii) Where the Revenue Requirement of a Transmission Owner is determined pursuant to a formula rate:

(a) the Revenue Requirement shall be increased by the amount of any revenue included in the Transmission Owner's formula rate as credits in determining the Revenue Requirement for Network Integration Transmission Service from: (i) Transmission Enhancement Charges; (ii) Firm Point-to-Point Transmission Service charges under Schedule 7; ~~or~~ (iii) Network Integration Transmission Service to Non-Zone Network Load under Attachment H-A; (iv) Interconnection Reliability Reinforcement Charges; or (v) Generator Reliability Reinforcement Recovery Fees that are included in the Transmission Owner's formula rate as revenue credits in determining the Revenue Requirement for Network Integration Transmission Service, if such credits are identified in the Transmission Owner's formula rate annual update; and

(b) (I) the Revenue Requirement shall be reduced by the amount of any credit applied directly to Network Customers to offset the cost of Network Integration Transmission Service, including credits to Network Customers resulting from: (i) a Network Upgrade Funding Agreement, Tariff, Attachment O-2; (ii) a State Agreement Public Policy Project subject to Tariff, Schedule 12, section (b)(xii)(B); (iii) agreements for transmission service entered into prior to a Transmission Owner signing the Consolidated Transmission Owners Agreement or any of its predecessor agreements or (iv) an entity executing an agreement by which such entity is obligated to pay for some, or all, of the Revenue Requirement of Transmission Facilities for which Network Customers would otherwise be responsible. (II) The Revenue Requirement for inclusion in the SHRR shall not be reduced by the amount of any credits for (i) Transmission Enhancement Charges; (ii) Firm Point-to-Point Transmission Service charges under this Schedule 7; ~~or~~ (iii) Network Integration Transmission Service to Non-Zone Network Load under Tariff, Attachment H-A; (iv) Interconnection Reliability Reinforcement Charges; or (v) Generator Reliability Reinforcement Recovery Fees.

(B) The Transmission Provider shall update the Border Yearly Charge annually based on the Revenue Requirements for each Transmission Owner used to determine charges for Network Integration Transmission Service in effect on January 1, provided that such Revenue Requirements were approved by FERC, stated in a formula rate update informational filing with FERC, or posted on the Transmission Provider's website no later than the preceding October 31. The Border Yearly Charge so updated shall become effective as of January 1 and remain in effect for the remainder of the calendar year. Except as provided in subsection (D) of this section (11), any change to the data used to determine the Border Yearly Charge following October 31, including any change in the number or identity of Transmission Owners filing Revenue Requirements for Network Integration Transmission Service under Attachment H, shall not be reflected in Border Yearly Charge until the next annual update.

(C) Not later than the first Business Day of December each year, the Transmission Provider shall post on the Transmission Provider's website a "BYC Workbook" that shall include (1) all of the inputs and calculations used to determine the Border Yearly Charge, (2) references to the sources of the inputs used to determine the Border Yearly Charge from each Transmission Owner's stated or formula rate filing or posting, (3) a variance report detailing all changes to the calculations, inputs, or procedures used to determine the proposed Border Yearly Charge as compared to the calculations, inputs or procedures used to determine the Border Yearly Charge then in effect, and (4) contact information for the submission of inquiries or comments regarding the posted BYC Workbook. All inputs used to determine the SHRR must be taken either from a stated Revenue Requirement for Network Integration Transmission Service specified in Attachment H or from an identified entry in a Transmission Owner's formula rate update either filed with the FERC or posted on the Transmission Provider's website for the rate for Network Integration Transmission Service that will be in effect on January 1.

(D) Procedure for Review of and Challenge to the Border Yearly Charge Determination.

(i) Review of the Border Yearly Charge Determination.

(a) Within sixty (60) days of the posting of the BYC Workbook, Interested Parties, including entities with existing, requested or planned transmission service reservations for service at the Border of PJM ("Border Rate Transmission Customers"), state utility regulatory commissions, consumer advocacy agencies, state attorneys general, and any entity having standing under Section 206 of the Federal Power Act ("Interested Party"), may submit reasonable information requests to the Transmission Provider regarding its selection and use of inputs and the calculations performed in calculating the Border Yearly Charge, including the creation of the BYC Workbook, with respect to any adjustments made by the Transmission Provider, including adjustments made based on information provided by a Transmission Owner to the Transmission Provider: (1) to a Transmission Owner's Revenue Requirement for Network Integration Transmission Service prior to its inclusion as an input into the calculation of the SHRR for the Border Yearly Charge; (2) to the data used in determining SZPL; (3) to the Revenue Requirement of a Transmission Owner in determining the Border Yearly Charge made in accordance with Section (11)(A)(ii); and (4) in response to any FERC orders approving or requiring changes to, or refunds associated with, a Transmission Owner's formula rate or resulting annual Revenue Requirement.

(b) The Transmission Provider shall respond to such reasonable information requests as soon as practicable, but no later than within forty-five (45) days of the receipt of the information request, unless it determines that additional time is required to respond. The Transmission Provider shall post any information requests received and its responses thereto on the Transmission Provider's website, provided that any responsive information that has been designated by a Transmission Owner as confidential pursuant to the provisions of the Operating Agreement or Consolidated Transmission Owners Agreement shall not be posted and shall be handled solely in accordance with such provisions. An Interested Party may request a meeting with the Transmission Provider and any interested Transmission Owner to discuss any response to an information request or any dispute regarding the calculation of the Border Yearly Charge annual update. The Transmission Provider and any interested Transmission Owner shall exercise good faith in responding to an Interested Party's meeting request and shall not unreasonably deny or delay such meeting in a manner that prejudices an Interested Party's opportunity to timely review the Border Yearly Charge annual update.

(c) At any time after posting of the BYC Workbook, but before a challenge pursuant to section (11)(D)(ii) ("Challenge") is filed, at the request of an Interested Party, the Transmission Provider will be required to meet with the Interested Party within ten (10) Business Days of such request in an attempt to resolve any dispute regarding the calculation of the Border Yearly Charge raised by the Interested Party in its meeting request. If the dispute relates to information from one or more Transmission Owners' Tariff, Attachment H stated or formula rate or Zonal peak load determination, the relevant Transmission Owner(s) will be notified by the Transmission Provider of the dispute and will be permitted to attend the meeting.

(d) If it is determined that the Border Yearly Charge is based on an incorrect input or calculation or FERC directs that a Transmission Owner's Revenue Requirement, upon which the Border Yearly Charge is based, be changed and implemented as a change to the Transmission Owner's rate for Network Integration Transmission Service at a time other than provided for in the Transmission Owner's formula rate protocols ("Changed Revenue Requirement"), the Transmission Provider shall change the Border Yearly Charge as necessary to account for such Changed Revenue Requirement and post on the Transmission Provider's website a revised BYC Workbook documenting the changes to the Border Yearly Charge to incorporate the correction or change. The correction to the Border Yearly Charge shall take effect no

later than the first day of the month that begins 30 days after a correction is posted by the Transmission Provider or, if the correction or Changed Revenue Requirement results from a FERC order, on a schedule consistent with that order. Subject to the notice of correction described above, to the extent permitted by Tariff, Part I, section 10.4, PJM Settlement, on behalf of itself or as agent for the Transmission Provider, shall adjust the charges to Border Rate Transmission Customers with respect to any month prior to the effective date of the Changed Revenue Requirement being reflected in the Border Yearly Charge that is affected by the correction or Changed Revenue Requirement and refund or credit any amount paid in excess of the corrected Border Yearly Charge. Any correction under this subsection (D) shall be limited to any Changed Revenue Requirement and the Transmission Provider's selection and use of Border Yearly Charge inputs and the calculations necessary to determine the Border Yearly Charge. This section does not apply to a FERC order that changes a Transmission Owner's Revenue Requirement that is implemented through a true-up mechanism.

(e) If FERC issues an order directing or approving refunds associated with a Transmission Owner's Revenue Requirement that previously was, or currently is, incorporated into the SHRR to be paid to Network Integration Transmission Service customers, Border Rate Transmission Customers shall also receive a refund, to the extent that the changes in a Transmission Owner's Revenue Requirement upon which such refund is based affects the calculation of the Border Yearly Charge.

(f) Nothing in section (11) shall authorize an inquiry into the data or information filed or posted by a Transmission Owner as part of its transmission rate protocols pursuant to Tariff, Attachment H, or shall affect the rights that any Border Rate Transmission Customer may have under said protocols.

(ii) Challenge to the Border Yearly Charge Determination.

(a) An Interested Party may file with FERC a Challenge to the annual update of the Border Yearly Charge within ninety (90) days of the posting of the BYC Workbook or thirty (30) days of receiving a response to any information request it submitted under subsection (11)(D)(i)(a), whichever is later. Any such Challenge shall be served on Transmission Provider and each Transmission Owner with Revenue Requirements included in the BYC Workbook.

(b) A Challenge must specify and include adequate supporting documentation, detailing how the Transmission Provider's selection of inputs to or calculation of the Border Yearly Charge fails to comply with the provisions of this Schedule 7, section (11), identifying any input data or other BYC Workbook entry that is alleged to be missing or inaccurate or the Border Yearly Charge calculations alleged to be performed incorrectly.

(c) A Challenge must be limited to the Transmission Provider's selection and use of Border Yearly Charge inputs and the calculations necessary to determine the Border Yearly Charge and may not seek to modify Tariff, Schedules 7 and 8 or Attachment H-A or question the data or information filed or posted by a Transmission Owner pursuant to Tariff, Attachment H.

(d) The Transmission Provider and each Transmission Owner with Revenue Requirements included in the BYC Workbook shall have thirty (30) days to answer a Challenge.

(e) In any proceeding before the FERC in response to a Challenge, the Transmission Provider shall bear the burden, consistent with Section 205 of the FPA, of demonstrating that it has correctly applied the terms of this Schedule 7, section (11).

(E) When the Transmission Provider posts on its website a Border Yearly Charge annual update under subsection (C) or correction under subsection (D) of this section (11), it shall also make an informational filing with the FERC that includes such posting.

(F) A Transmission Customer taking Point-to-Point Transmission Service at the Border of PJM under this Schedule 7, including any discounted service pursuant to Section (3), is relieved from, and shall not be separately allocated or assigned Transmission Enhancement Charges under Schedule 12 §(c)(5) on the basis of its reservation of Firm Point-to-Point Transmission Service at the Border of PJM. Payment of the charges set forth in this Schedule does not relieve the responsibility of a Transmission Customer or Merchant Transmission Facility to pay Transmission Enhancement Charges assigned to such Merchant Transmission Facility, other than pursuant to Tariff, Schedule 12, §(c)(5), nor does it determine other cost obligations of Transmission Customers or Merchant Transmission Facilities that may be imposed under other provisions of the Tariff.

(G) Point-to-Point Transmission Service at the Border of PJM includes service to a Point of Delivery at a Merchant Transmission Facility that provides service to a neighboring transmission system.

(H) Customers taking Point-to-Point Transmission Service at the Border of PJM with a Point of Delivery at a Merchant Transmission Facility and not receiving a discount from the Border Yearly Charge pursuant to this Schedule 7, section (3) under the settlement entered into in FERC Docket No. ER19-2105, shall receive a credit determined in accordance with the following formula:

MTFC = BYC*MTFTEC/SHRR

Where:

MTFC is the credit to the Border Yearly Charge per kW of reserved capacity;

BYC is the Border Yearly Charge;

MTFTEC is the total annual Transmission Enhancement Charges under Tariff, Schedule 12 applicable to the Merchant Transmission Facility to which the customer is taking Point-to-Point Transmission Service during the current calendar year; and

SHRR is the amount determined pursuant to subsection (A) of this section (11).

The MTFC shall be credited on a monthly basis only for those months during which the customer takes Firm Point-to-Point Transmission Service to the Merchant Transmission Facility.

**SCHEDULE 12**
**Transmission Enhancement Charges and**
**Interconnection Reliability Reinforcement Cost Recovery**

**(a) Establishment of Transmission Enhancement Charges.**

**(i) Establishment of Transmission Enhancement Charges by Transmission Owners and Entities That Will Become Transmission Owners.** One or more of the Transmission Owners may be designated to construct and own and/or finance Required Transmission Enhancements by (1) the Regional Transmission Expansion Plan periodically developed pursuant to Operating Agreement, Schedule 6 or (2) any joint planning or coordination agreement between PJM and another region or transmission planning authority set forth in Tariff, Schedule 12-Appendix B ("Appendix B Agreement") (collectively, for purposes of this Schedule 12 only, "Regional Transmission Expansion Plan"). Operating Agreement, Schedule 6, section 1.7 recognizes that Transmission Owners, subject to obtaining any necessary regulatory approvals, may seek to recover the costs of Required Transmission Enhancements and obligates PJMSettlement to collect on behalf of Transmission Owner(s) any charges established by Transmission Owners to recover the costs of Required Transmission Enhancements. If a Transmission Owner is designated by the Regional Transmission Expansion Plan to construct and own and/or finance a Required Transmission Enhancement, such Transmission Owner may choose any of the following cost recovery mechanisms, subject to the crediting procedures set forth in section (e) below:

(1) Decline to seek to recover the costs of Required Transmission Enhancements from customers until such time as it makes a filing pursuant to Section 205 of the Federal Power Act to revise its Network Integration Transmission Service rates;

(2) Make a filing pursuant Section 205 of the Federal Power Act and the FERC's rules and regulations to establish the revenue requirement with respect to a Required Transmission Enhancement, without filing to revise its rates for Network Integration Transmission Service generally; or

(3) Establish the revenue requirement with respect to a Required Transmission Enhancement through the operation of a formula rate in effect applicable to its rates for Network Integration Transmission Service.

A charge established to recover the revenue requirement with respect to a Required Transmission Enhancement is hereafter referred to as a "Transmission Enhancement Charge." Transmission Enhancement Charges of one or more Transmission Owners for Required Transmission Enhancements shall be established in accordance with this Schedule 12.

**(ii) Establishment of Transmission Enhancement Charges With Respect to Required Transmission Enhancements Constructed by Entities in Another Region.** The revenue requirement with respect to a Required Transmission Enhancement constructed pursuant to an Appendix B Agreement in another region by an entity designated by such other region shall be governed by the tariffs or agreements in effect in such region. Transmission Enhancement

Charges to recover the costs of such Required Transmission Enhancement for which PJM is responsible shall be determined in accordance with this Schedule 12. Other than with respect to a Required Transmission Enhancement constructed pursuant to an Appendix B Agreement, no PJM Network or Transmission Customer will bear cost responsibility for any required transmission upgrades in another region as a consequence of a Required Transmission Enhancement included in the Regional Transmission Expansion Plan.

**(iii) Transmission Facilities Not Eligible for Cost Responsibility Assignment.** Any alternating current ("A.C.") facilities or direct current ("D.C.") facilities that are Attachment Facilities, Local Upgrades, Merchant Network Upgrades, Merchant Transmission Facilities, Network Upgrades, Supplemental Projects, or any other Transmission Facilities that operate or are planned to be operated in a manner that requires customers to subscribe to transmission service over such facilities or to a portion of the electric capability of such facilities shall not be eligible for cost responsibility assignment pursuant to this Schedule 12.

**(iv) Entities Not Yet Eligible to Become Transmission Owners.** For purposes of this Schedule 12 only, the term, "Transmission Owner," shall include any entity that undertakes to construct and own and/or finance a Required Transmission Enhancement pursuant to a designation in the Regional Transmission Expansion Plan to construct and own and/or finance such Required Transmission Enhancement, even if such entity is not yet eligible to become a party to the Consolidated Transmission Owners Agreement. Nothing in the PJM Tariff nor the Consolidated Transmission Owners Agreement shall prevent an entity that undertakes to construct and own and/or finance a Required Transmission Enhancement pursuant to a designation in the Regional Transmission Expansion Plan to construct and own and/or finance such Required Transmission Enhancement from recovering the costs of such Required Transmission Enhancement through this Schedule 12.

**(v) Effective Date.** The assignment of cost responsibility or classification of Required Transmission Enhancements either (1) made by the Transmission Provider prior to February 1, 2013, or (2) applicable to Required Transmission Enhancements approved by the PJM Board pursuant to Operating Agreement, section 1.6 prior to February 1, 2013 are set forth in Tariff, Schedule 12-Appendix. Except as specifically set forth herein, nothing in this Schedule 12 shall change the assignment of cost responsibility or classification of Required Transmission Enhancements included in Tariff, Schedule 12-Appendix. The assignment of cost responsibility or classification of all other Required Transmission Enhancements shall be set forth in Tariff, Schedule 12-Appendix A.

**(b) Designation of Customers Subject to Transmission Enhancement Charges.**

**(i) Regional Facilities and Necessary Lower Voltage Facilities.** Transmission Provider shall assign cost responsibility on a region-wide basis for Required Transmission Enhancements included in the Regional Transmission Expansion Plan that (1) (a) are A.C. facilities that operate at or above 500 kV; (b) constitute a single Required Transmission Enhancement comprising two A.C. circuits operating at or above 345 kV and below 500 kV, where both circuits originate from a single substation or switching station at one end and

terminate at a single substation or switching station at the other end, regardless of whether or not the two circuits are routed in the same right-of-way ("Double-circuit 345 kV Required Transmission Enhancement"); (c) are A.C. or D.C. shunt reactive resources (such as capacitors, static var compensators, static synchronous condenser (STATCON), synchronous condensers, inductors, other shunt devices, or their equivalent) connected to a Transmission Facility described in clause (a) or (b) of this subsection, or (d) are D.C. facilities meeting the criteria set forth in subsection (b)(i)(D) (collectively, "Regional Facilities"), or (2) new A.C. Transmission Facilities or expansions or enhancements to existing Transmission Facilities that operate below 500 kV (or 345 kV in the case of a Regional Facility described in clause (1)(b) of this subsection) or new D.C. Transmission Facilities that do not meet the criteria of subsection (b)(i)(D) that must be constructed or strengthened to support new Regional Facilities, based on the planning criteria used by the Transmission Provider in developing the applicable Regional Transmission Expansion Plan ("Necessary Lower Voltage Facilities") as follows:

(A) Cost responsibility for Regional Facilities and Necessary Lower Voltage Facilities shall be allocated among Responsible Customers as defined in this Schedule 12 as follows:

(1) Fifty percent (50%) shall be assigned annually on a load-ratio share basis as follows:

(a) With respect to each Zone, using, consistent with Tariff, Part III, section 34.1, the applicable zonal loads at the time of such Zone's annual peak load from the 12-month period ending October 31 preceding the calendar year for which the annual cost responsibility allocation is determined; and

(b) With respect to Merchant Transmission Facilities, (1) for the calendar year following the year in which it initiates operation, the actually awarded Firm Transmission Withdrawal Rights associated with its existing Merchant Transmission Facility; and (2) for all subsequent calendar years, the annual peak load of the Merchant Transmission Facility (not to exceed its actual Firm Transmission Withdrawal Rights) from the 12-month period ending October 31 of the calendar year preceding the calendar year for which the annual cost responsibility allocation is determined.

(2) Fifty percent (50%) shall be assigned as follows:

(a) In the case of a Required Transmission Enhancement included in the Regional Transmission Expansion Plan to address one or more reliability violations or to address operational adequacy and performance issues (collectively, "Reliability Project"), in accordance with the distribution factor ("DFAX") analysis described in subsection (b)(iii) or the analysis applicable to Regional Facilities that address stability issues described in subsection (b)(xviii) of this Schedule 12 as applicable; and

(b) In the case of a Required Transmission Enhancement included in the Regional Transmission Expansion Plan to relieve one or more economic constraints as described in Operating Agreement, Schedule 6, section 1.5.7(b)(iii) ("Economic

Project"), in accordance with the methodology described in subsection (b)(v) of this Schedule 12.

(B) (1) Except for transformers that are an integral component of a Regional Facility, transformers connected to Lower Voltage Facilities, as defined in section (b)(ii) of this Schedule 12, shall not be considered Regional Facilities or Necessary Lower Voltage Facilities; and (2) Transmission Facilities that are not Regional Facilities and deliver energy from a Regional Facility to load shall not be considered Necessary Lower Voltage Facilities.

(C) With respect Required Transmission Enhancements that qualify as Regional Facilities under subsection (b)(i)(1)(b) or subsection (b)(i)(D)(2) of this Schedule 12:

(1) where the Required Transmission Enhancement includes both new Transmission Facilities and pre-existing Transmission Facilities, cost responsibility under this section (b)(i) shall apply only to the cost of the new Transmission Facilities plus the original cost less accumulated depreciation of pre-existing Transmission Facilities that are included in Tariff, Schedule 12-Appendix or Tariff, Schedule 12-Appendix A;

(2) cost responsibility shall be assigned under this section (b)(i) only after the Required Transmission Enhancement goes into service as a Double-circuit 345 kV Required Transmission Enhancement or a Double-circuit D.C. Required Transmission Enhancement; and

(3) cost responsibility shall be assigned under this section (b)(i) for any CWIP permitted to be recovered before the Required Transmission Enhancement goes into service only after such Transmission Facilities are approved in a Regional Transmission Expansion Plan as a Double-circuit 345 kV Required Transmission Enhancement or a Double-circuit D.C. Required Transmission Enhancement.

(D) A Required Transmission Enhancement included in the Regional Transmission Expansion Plan that is a D.C. facility, consisting of D.C. lines (i.e., wires or cables) and A.C./D.C. converters, shall be a Regional Facility only if:

(1) such D.C. facility comprises two poles and operates at a voltage of ±433 kV D.C. or above; or

(2) such D.C. Facility constitutes a single Required Transmission Enhancement comprising two D.C. circuits where (i) both circuits originate from a single substation or switching station at one end and terminate at a single substation or switching station at the other end, regardless of whether or not both circuits are routed in the same right-of-way, and (ii) each such circuit consists of two poles and operates at a voltage of ±298 kV D.C or above ("Double-circuit D.C. Required Transmission Enhancement").

**(ii) Lower Voltage Facilities.** Transmission Provider shall assign cost responsibility for Required Transmission Enhancements that (a) are not Regional Facilities; and (b) are not "Necessary Lower Voltage Facilities" as defined in section(b)(i) of this Schedule 12 (collectively "Lower Voltage Facilities"), as follows:

(A) If the Lower Voltage Facility is a Reliability Project, Transmission Provider shall use the DFAX analysis described in subsection (b)(iii) or the analysis applicable to Regional Facilities that address stability issues described in subsection (b)(xviii) of this Schedule 12 as applicable; and

(B) If the Lower Voltage Facility is an Economic Project, Transmission Provider shall use the methodology described in subsection (b)(v) of this Schedule 12.

**(iii) DFAX Analysis for Reliability Projects.**

(A) For purposes of the assignment of cost responsibility for Reliability Projects under subsection (b)(i)(A)(2)(a) and subsection (b)(ii)(A) of this Schedule 12, the Transmission Provider, based on a computer model of the electric network and using power flow modeling software, shall calculate distribution factors, represented as decimal values or percentages, which express the portions of a transfer of energy from a defined source to a defined sink that will flow across a particular transmission facility or group of transmission facilities. These distribution factors represent a measure of the use by the load of each Zone or Merchant Transmission Facility (collectively, "Responsible Zone") of the Required Transmission Enhancement, as determined by a power flow analysis. In general, a distribution factor can be represented as:

Distribution Factor = (After-shift power flow – pre-shift power flow) / Total amount of power shifted

Total amount of power shifted = Modeled incremental megawatt transfer to a given Load Deliverability Area or Merchant Transmission Facility

Pre-shift power flow = Megawatt flow over the Required Transmission Enhancement before the incremental megawatt transfer

After-shift power flow = Megawatt flow over the Required Transmission Enhancement after the incremental megawatt transfer

When calculating such distribution factors:

(1) All distribution factors are calculated with respect to the Required Transmission Enhancement subject to cost allocation under subsection (b)(i)(A)(2)(a) and subsection (b)(ii)(A) of this Schedule 12.

(2) The calculation of distribution factors shall be determined using linear matrix algebra, such that distribution factors represent the ratio of (i) a change in megawatt flow on a Required Transmission Enhancement to (ii) a change in megawatts transferred to aggregate load within a Zone or, in the case of a Merchant Transmission Facility, the point of withdrawal associated with Firm Transmission Withdrawal Rights over such Merchant Transmission Facility.

(3) With respect to a Merchant Transmission Facility, zonal peak load shall mean (i) the existing Firm Transmission Withdrawal Rights of the Merchant Transmission Facility being evaluated, if the Merchant Transmission Facility is in service, or (ii) for a Merchant Transmission Facility that is not yet in service, the planned Firm Transmission Withdrawal Rights of the Merchant Transmission Facility being evaluated as identified in the Interconnection Service Agreement in effect for such Merchant Transmission Facility.

(4) In the DFAX analysis, when Transmission Provider models a transfer from generation to all load within an individual Zone, Transmission Provider shall model the transfer to the Zone as a whole (not on a bus-by-bus basis).

(5) In the DFAX analysis, Transmission Provider shall model generation both external and internal to individual Responsible Zones to reflect (a) the boundaries of Locational Deliverability Areas ("LDAs"), and (b) limitations with respect to the reliability objective for moving generation capacity across the transmission system. Transmission Provider shall adopt the Capacity Emergency Transfer Objective ("CETO"), associated with that LDA and calculated for the applicable planning year to be the transfer limitation into the LDA. In modeling the system generation and load, Transmission Provider shall assume that the percentage of the zonal load in the LDA served by external (or internal) generation to the LDA shall equal the ratio of (i) the CETO associated within that LDA (or generation internal with the LDA) to (ii) the sum of (a) the internal generation within the LDA and (b) the CETO associated with that LDA. For the generation dispatch used in calculating the distribution factor, Transmission Provider shall distribute these amounts of external/internal generation among all generation in the PJM Region external to/internal within the LDA, respectively, in proportion to their capacity. For Responsible Zones that are located within LDAs that are also entirely contained in other larger LDAs, the modeling approach and distribution factor calculations shall be repeated for such Responsible Zones for each LDA. The lowest distribution factor derived from these calculations shall be applied to the Responsible Zone in the calculation of the use of the Required Transmission Enhancement.

(B) The DFAX analysis will be performed in accordance with the following steps:

(1) Transmission Provider shall calculate a distribution factor and a direction of use for each Responsible Zone by modeling a transfer from all generation in the PJM Region to each Responsible Zone. To establish the use by a Responsible Zone, in megawatts, of a Required Transmission Enhancement, the distribution factor of a Required Transmission Enhancement associated with the resulting transfer modeled by the Transmission Provider to each Responsible Zone shall be multiplied by the Responsible Zone's peak load.

(2) The Transmission Provider shall separately determine the relative use of the Required Transmission Enhancement by each Responsible Zone in each direction by dividing the megawatts of use by each Responsible Zone determined in section (iii)(B)(1) above

by the total use of all Responsible Zones using the Required Transmission Enhancement in the same direction of use.

(3) Transmission Provider shall determine the direction of use percentage of the Required Transmission Enhancement in each direction using a production cost analysis to determine the total use, in megawatt-hours, of the Required Transmission Enhancement by all Zones and Merchant Transmission Facilities in each direction over the course of a year. The Transmission Provider shall calculate the percentage use in each direction by dividing the megawatt-hours of use in each direction by total use in megawatt-hours in both directions of use.

(4) The Transmission Provider shall multiply the relative use by each Responsible Zone of the Required Transmission Enhancement in each direction of use determined in section (iii)(B)(2) above, by the applicable direction of use percentage determined in section (iii)(B)(3) above.

(5) The products of the calculation performed in section (iii)(B)(4) above, shall determine the relative allocation to each Responsible Zone of cost responsibility for the Required Transmission Enhancement.

(C) In the DFAX analysis, the Zones of Public Service Electric and Gas Company and Rockland Electric Company will be treated as one Zone unless and until Rockland Electric Company elects to be treated as a separate Zone in accordance with the terms of the Settlement Agreement And Offer Of Partial Settlement approved by FERC in Docket Nos. ER06-456-000, et al.

(D) Transmission Provider shall round cost responsibility assignments determined using the DFAX analysis described in subsection (b)(iii) of this Schedule 12 to the nearest one-hundredth of one percent.

(E) Transmission Provider shall not account for the ability to adjust use of phase angle regulators ("PARs") in the DFAX analysis described in subsection (b)(iii) of this Schedule 12. In the DFAX analysis, all PAR angles shall be fixed at their base case settings.

(F) In the DFAX analysis, if the Required Transmission Enhancement is a D.C. facility, the Transmission Provider shall determine cost responsibility assignment as follows:

(1) The Required Transmission Enhancement shall be replaced in the model with a comparable proxy A.C. facility, the impedance of which shall be calculated based on the length of the D.C. facility that was removed from the model multiplied by an approximate per unit/mile impedance value for the proxy A.C. facility.

(2) Where a D.C. facility is an integral part of a Required Transmission Enhancement that also includes A.C. facilities, the methodology described in

subsection (b)(iii)(F)(1) above shall be used only for the D.C. facility segment of such Required Transmission Enhancement.

(3) A D.C. facility used to control flow over portions of the Transmission System shall be modeled with a zero impedance and no control shall be applied.

(G) If Transmission Provider determines in its reasonable engineering judgment that, as a result of applying the provisions in section (b)(iii) of this Schedule 12, the DFAX analysis cannot be performed or that the results of such DFAX analysis are objectively unreasonable, the Transmission Provider may use an appropriate substitute proxy for the Required Transmission Enhancement in conducting the DFAX analysis. If a proxy is used that is not specified in this Schedule 12, Transmission Provider shall state in a written report (a) the reasons why it determined the DFAX analysis could not be performed or that the results of the DFAX analysis were objectively unreasonable; (b) why the substitute proxy produced objectively reasonable results; and (3) a recommendation as to what changes, if any, should be considered in conducting the DFAX analysis.

(H) The Transmission Provider shall make a preliminary cost responsibility determination for each Required Transmission Enhancement subject to section (b)(iii) of this Schedule 12 at the time such Required Transmission Enhancement is included in the Regional Transmission Expansion Plan.

(1) When CWIP in connection with a Required Transmission Enhancement subject to this section (b)(iii) of this Schedule 12 is entitled to be recovered, the preliminary determination of cost responsibility made at the time that the Required Transmission Enhancement was included in the Regional Transmission Expansion Plan shall be used to assign cost responsibility for such CWIP and such cost responsibility shall remain unchanged until the date the Required Transmission Enhancement goes into service. Once a Required Transmission Enhancement has gone into service, the updated cost responsibility determination provided for in subsection (b)(iii)(H)(2) below shall apply.

(2) Beginning with the calendar year in which a Required Transmission Enhancement is scheduled to enter service, and thereafter annually at the beginning of each calendar year, the Transmission Provider shall update the preliminary cost responsibility determination for each Required Transmission Enhancement using the values and inputs used in the base case of the most recent Regional Transmission Expansion Plan approved by the PJM Board prior to the date of the update. All values and inputs used in the calculation of the distribution factor in a determination of cost responsibility shall be the same values and inputs as used in the base case of the most recent Regional Transmission Expansion Plan approved by the PJM Board prior to the determination of cost responsibility.

**(iv) Spare Parts, Replacement Equipment And Circuit Breakers.** Transmission Provider shall assign cost responsibility for spare parts, replacement equipment, and circuit breakers and associated equipment, included in the Regional Transmission Expansion Plan as follows:

(A) Spare parts that are part of the design specifications of a Required Transmission Enhancement at the time such Required Transmission Enhancement is first included in the Regional Transmission Expansion Plan shall be considered part of the Required Transmission Enhancement for the purpose of applying the cost threshold described in subsection (b)(vi) of this Schedule 12 and cost responsibility for such spare parts shall be assigned in the same manner as the Required Transmission Enhancement. Cost responsibility for spare parts independently included the Regional Transmission Expansion Plan and not a part of the design specifications of a Required Transmission Enhancement as described above in this subsection shall be assigned to the Zone of the owner of the spare part, if the owner of the spare part is a Transmission Owner listed in Tariff, Attachment J. If the owner of the spare part is not a Transmission Owner listed in Tariff, Attachment J, cost responsibility shall be assigned on a pro rata basis to the zones that bear cost responsibility for the owner's Required Transmission Enhancements.

(B) Replacement equipment that is part of the design specifications of a Required Transmission Enhancement at the time the Required Transmission Enhancement is first included in the Regional Transmission Expansion Plan shall be considered part of the Required Transmission Enhancement for the purpose of applying the cost threshold described in section (b)(vi) of this Schedule 12 and cost responsibility for such replacement equipment shall be assigned in the same manner as the Required Transmission Enhancement. Cost responsibility for Required Transmission Enhancement replacement equipment independently included in the Regional Transmission Expansion Plan and not a part of the design specifications of a Required Transmission Enhancement as described above in this subsection, shall be assigned to the same Zones and/or Merchant Transmission Facilities and in the same proportions as the then-existing assignments of cost responsibility for the facilities that the replacement equipment is replacing.

(C) Circuit breakers and associated equipment that are part of the design specifications of a Required Transmission Enhancement at the time the Required Transmission Enhancement is first included in the Regional Transmission Expansion Plan shall be considered part of the Required Transmission Enhancement for the purpose of applying the cost threshold described in subsection (b)(vi) of this Schedule 12 and cost responsibility for such circuit breakers and associated equipment shall be assigned in the same manner as the Required Transmission Enhancement. Cost responsibility for circuit breakers and associated equipment independently included in the Regional Transmission Expansion Plan and not a part of the design specifications of a transmission element of a Required Transmission Enhancement as described above in this subsection, shall be assigned to the Zone of the owner of the circuit breaker and associated equipment if the owner of the circuit breaker is a Transmission Owner listed in Tariff, Attachment J. If the owner of the circuit breaker is not a Transmission Owner listed in Tariff, Attachment J, cost responsibility shall be assigned on a pro rata basis to the zones that bear cost responsibility for the owner's Required Transmission Enhancements.

**(v) Economic Projects.** Transmission Provider shall assign (i) fifty percent (50%) of cost responsibility for Economic Projects that are Regional Facilities; and (ii) full cost responsibility for Economic Projects that are Lower Voltage Facilities; as follows:

(A) Transmission Provider shall assign cost responsibility for Economic Projects that are accelerations of Reliability Projects as described in Operating Agreement, Schedule 6, section 1.5.7(b)(i) ("Acceleration Projects") by performing and comparing (1) a DFAX analysis consistent with the methodology described in subsection (b)(iii) of this Schedule 12, and (2) a methodology that is intended to act as a proxy for expected economic benefits from reduced Locational Marginal Prices ("LMP Benefit") over the period that the reliability-based enhancement or expansion is to be accelerated ("LMP Benefits Methodology"). The LMP Benefits Methodology shall determine cost responsibility assignment percentages to Zones and Merchant Transmission Facilities in the following manner. The LMP Benefit to a Zone shall be deemed to be equal to the reduction in Locational Marginal Price payments made by Load Serving Entities as a result of the Acceleration Project assuming the customers purchase all energy needs from the PJM Interchange Energy Market, and LMP Benefits so calculated shall be converted into percentage cost responsibility assignments for the affected Zones. The LMP Benefits Methodology shall not incorporate the financial effects of allocations of Auction Revenue Rights or Financial Transmission Rights. The LMP Benefit to a Merchant Transmission Facility shall be deemed to be equal to the proportionate share of assigned cost responsibility using the DFAX analysis and the assignments of cost responsibility to other Zones in the LMP Benefits Methodology shall be proportionately adjusted, as necessary, to reflect this treatment of Merchant Transmission Facilities to ensure that the total allocation for any economic-based Required Transmission Enhancement equals one hundred percent. If, after performing both analyses and comparing the percentage cost responsibility assignments for the affected Zones calculated pursuant to the DFAX analysis and the LMP Benefits Methodology, the results do not indicate at least a ten percentage point cost responsibility assignment differential between the two methods for any Zone, cost responsibility for the Acceleration Project shall be assigned using the DFAX analysis. If, after performing both analyses and comparing the percentage cost responsibility assignments for the affected Zones calculated pursuant to the DFAX analysis and LMP Benefits Methodology, the results indicate at least a ten percentage point cost responsibility assignment differential between the DFAX analysis and the LMP Benefits Methodology for any Zone, cost responsibility for the Acceleration Project for the period of time the Reliability Project is accelerated (i.e. the period between the date the Reliability Project actually goes into service and the date the Reliability Project originally was scheduled to go in service in the PJM Board approved Regional Transmission Expansion Plan) shall be assigned using the LMP Benefits Methodology. For all periods other than the period of time the Reliability Project is accelerated, cost responsibility for such an Acceleration Project shall be assigned in accordance with the provisions of this Schedule 12 governing the assignment of cost responsibility of Regional Facility Reliability Projects or Lower Voltage Facility Reliability Projects, as applicable.

(B) Transmission Provider shall assign cost responsibility for Economic Projects that are modifications to Reliability Projects as described in Operating Agreement, Schedule 6, section 1.5.7(b)(ii) in accordance with the provisions of this Schedule 12 governing the assignment of cost responsibility of Regional Facility Reliability Projects or Lower Voltage Facility Reliability Projects, as applicable.

(C) Transmission Provider shall assign cost responsibility for Economic Projects that are new enhancements or expansions that could relieve one or more economic

constraints as described in Operating Agreement, Schedule 6, section 1.5.7(b)(iii) to the Zones that show a decrease in the net present value of the Changes in Load Energy Payment. The Change in Load Energy Payment for each year shall be determined using the methodology set forth in Operating Agreement, Schedule 6, section 1.5.7(d) for the period specified in that section. Cost responsibility shall be assigned based on each Zone's pro rata share of the sum of the net present values of the Changes in Load Energy Payment only of the Zones in which the net present value of the Changes in Load Energy Payment shows a decrease.

**(vi) Required Transmission Enhancements Costing Less Than $5 Million.** Notwithstanding sections (b)(i), (b)(ii), (b)(iv) and (b)(v) of this Schedule 12, cost responsibility for a Required Transmission Enhancement for which the good faith estimate of the cost of the Required Transmission Enhancement (a) prepared in connection with the development of the Regional Transmission Expansion Plan and (b) provided to the PJM Board at the time the Required Transmission Enhancement is included for the first time in the Regional Transmission Expansion Plan, does not equal or exceed $5 million shall be assigned to the Zone where the Required Transmission Enhancement is to be located. The determination of whether the estimated cost of a Required Transmission Enhancement does not equal or exceed $5 million shall be based solely on such good faith estimate of the cost of the Required Transmission Enhancement regardless of the actual costs incurred. The estimated cost of a Required Transmission Enhancement shall include the aggregate estimated costs of all of the transmission elements approved by the PJM Board at the time such elements are included in the Regional Transmission Expansion Plan that collectively are intended (i) in the case of a Reliability Project, to resolve a specific reliability criteria violation, or (ii) in the case of an Economic Project, provide a specific LMP Benefit. Where a Required Transmission Enhancement subject to this section (b)(vi) consists of a single transmission element or multiple transmission elements that will be located in more than one Zone, each Zone shall be assigned cost responsibility for the transmission elements or portions of the transmission elements located in such Zone. Merchant Transmission Facilities shall not be assigned cost responsibility for a Required Transmission Enhancement subject to this section (b)(vi).

**(vii) Modifications of Required Transmission Enhancements.** Once a Required Transmission Enhancement is included in the Regional Transmission Expansion Plan, any modification to such Required Transmission Enhancement that subsequently is included in the Regional Transmission Expansion Plan as a separate Reliability or Economic Project shall be considered a separate and distinct Required Transmission Enhancement for purposes of cost responsibility assignment under this Schedule 12. Except as provided in sections (b)(iv) and (b)(xiv) of this Schedule 12, any cost responsibility assignment that has been made for a previously approved Required Transmission Enhancement shall have no impact on the cost responsibility assignment of such modification.

**(viii) FERC Filing.** Within 30 days of the approval of each Regional Transmission Expansion Plan or an addition to such plan by the PJM Board pursuant to Operating Agreement, Schedule 6, section 1.6, the Transmission Provider shall designate in the Tariff, Schedule 12-Appendix A and in a report filed with the FERC the ~~customers using Point-to-Point Transmission Service and/or Network Integration Transmission Service and Merchant Transmission Facility owners that will be subject to each such Transmission Enhancement~~

~~Charge (“~~Responsible Customers~~”)~~ based on the cost responsibility assignments determined pursuant to this Schedule 12. Those customers designated by the Transmission Provider as Responsible Customers shall have 30 days from the date the filing is made with the FERC to seek review of such designation. Such cost responsibility designations shall be the same as those made for the relevant Regional Facility, Necessary Lower Voltage Facility, or Lower Voltage Facility in the Regional Transmission Expansion Plan.

**(ix) Regions With Which PJM Has Entered Into an Agreement Listed in Schedule 12-Appendix B .** For purposes of this Schedule 12, where costs of a Required Transmission Enhancement are allocated to a region other than PJM pursuant to an agreement set forth in Tariff, Schedule 12-Appendix B, Responsible Customers for such costs shall be customers in such region. Cost responsibility with respect to the costs of a Required Transmission Enhancements allocated to a region other than PJM shall be allocated within such region in accordance with the applicable tariff or agreement governing the allocation of such costs in such region.

**(x) Merchant Transmission Facilities.**

(A) For purposes of this Schedule 12, where the Transmission Provider has allocated all or a portion of a Required Transmission Enhancement to a Merchant Transmission Facility, the owner of the Merchant Transmission Facility shall be the Responsible Customer with respect to such Required Transmission Enhancement, and shall pay the Transmission Enhancement Charges associated with the Required Transmission Enhancement.

(B) (1) Transmission Provider shall defer collection of Transmission Enhancement Charges from a Merchant Transmission Facility until the Merchant Transmission Facility goes into commercial operation; provided, however, in the event the commercial operation of a Merchant Transmission Facility is delayed beyond the commercial operation milestone date(s) specified in the Interconnection Service Agreement associated with the Merchant Transmission Facility and the Transmission Provider or Transmission Owner constructing the Required Transmission Enhancement demonstrates that the Merchant Transmission Facility is responsible for such delay, Transmission Provider may begin collecting Transmission Enhancement Charges from the Merchant Transmission Facility prior to the Merchant Transmission Facility going into commercial operation. Transmission Enhancement Charges allocated to a Merchant Transmission Facility for which collection is deferred in accordance with this section (b)(x)(B)(1) shall be recorded in appropriate Transmission Provider accounts for deferred charges and collected in accordance with section (b)(x)(B)(3) below.

(2) Transmission Provider shall base the collection of Transmission Enhancement Charges associated with Required Transmission Enhancements from a Merchant Transmission Facility on the actual Firm Transmission Withdrawal Rights that have been awarded to the Merchant Transmission Facility; provided, however, to the extent that a Merchant Transmission Facility has been awarded less than the amount of Firm Transmission Withdrawal Rights specified in the Interconnection Service Agreement associated with the Merchant Transmission Facility, then Transmission Provider shall record the difference between the amount of Transmission Enhancement Charges collected based on the lesser amount of Firm

Transmission Withdrawal Rights and the amount of Transmission Enhancement Charges based on the full amount of Firm Transmission Withdrawal Rights specified in the applicable Interconnection Service Agreement in appropriate accounts for deferred charges and, after the Merchant Transmission Facility has been awarded the full amount of Firm Transmission Withdrawal Rights specified in the Interconnection Service Agreement, collect such deferred amounts in accordance with section (b)(x)(B)(3) below. Notwithstanding the foregoing, Transmission Provider may collect Transmission Enhancement Charges based on more than a Merchant Transmission Facility's actually awarded Firm Transmission Withdrawal Rights (not to exceed the Firm Transmission Withdrawal Rights specified in the applicable Interconnection Service Agreement) if the Transmission Provider or Transmission Owner demonstrates that the Merchant Transmission Facility is responsible for receiving fewer Firm Transmission Withdrawal Rights than are specified in the applicable Interconnection Service Agreement.

(3) Transmission Provider shall record: (i) in an appropriate deferred asset account, the Transmission Enhancement Charges associated with Required Transmission Enhancements for which collection is deferred in accordance with sections (b)(x)(B)(1) and (b)(x)(B)(2) above; and (ii) in an appropriate deferred liability account, the revenues associated with the Transmission Enhancement Charges that, absent the deferred charges, would have been due to Transmission Owners or to Transmission Owners' customers as directed by the applicable Transmission Owner. At such time as collection of such deferred Transmission Enhancement Charges are permitted in accordance with sections (b)(x)(B)(1) and (b)(x)(B)(2) above, the deferred charges (along with appropriate interest) shall be collected from the Merchant Transmission Facility in equal installments over the twelve months following the commencement of the collection of the deferred charges. Such amounts shall be distributed to Transmission Owners or to Transmission Owners' customers as directed by the applicable Transmission Owner, and the Transmission Provider shall make appropriate adjustments to the deferred asset and liability accounts. Transmission Provider shall not be responsible for distributing revenues associated with deferred Transmission Enhancement Charges unless and until such charges are collected in accordance with this section (b)(x)(B), and uncollected deferred Transmission Enhancement Charges shall not be subject to Default Allocation Assessments to the Members pursuant to Operating Agreement, section 15.2.

**(xi) Consolidated Edison Company of New York.** (A) Cost responsibility assignments to Consolidated Edison Company of New York for Required Transmission Enhancements pursuant to this Schedule 12 with respect to the Firm Point-To-Point Service Agreements designated as Original Service Agreement No. 1873 and Original Service Agreement No. 1874 accepted by the Commission in Docket No. ER08-858 ("ConEd Service Agreements") shall be in accordance with the terms and conditions of the settlement approved by the FERC in Docket No. ER08-858-000. (B) All cost responsibility assignments for Required Transmission Enhancements pursuant to this Schedule 12 shall be adjusted at the commencement and termination of service under the ConEd Service Agreements to take account of the assignments under subsection (xi)(A) of this section.

**(xii) Public Policy Projects**.

(A) Transmission Facilities as defined in Consolidated Transmission Owners Agreement, section 1.27 constructed by a Transmission Owner pursuant to a Public Policy Requirement but not included in a Regional Transmission Expansion Plan as a Required Transmission Enhancement, shall be as considered a Supplemental Project.

(B) If a transmission enhancement or expansion is proposed pursuant to Operating Agreement, Schedule 6, section 1.5.9(a) which is not a Supplemental Project ("State Agreement Public Policy Project"), the Transmission Provider shall submit the assignment of costs to Responsible Customers proposed in connection with such State Agreement Public Policy Project to the Transmission Owners Agreement Administrative Committee for consideration and filing pursuant to Consolidated Transmission Owners Agreement, section 7.3 and Tariff, Part I, section 9.1(a). Nothing in this section (b)(xii) shall prevent the Transmission Provider or the state governmental entities proposing such State Agreement Public Policy Project from filing a proposed assignment of costs to Responsible Customers for such project pursuant to Section 206 of the Federal Power Act.

**(xiii) Replacement of Transmission Facilities.** Unless determined by PJM to be a Required Transmission Enhancement included in a Regional Transmission Expansion Plan, cost responsibility for the replacement of Transmission Facilities, as defined in Consolidated Transmission Owners Agreement, section 1.27, shall be assigned to the Zonal loads and Merchant Transmission Facilities responsible for the costs of the Transmission Facilities being replaced.

**(xiv) Multi-Driver Projects.**

(A) Assignment of Proportional Multi-Driver Project Costs. The Transmission Provider shall assign cost responsibility for Proportional Multi-Driver Projects in proportion to the relative percentage benefit that each driver of a Proportional Multi-Driver Project addresses, respectively, reliability violations or operational performance ("reliability"), economic constraints ("economic") and/or Public Policy Requirements ("public policy") as follows:

(1) As part of the open planning process provided for in Operating Agreement, Schedule 6, section 1.5.10(h), the Transmission Provider employs the Proportional Method to develop a Proportional Multi-Driver Project, by determining which of the following drivers a Proportional Multi-Driver Project addresses: reliability, economic, or public policy, and the extent to which each such driver contributes to the size, scope, and estimated costs of such Proportional Multi-Driver Project (irrespective of the reliability cost allocation treatment that is otherwise accorded an incremental market efficiency modification thereto pursuant to section (b)(v)(B) of this Schedule 12). The Transmission Provider shall identify the contribution of each driver in terms of a percentage totaling 100 percent for all such drivers at the time that each Proportional Multi-Driver Project is submitted to the PJM Board for approval and included in the Regional Transmission Expansion Plan. The percentage contribution of each driver shall be based on the ratio of the estimated cost of each project that the Multi-Driver Project replaces to the total of the estimated costs

of all projects combined into the Multi-Driver Project.

(2) Once a Proportional Multi-Driver Project is approved by the PJM Board, the percentage contributions of each driver shall not be changed unless the PJM Board subsequently approves an upgrade or modification to the Proportional Multi-Driver Project. In that event, the cost responsibility for the Proportional Multi-Driver Project, including any costs incurred prior to the upgrade or modification, will be determined as if it were a new Proportional Multi-Driver Project, such that the percentage contribution for each driver shall be established anew.

(B) Assignment of Incremental Multi-Driver Project Costs. The Transmission Provider shall assign cost responsibility for Incremental Multi-Driver Projects as defined in Operating Agreement, Schedule 6, section 1.15B using the same methodology described in section (b)(xiv)(A)(1) above treating the estimated cost of modifying the original project as if it were the estimated cost of a separate project included in a Proportional Multi-Driver Project. Any costs that had been expended on the original project prior its designation by Transmission Provider as an Incremental Multi-Driver Project shall be included in the calculation of the Incremental Multi-Driver Project pursuant to this section (b)(xiv)(B).

(C) The Transmission Provider shall separately assign cost responsibility for the costs assigned to each driver pursuant to this section (b)(xiv) in accordance with the provisions of this Schedule 12 governing the assignment of cost responsibility for a single driver project of each driver's respective type (reliability, economic or public policy). Except as provided in section (b)(xiv)(D) below, cost responsibility will be assigned based on the final voltage and configuration of the Multi-Driver Project determined in accordance with sections (b)(i), (b)(ii), or (b)(vi) of this Schedule 12.

(D) Notwithstanding the cost assignments that would otherwise be provided for in section (b)(xiv)(C) above, if a Multi-Driver Project includes a public policy driver that is the result of the State Agreement Approach provided for in Operating Agreement, Schedule 6, section 1.5.9 and is a Regional Facility as defined in section (b)(i) of this Schedule 12 and such Multi-Driver Project would not be a Regional Facility but for the inclusion of the public policy driver, then the percentage of costs of such Multi-Driver Project assigned to the non-public policy drivers in accordance with the procedures set forth in in section (b)(i)(A)(1) above shall be twenty percent (20%) and the percentage of costs assigned to the non-public policy drivers of such Multi-Driver Project in accordance section (b)(i)(A)(2) above shall be eighty percent (80%), and not the fifty percent (50%) cost responsibility percentages provided for in section (b)(i)(A)(i) and section (b)(i)(A)(2), respectively, of this Schedule 12.

**(xv)** ***Reserved.***

**(xvi) Required Transmission Enhancements Designed to Address Reliability Violations on Transmission Facilities Operating Below 200 kV.** Notwithstanding section (b)(ii), above, cost responsibility for any Required Transmission Enhancements that are included in the Regional Transmission Expansion Plan to address reliability violations on Transmission Facilities that are designed to operate at below 200 kV and, pursuant to Operating Agreement,

Schedule 6, section 1.5.8(n), were not included in an Operating Agreement, Schedule 6, section 1.5.8(c) proposal window, shall be assigned to the Responsible Customers in the Zone where the Required Transmission Enhancement is to be located.

**(xvii) Required Transmission Enhancements Constructed As Targeted Market Efficiency Projects Under The Midcontinent Independent Transmission System Operator, Inc. and PJM Interconnection, L.L.C. Coordinated System Plan.** Notwithstanding sections (b)(i), (b)(ii), (b)(iv), (b)(v), (b)(vi) and (b)(x)(B)(2) of this Schedule 12, cost responsibility for the costs of a Required Transmission Enhancement that is included in the Regional Transmission Expansion Plan because it is a Targeted Market Efficiency Project ("TMEP") identified in the Coordinated System Plan periodically developed pursuant to the Joint Operating Agreement Between the Midcontinent Independent Transmission System Operator, Inc. and PJM Interconnection, L.L.C. ("PJM-MISO JOA") and assigned to PJM pursuant to PJM-MISO JOA, section 9.4.4.2.5, shall be assigned among Zones and Merchant Transmission Facilities in accordance with this section (b)(xvii). Using the Targeted Market Efficiency Project study conducted pursuant to PJM-MISO JOA, section 9.3.7.2(c) of in which the TMEP was identified, the Transmission Provider shall determine, in accordance with Tariff, Attachment K-Appendix, section 5.1, the average annual Transmission Congestion Charges experienced by Market Buyers in Zones and at Merchant Transmission Facilities attributable to the targeted Reciprocal Coordinated Flowgate during the two historical calendar years prior to the study year of the Targeted Market Efficiency Project study. In making this determination, the Transmission Provider shall net any increases in Day-ahead and Real-time Prices paid by Market Buyers in a Zone or at a Merchant Transmission Facility against any decreases in Day-ahead and Real-time Prices paid by Market Buyers in such Zone or at such Merchant Transmission Facility attributable to the targeted Reciprocal Coordinated Flowgate. Where a single TMEP is constructed to reduce Transmission Congestion Charges attributable to more than one targeted Reciprocal Coordinated Flowgate, the Transmission Provider shall net any increases in Day-ahead and Real-time Prices paid by Market Buyers in a Zone or at a Merchant Transmission Facility against any decreases in Day-ahead and Real-time Prices paid by Market Buyers in such Zone or at such Merchant Transmission Facility attributable to all targeted Reciprocal Coordinated Flowgates. Cost responsibility shall be assigned based on each Zone's and Merchant Transmission Facility's pro rata share of the sum of the net Transmission Congestion Charges paid by Market Buyers only of the Zones and Merchant Transmission Facilities in which Market Buyers experienced net Transmission Congestion Charges.

**(xviii) Required Transmission Enhancements Designed to Address Stability Issues.** For purposes of the assignment of cost responsibility for Reliability Projects designed to address stability issues under subsection (b)(i)(A)(2)(a) and subsection (b)(ii)(A) of this Schedule 12, the Transmission Provider shall, using the same inputs and assumptions from the simulation that originally drove the need for the stability upgrade, perform a stability simulation that includes the stability upgrade under the worst fault condition. The worst fault condition shall be the fault condition in the simulation that produces the maximum rotor angle swing with the stability upgrade included. For each load bus on the system, the difference between the highest and lowest voltage angle that occurs during the simulation of the worst fault condition will be recorded. Load buses having a voltage angle deviation less than 25 percent of the load bus with the largest voltage angle deviation will not be included in the cost allocation calculation. For the

remaining load buses, the voltage angle deviation will be multiplied by the megawatt load at the bus obtained from the stability simulation model, or, in the case of a Merchant Transmission Facility, the Firm Transmission Withdrawal Rights at the bus. The products of the voltage angle deviation and megawatt load at each bus will be summed for each Responsible Zone. The Stability Deviation cost allocation for a Responsible Zone or Merchant Transmission Facility will be determined by dividing the sum of the load-weighted angle deviations for the Responsible Zone or Merchant Transmission Facility by the sum of the load-weighted angle deviations for each Responsible Zone and Merchant Transmission Facility. Transmission Provider shall round cost responsibility assignments to the nearest one-hundredth of one percent.

**(c) Determination of Transmission Enhancement Charges.** In the event that any Transmission Owner recovers the cost of a Required Transmission Enhancement through a Transmission Enhancement Charge, such charge shall be determined as follows:

(1) Transmission Provider shall identify in writing and post on the PJM Internet site the Required Transmission Enhancement(s) to which each Transmission Enhancement Charge corresponds. The Transmission Enhancement Charge with respect to a Required Transmission Enhancement shall recover the applicable Transmission Owner's annual transmission revenue requirement associated with the Required Transmission Enhancement.

(2) Each Transmission Enhancement Charge shall be a monthly charge based on all costs and applicable incentives associated with a particular Required Transmission Enhancement for which the Transmission Owner is responsible.

(3) A Transmission Owner's annual transmission revenue requirement associated with a Required Transmission Enhancement shall be determined pursuant to either (i) a unilateral filing by the Transmission Owner under Section 205 of the Federal Power Act and the FERC's rules and regulations thereunder; or (ii) a formula rate in effect applicable to the Transmission Owner's rates for Network Integration Transmission Service, including the costs associated with Required Transmission Enhancements.

(4) Each Transmission Enhancement Charge applicable to Network Customers and Non-Zone Network Customers shall be recalculated annually to reflect the annual revisions to the billing determinants used by the Transmission Provider to calculate charges to Network Customers for Network Integration Transmission Service under Tariff, Part III, section 34.1. The Transmission Provider shall post on its Internet site by October 31 of each calendar year each recalculated Transmission Enhancement Charge that shall be effective during the subsequent calendar year.

(5) Each Transmission Enhancement Charge applicable to customers using Point-To-Point Transmission Service shall be calculated monthly to reflect the billing determinants used by the Transmission Provider to determine charges for customers of Point-To-Point Transmission Service in accordance with Tariff, Part II, section 25.

(6) Each Transmission Enhancement Charge payable by an owner of a Merchant Transmission Facility pursuant to section (b) of this Schedule 12 shall be calculated as a fixed monthly charge.

(7) If a Transmission Owner chooses to recover the cost of Required Transmission Enhancements through the operation of a formula rate as described in section (a) of this Schedule 12, the Transmission Owner must make an informational filing with the Commission one year from the date the selecting Transmission Owner's formula rates go into effect, and each year thereafter, providing a detailed list of the costs the Transmission Owner has incurred, and the revenues the Transmission Owner has received to provide service.

**(d) Recovery of Transmission Enhancement Charges.**

(1) Responsible Customers shall pay Transmission Provider all applicable Transmission Enhancement Charges as required by this Schedule 12 in addition to all other charges for transmission service for which such Responsible Customers are responsible under the Tariff.

(2) Transmission Provider shall collect all applicable Transmission Enhancement Charges from each Responsible Customer on a monthly basis. Transmission Provider shall remit or credit all revenues received from Responsible Customers under this Schedule 12 to the Transmission Owner(s) that established such charge or to the appropriate authority in a region other than PJM in the case of Transmission Enhancement Charges established in such region in connection with a Required Transmission Enhancement constructed pursuant to an Appendix B Agreement, to be distributed in accordance with the applicable tariff or agreement governing the distribution of such charges in such region.

**(e) Crediting of Revenue from Transmission Enhancement Charges.** In recognition that a Transmission Owner's charges for Network Integration Transmission Service set forth in Tariff, Attachment H are established based upon the Transmission Owner's total cost of providing FERC-jurisdictional transmission service, including the costs associated with Required Transmission Enhancements, revenue from a Transmission Owner's Transmission Enhancement Charges for a billing month shall be credited pursuant to this Schedule 12 to the Network Customers in the Transmission Owner's Zone (including, where applicable, the Transmission Owner) and Transmission Customers purchasing Firm Point-to-Point Transmission Service for delivery in the Transmission Owner's Zone in proportion to their Demand Charges (including any imputed Demand Charges for bundled service to Native Load Customers) for Network Integration Transmission Service and Reserved Capacity for Firm Point-to-Point Transmission Service; provided that such credits shall be reduced by the amount of any applicable incentives included in such Transmission Enhancement Charges.

**(f) Recovery of Interconnection Reliability Reinforcement Costs.**

**(1) Customers Subject to Cost Responsibility for Interconnection Reliability Reinforcements**. For each Fast Energization Process Cycle, the Transmission Provider shall determine cost responsibility for Interconnection Reliability Reinforcements identified and designated for construction pursuant to this section (f) of this Schedule 12. Cost responsibility for Interconnection Reliability Reinforcements in a Fast Energization Cycle shall be assigned to Responsible Customers in Zones containing Transmission Customers taking Firm Transmission Service on behalf of Eligible Loads and Large Loads ("Large Load Zones"). Generator Interconnection Customers in a given Cycle that are parties to a Generator Interconnection Agreement will pay a Generator Reliability Reinforcement Fee established in section (f)(vi) below.

**(2) Determination of Cost Responsibility and Generator Allocation for Interconnection Reliability Reinforcements.** The Transmission Provider shall determine cost responsibility for Interconnection Reliability Reinforcements and the Generator Reliability Reinforcement Fee based on a proportional impact approach that considers all of the constraints identified in the Fast Energization Process Cycle.

This proportional impact methodology will apply to thermal and non-thermal constraints, and will determine the pro rata share of impacts of Project Developers, Eligible Loads and Large Loads on the aggregate of constraints being alleviated by the portfolio of Interconnection Reliability Reinforcements as further described below and in the PJM Manuals.

The Transmission Provider shall determine each Project Developer, Eligible Load and Large Load's proportional impact as follows:

(A) With respect to the portfolio of Interconnection Reliability Reinforcements addressing thermal, stability and voltage constraints:

(1) The Transmission Provider shall apply aggregation and thresholds as set forth in the PJM Manuals to identify the set of constrained facilities identified as having violations requiring mitigation through Interconnection Reliability Reinforcements in the Fast Energization Process Cycle studies, resulting in distribution factors, represented as decimal values or percentages, which express the portions of impact on constrained facilities from each Project Developer, Eligible Customer seeking Long-Term Firm Point-to-Point Transmission Service, Eligible Load, or Large Load.

(2) For purposes of determining MW impacts, each calculated distribution factor, if it exceeds the threshold set forth in the PJM Manuals, shall first be multiplied, for each Project Developer, Eligible Customer seeking Long-Term Firm Point-to-Point

Transmission Service, Eligible Load or Large Load, by its requested MW value as studied in the Fast Energization Process.

(3) No allocation relating to a constrained facility shall result unless the calculated MW impact exceeds the thresholds set forth in the PJM Manuals.

(4) All calculated MW impacts on constrained facilities above the relevant thresholds for each Project Developer, Eligible Customer seeking Long-Term Firm Point-to-Point Transmission Service, Eligible Load or Large Load are converted to proportional MW impacts representing the pro rata share of all MW impacts on the same constrained facility.

(5) The proportional MW impacts are weighted using values as further described in the PJM Manuals resulting in a weighted proportional MW impact.

(6) The percentage proportional impact values allocated for each Project Developer, Eligible Load or Large Load is based on its pro rata share of the weighted proportional MW impact relative to the total of weighted proportional MW impact for the Cycle. For Project Developers, this value is the Generation Interconnection Customer's Allocated Percentage (GCAP) as outlined in (f)(vi)(B).

(B) With respect to the portfolio of Interconnection Reliability Reinforcements addressing short-circuit constraints, allocation will be based on contributing fault current impact on the circuit breaker's applicable interrupting rating, as set forth in the PJM Manuals.

(C) The aggregate impact values calculated pursuant to subsection (f)(ii)(A) and (f)(ii)(B) above shall determine the relative assignment of cost responsibility for Interconnection Reliability Reinforcements and the Generator Reliability Reinforcement Fee subject to the following rules:

(1) The percentage proportional impacts of Eligible Load and Large Load Transmission Service Requests will be summed on a Zonal basis assigned to the relevant Transmission Owner Zones.

(2) For purposes of this proportional allocation, the entire cost responsibility calculated pursuant to this subsection (f)(ii) will be assigned to Transmission Owner Zones based on their summed percentage proportional impacts. Interconnection Reliability Reinforcement costs representing the relative contribution attributable to Generator Interconnection Customers shall be recovered from Generator Interconnection Customers through

Generator Reliability Reinforcement Fees as set forth in subsection (f)(vi) below.

(D) The Transmission Provider shall complete the analysis described in this subsection (f)(ii) within 30 days before Transmission Service Agreements and Generator Interconnection Agreements have been executed. Within 30 days of the completion of this analysis, the Transmission Provider shall post on the PJM Internet Site the cost responsibility assignments determined pursuant to this section (f).

**(3) Interconnection Reliability Reinforcements Charge.** The charge established to recover the revenue requirement with respect to an Interconnection Reliability Reinforcement is hereafter referred to as an "Interconnection Reliability Reinforcement Charge." Interconnection Reliability Reinforcement Charges of one or more Transmission Owners for Interconnection Reliability Reinforcements shall be established in accordance with this section (f) of Schedule 12. Transmission Provider shall assess an Interconnection Reliability Reinforcement Charge to Firm Transmission Customers in Zones based on the cost responsibility assignments determined pursuant to subsection (f)(ii) above. The Interconnection Reliability Reinforcement Charge shall recover the applicable Transmission Owner's annual transmission revenue requirement associated with the Interconnection Reliability Reinforcements constructed and owned and/or financed by that Transmission Owner for a period of 15 years after an Interconnection Reliability Reinforcement enters service. After this period, beginning with the next full calendar year, Transmission Provider will assign responsibility for and recover the remaining costs of the Interconnection Reliability Reinforcement in accordance with sections (a) through (e) of this Schedule 12.

(A) A Transmission Owner's annual transmission revenue requirement associated with an Interconnection Reliability Reinforcement shall be determined pursuant to the formula rate in effect applicable to the Transmission Owner's rates for Network Integration Transmission Service and Firm Contract Demand Transmission Service ("Firm Transmission Service"), including the costs associated with Interconnection Reliability Reinforcements.

(B) Each Interconnection Reliability Reinforcement Charge applicable to Firm Transmission Customers shall be recalculated annually to reflect the annual revisions to the billing determinants used by the Transmission Provider to calculate charges for Firm Transmission Service. The Transmission Provider shall post on its Internet site by October 31 of each calendar year each recalculated Interconnection Reliability Reinforcement Charge that shall be effective during the subsequent calendar year.

(C) Each Interconnection Reliability Reinforcement Charge applicable to customers using Point-To-Point Transmission Service shall be calculated monthly

to reflect the billing determinants used by the Transmission Provider to determine charges for customers of Point-To-Point Transmission Service in accordance with Tariff, Part II, section 25.

**(4) Recovery of Interconnection Reliability Reinforcement Charges.**

(A) Transmission Customers shall pay the Transmission Provider all applicable Interconnection Reliability Reinforcement Charge as required by this Schedule 12 in addition to all other charges for transmission service for which such Transmission Customers are responsible under the Tariff.

(B) The Transmission Provider shall collect all applicable Interconnection Reliability Reinforcement Charges from each applicable Transmission Customer on a monthly basis. The Transmission Provider shall remit or credit all revenues received from Transmission Customers under this Schedule 12 to the Transmission Owner(s) owning the relevant Interconnection Reliability Reinforcements.

**(5) Crediting of Revenue from Interconnection Reliability Reinforcement Charges.** In recognition that a Transmission Owner's charges for Firm Transmission Service set forth in Tariff, Attachment H are established based upon the Transmission Owner's total cost of providing FERC-jurisdictional transmission service, including the costs associated with Interconnection Reliability Reinforcements, revenue Interconnection Reliability Reinforcement Charges for a billing month shall be credited pursuant to this Schedule 12 to the Firm Transmission Customers in the Transmission Owner's Zone (including, where applicable, the Transmission Owner) and Transmission Customers purchasing Firm Point-To-Point Transmission Service for delivery in the Transmission Owner's Zone in proportion to their Demand Charges (including any imputed Demand Charges for bundled service to Native Load Customers) for Network Integration Transmission Service and Reserved Capacity for Firm Contract Demand Transmission Service and Firm Point-To-Point Transmission Service; provided that such credits shall be reduced by the amount of any applicable incentives included in such Interconnection Reliability Reinforcement Charges.

**(6) Generator Reliability Reinforcement Fee.** The Transmission Provider shall recover the portion of the costs of Interconnection Reliability Reinforcements allocated to Generator Interconnection Customers in a Fast Energization Process Cycle, as determined pursuant to subsection (f)(ii) of this Schedule 12, through Generator Interconnection Reliability Reinforcement Fees as follows:

(A) The Transmission Provider shall assess and each Generator Interconnection Customer will pay the Generator Reliability Reinforcement Fee beginning on the earlier of: (1) in the calendar year when the Generator Interconnection Customer's facility achieves Commercial Operation, or (2) three

years after the Commercial Operation date in the Customer's original Generator Interconnection Agreement, and continuing for a period of 15 years from the Commercial Operation Date.

(B) The Transmission Provider shall calculate the Generator Reliability Reinforcement Fee after each System Impact Study Phase as part of the Fast Energization Process as follows:

$$AGRRRF = GCAP \times TRRGP \times \{[ACCC \times (1 + ACCC)^{15}]/[(1 + ACCC)^{15} - 1]\}$$

Where:

GRRRF is the Generator Reliability Reinforcement Fee

GCAP is the Generator Interconnection Customer's Allocated Percentage, which is the Generator Interconnection Customer's allocated percentage for the portfolio of Interconnection Reliability Reinforcements from its New Service Request Cycle, determined pursuant to subsection (f)(ii) above.

TRRGP is the Total Reliability Reinforcement Gross Plant, which is based on the gross plant of all Interconnection Reliability Reinforcements included in the RTEP approved by the PJM Board with respect to the Generator Interconnection Customer's New Service Request Cycle, and for which it has been allocated a percentage pursuant to subsection (f)(ii) above. The gross plant amounts used in this calculation shall be based on the final estimated costs of the Interconnection Reliability Reinforcements as determined by the Transmission Provider through the Fast Energization Process.

ACCC is the Annual Carrying Charge Component, which shall be calculated as the weighted average of the Weighted Average Cost of Capital for all Transmission Owners with Interconnection Reliability Reinforcements included in the RTEP approved by the PJM Board with respect to the Generator Interconnection Customer's New Service Request Cycle. The Weighted Average Cost of Capital values shall be derived from the applicable Transmission Owner's formula rates, as set forth in Attachment H and in effect at the time the Annual Generator Reliability Reinforcement Fee is calculated. For purposes of calculating such weighted average, each applicable Transmission Owner's Weighted Average Cost of Capital shall be weighted based on the ratio of the final estimated costs of the Interconnection Reliability Reinforcements that it has been designated to construct and own and/or finance identified in the New Service Request Cycle that contains the Generator Interconnection Customer, to the final estimated costs for all Interconnection Reliability Reinforcements identified in the New Service Request Cycle that contains the Generator Interconnection Customer.

**SCHEDULE 20**
**Firm Contract Demand Transmission Service**
**For Eligible Load and Large Load**

1) Eligible Customer taking Firm Contract Demand Transmission Service in a Zone in which Network Integration Transmission Service rates are determined based on formula rates set forth in Attachment H shall pay a Monthly Demand Charge based on the Firm Contract Demand Transmission Service Amount (MW), as specified in Eligible Customer's Service Agreement, which shall be determined as follows:

MDC = FCDTSA X RTZ/12

Where:

MDC is the monthly demand charge

FCDTSA is the Firm Contract Demand Transmission Service Amount (MW), as specified in Eligible Customer's Service Agreement

RTZ is the rate for Network Integration Transmission Service from Attachment H for the Zone in which the Eligible Customer's Eligible Load or Large Load is located, stated in dollars per megawatt per year. For purposes of establishing the RTZ component in the relevant Attachment H, the annual peak of the Zone shall be based on the sum of Network Customer Loads in the Zone and Firm Contract Demand Transmission Service Amounts for all Eligible Customers taking Firm Contract Demand Transmission Service in the Zone for the applicable peak period.

2) Eligible Customers taking Firm Contract Demand Transmission Service in a Zone in which Network Integration Transmission Service rates are not established based on formula rates shall pay a Monthly Demand Charge based on the Firm Contract Demand Transmission Service Amount (MW), as specified in Eligible Customer's Service Agreement, multiplied by a Zonal-specific Firm Contract Demand Transmission Service rate filed with FERC pursuant to Section 205 of the Federal Power Act. Those rates will be posted on Transmission Provider's website.

3) **Revenue Crediting.** Each month, credits will be applied to the Eligible Customer's gross Monthly Demand Charge stated above associated with revenue collected from Non-Firm Contract Demand Transmission Service Charges in accordance with Schedule 19, based on each Eligible Customer's pro rata share of the Zone's annual peak load, from the most recent 12-month period ending October 31. The Eligible Customer's pro rata share shall be based on the ratio of its Firm Contract Demand Transmission Service Amount during the peak period to the sum of Network Customer Loads in the Zone and Firm Contract Demand Transmission Service Amounts for all Eligible Customers taking Firm Contract Demand Transmission Service in the Zone for the applicable peak period. The sum of these revenue credits will appear as a reduction to the gross monthly rate stated above on a Eligible Customer's bill in that month for service under this schedule.

4) **Transmission Enhancement Charges.** In addition to the rates set forth in section (1) of this Schedule and any other applicable charges, the Eligible Customer shall also pay any Transmission Enhancement Charges for which it is designated as a Responsible Customer under Schedule 12 appended to the Tariff.

5) **Determination of Monthly Charges for ComEd Zone**. On a monthly basis, revenue credits shall be calculated based on the sum of ComEd's share of revenues collected during the month from: (i) the PJM Border Rate under Schedule 7; (ii) Network Integration Transmission Service to Non-Zone Network Load under Attachment H-A; and (iii) any Point-To-Point Transmission Service where the Point of Receipt and the Point of Delivery are both internal to the ComEd Zone. On this basis, the sum of these revenues will appear as a reduction to the gross monthly rate stated above on a Transmission Customer's[1] bill in that month for service under this schedule.

6) **Determination of Monthly Charges for AEP Zone**. On a monthly basis, revenue credits shall be calculated based on the sum of AEP's share of revenues collected during the month from: (i) the PJM Border Rate under Schedule 7; (ii) Network Integration Transmission Service to Non-Zone Network Load under Attachment H-A; and (iii) Firm Point-To-Point Transmission Service where the Point of Delivery is internal to the AEP Zone. The sum of these revenue credits will appear as an adjustment (reduction) to the gross monthly rate stated above on a Eligible Customer's bill in that month for service under this schedule.

7) **Other Supporting Facilities and Taxes.** In addition to the charges set forth in section (1) of this schedule, the Eligible Customer shall pay charges determined on a case-by-case basis for facilities necessary to provide Transmission Service at voltages lower than those shown in Attachment H for the applicable Zone(s) and any amounts necessary to reimburse the Transmission Provider for any amounts payable as sales, excise, "Btu," carbon, value-added or similar taxes (other than taxes based upon or measured by net income) with respect to the amounts payable pursuant to the Tariff.

1/ Transmission Customer is defined as an Eligible Customer that executes a Service Agreement, or requests PJM file an unexecuted Service Agreement, to receive transmission service under the Tariff.

**SCHEDULE 21**
**Non-Firm Contract Demand Service**
**For Eligible Load and Large Load**

1) Eligible Customer taking Non-Firm Contract Demand Transmission Service in a Zone in which Network Integration Transmission Service rates are determined based on formula rates set forth in Attachment H shall pay for such service at a discounted reservation rate calculated by applying the Zone's Annual Load Factor to the applicable Zonal Firm Contract Demand Transmission Service rate as follows:

Monthly Rate ($/MW): Zonal Firm Contract Demand Transmission Rate (RTZ) multiplied by the Zone's Annual Load Factor, and divided by 12, where the Annual Load Factor is calculated as follows: Annual Load Factor = Zonal Annual Energy divided by (Zonal Peak Demand multiplied by 8,760 hours). For purposes of this Schedule, Zonal Annual Energy shall be the total net energy for load measured as net generation plus energy receipts minus energy deliveries for the Zone from the 12-month period ending October 31 preceding the calendar year during which Non-Firm Contract Demand Transmission Service is taken. For purposes of this Schedule, Zonal Peak Demand shall be the Zone's annual peak load from the 12-month period ending October 31 preceding the calendar year during which Non-Firm Contract Demand Transmission Service is taken.

Weekly Rate ($/MW): Zonal Firm Contract Demand Transmission Rate (RTZ) multiplied by the Zone's Annual Load Factor, and divided by 52, where the Annual Load Factor is calculated as follows: Annual Load Factor = Zonal Annual Energy divided by (Zonal Peak Demand multiplied by 8,760 hours).

Daily On-Peak Rate[1] ($/MW): Weekly Rate divided by 5.

Daily Off-Peak Rate[2] ($/MW): Weekly Rate divided by 7.

Hourly On-Peak Rate[3] ($/MWh): Zonal Firm Contract Demand Transmission Rate (RTZ), multiplied by the Zone's Annual Load Factor, and divided by 4,160.

Hourly Off-Peak Rate[4] ($/MWh): Zonal Firm Contract Demand Transmission Rate (RTZ), multiplied by the Zone's Annual Load Factor, divided by 8,760.

1/ Monday–Friday except the following holidays: New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.

2/ Saturday and Sunday and the following holidays: New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.

3/ 7:00 a.m. up to the hour ending 11:00 p.m.

4/ 11:00 p.m. up to the hour ending 7:00 a.m.

2) Eligible Customers taking Non-Firm Contract Demand Transmission Service in a Zone in which Network Integration Transmission Service rates are not established based on formula rates shall pay for Non-Firm Contract Demand Transmission Service based on the amount of Non-Firm Contract Demand Transmission Service reserved by the Eligible Customer in MW, multiplied by Zonal-specific Non-Firm Contract Demand Transmission Service rates filed with FERC pursuant to Section 205 of the Federal Power Act. Those rates will be posted on Transmission Provider's website.

3) **Discounts.** Three principal requirements apply to discounts for Non-Firm Contract Demand Transmission Service as follows: (1) any offer of a discount made by the Transmission Provider must be announced to all Eligible Customers solely by posting on the OASIS, (2) any customer-initiated requests for discounts (including requests for use by one's wholesale merchant or an Affiliate's use) must occur solely by posting on OASIS, and (3) once a discount is negotiated, details must be immediately posted on the OASIS. For any discount agreed to by Transmission Provider, Transmission Provider must offer the same discounted transmission service rate for the same time period to all Eligible Customers taking Non-Firm Contract Demand Transmission Service.

4) **Revenue Crediting.** Revenues collected from Non-Firm Contract Demand Transmission Service Charges shall be credited to Eligible Customers taking Network Integration Transmission Service, Firm Contract Demand Transmission Service, and Firm Point-to-Point Transmission Service based on each Eligible Customer's pro rata share of the Zone's annual peak load based on the most recent 12-month period ending October 31. The Eligible Customer's pro rata share shall be based on the ratio of its Zone Network Load, Firm Point-To-Point Transmission Service and Firm Contract Demand Transmission Service Amount to the sum of Network Customer Loads in the Zone and Firm Contract Demand Transmission Service Amounts for all Eligible Customers taking Firm Contract Demand Transmission Service in the Zone, for the applicable peak period. The sum of these revenue credits will appear as a reduction to the gross monthly rate for Firm Contract Demand Transmission Service on a Eligible Customer's bill in that month.

5) **Other Supporting Facilities and Taxes.** In addition to the charges set forth in section (1) of this schedule, the Eligible Customer shall pay charges determined on a case-by-case basis for facilities necessary to provide Transmission Service at voltages lower than those shown in Attachment H for the applicable Zone(s) and any amounts necessary to reimburse the Transmission Provider for any amounts payable as sales, excise, "Btu," carbon, value-added or similar taxes (other than taxes based upon or measured by net income) with respect to the amounts payable pursuant to the Tariff.

## SCHEDULE 22
## Financial Penalty Charge for
## Unreserved Use by Eligible Load and Large Load

An Eligible Customer taking Firm Contract Demand Transmission Service, Non-Firm Contract Demand Transmission Service, or Interim Network Integration Transmission Service on behalf of Eligible Load or Large Load shall be subject to financial penalties for its unreserved use of the transmission system.

The financial penalty charge for unreserved use shall include two components: (1) a base penalty charge, which applies to each individual hour in which the reserved transmission service limit is exceeded, and (2) a penalty ratchet, which applies when such exceedances occur repeatedly.

### Base Penalty Charge

When an Eligible Customer taking service on behalf of Eligible Load or Large Load exceeds its reserved transmission service limit, a base penalty charge shall be assessed for any hour in which at least one five-minute interval occurs during which the Eligible Customer's telemetered load at the Point of Delivery exceeds its reserved transmission service limit. This five-minute interval is defined as an Exceedance Interval, and such an hour is defined as an Exceedance Hour. The base penalty charge shall apply to each Exceedance Hour.

For an Eligible Customer taking only Firm Contract Demand Transmission Service, the reserved transmission service limit shall equal the Firm Contract Demand Transmission Service minus any curtailed MW.

For an Eligible Customer taking only Non-Firm Contract Demand Transmission Service, the reserved transmission service limit shall equal the approved Non-Firm Contract Demand Transmission Service minus any curtailed MW.

For an Eligible Customer taking Firm Contract Demand and Non-Firm Contract Demand Transmission Services, the reserved transmission service limit shall equal the Firm Contract Demand Transmission Service plus the approved Non-Firm Contract Demand Transmission Service minus any curtailed MW.

For an Eligible Customer taking Interim Network Integration Transmission Service, the reserved transmission service limit shall equal the Interim Network Integration Transmission Service demand minus any curtailed MW.

Each five-minute interval beginning with the first minute of each hour shall constitute a separate interval and each hour from 0100 through 2400 shall constitute a separate hour for purposes of determining whether one or more exceedances have occurred.

The base penalty charge shall be applied to each Exceedance Hour and shall be calculated as:

Hourly Exceedance MW × Equivalent Hourly Firm Contract Demand ("FCD") rate × number of Exceedance Intervals within the hour

Where:

Hourly Exceedance MW = Maximum telemetered load during the hour – Reserved Transmission Service Limit for the hour

Equivalent Hourly FCD rate = FCD rate / 8,760 hours

**Penalty Ratchet**

A penalty rachet shall apply when multiple Exceedance Hours occur during a particular time period in order to escalate the penalty charges as the frequency of unreserved transmission use increases.

If more than one Exceedance Hour occurs on the same calendar day, an additional daily penalty shall apply.

If exceedances occur on multiple calendar days within the same calendar week, an additional weekly penalty shall apply.

If exceedances occur in multiple calendar weeks within the same calendar month, an additional monthly penalty shall apply.

If exceedances occur in multiple calendar months within the same calendar year, an additional yearly penalty shall apply.

The penalty ratchet shall be based on an Eligible Customer's exceedance pattern and applies escalating FCD-equivalent rates as the frequency of unreserved transmission use increases. Depending on whether exceedances occur within the same calendar day, calendar week, calendar month, or calendar year, the penalty ratchet shall apply daily, weekly, monthly, or annual penalty charges, respectively, as follows:

| **Exceedance Pattern** | **Penalty Rate Applied** |
|---|---|
| Multiple Exceedance Hours in a single calendar day | Daily FCD-Equivalent Rate |
| Multiple Exceedance Days within a calendar week | Weekly FCD-Equivalent Rate |
| Multiple Exceedance Weeks within a calendar month | Monthly FCD-Equivalent Rate |
| Multiple Exceedance Months within a calendar year | FCD Annual Rate |

**Daily Penalty Charge**

The Daily Penalty Charge is calculated as:

Maximum Hourly Exceedance MW during the calendar day
× Daily FCD Equivalent Rate

× Number of Exceedance Hours in the calendar day

**Weekly Penalty Charge**

The Weekly Penalty Charge is calculated as:

Maximum Hourly Exceedance MW during the calendar week
× Weekly FCD Equivalent Rate
× Number of Exceedance Days in the calendar week

**Monthly Penalty Charge**

The Monthly Penalty Charge is calculated as:

Maximum Hourly Exceedance MW during the calendar month
× Monthly FCD Equivalent Rate
× Number of Exceedance Weeks in the calendar months

**Annual Penalty Charge**

The Annual Penalty Charge is calculated as:

Maximum Hourly Exceedance MW during the calendar year
× Annual FCD Rate
× Number of Exceedance Months in the calendar year

Revenues collected from Financial Penalty Charges shall be credited to Eligible Customers taking Firm Contract Demand Transmission Service, Non-Firm Contract Demand Transmission Service, Network Integration Transmission Service, and Interim Network Integration Transmission Service. The Transmission Provider shall return revenues collected from Financial Penalty Charges on a monthly and annual basis as bill credits to Eligible Customers taking Firm Contact Demand Service, Non-Firm Contract Demand Transmission Service, Network Integration Transmission Service, and Interim Network Integration Transmission Service, who were not assessed Financial Penalty Charges during the year based on each Eligible Customer's pro rata share of the Zone's annual peak load based on the most recent 12-month period ending October 31. The Eligible Customer's pro rata share shall be based on the ratio of its Zone Network Load, Firm Contract Demand Transmission Service Amount, and Non-Firm Contract Transmission Service Amount to the sum of Network Customer Loads in the Zone and Firm and Non-Firm Contract Demand Transmission Service Amounts for all Eligible Customers taking Firm and Non-Firm Contract Demand Transmission Service in the Zone, for the applicable peak period.

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

Exelon Corporation, *et al.* ) Docket No. ER27-___-000

# DIRECT JOINT TESTIMONY
# OF
# PETER BLAZUNAS AND HANHAN HAMMER

## I. INTRODUCTION

**Q. Please state your name, title, business address, and provide your professional background and relevant experience.**

A. **[Blazunas]** My name is Peter Blazunas, and my business address is 293 Boston Post Road West, Marlborough, MA 01752. I am a Vice President with Concentric Energy Advisors, Inc ("Concentric"). I joined Concentric in 2021, and I provide regulatory strategy and rate case expertise to regulated electric and gas utilities, especially with respect to the topics of cost of service and rate design. Prior to Concentric, I managed a team overseeing the cost of service, rate design, and rate administration functions for Potomac Electric Power Company's ("Pepco") Maryland and District of Columbia jurisdictions. Prior to Pepco, I worked as an analyst in the FirstEnergy Corp. Rates and Regulatory Affairs department. I have testified before the Federal Energy Regulatory Commission ("FERC" or "Commission") as well as regulatory commissions in Delaware, the District of Columbia, Maryland, Ohio, and Rhode Island.

**[Hammer]** My name is Hanhan Hammer, and my business address is 293 Boston Post Road West, Marlborough, MA 01752. I am a Senior Project Manager with

Concentric. In my current role, I advise regulators, utilities, grid operators, and project developers on complex regulatory and market matters, with a particular focus on transmission planning, cost allocation and cost recovery, and large load tariffs. I also advise clients on generation and large load interconnection rules, compliance with FERC orders, wholesale market participation, and resource planning.

Prior to joining Concentric in 2024, I spent 15 years working at three Regional Transmission Organizations/Independent System Operators. My experience includes designing wholesale market rules, particularly wholesale pricing mechanisms at ISO New England Inc. ("ISO-NE"), and overseeing competitive market performance and monitoring activities at the Midcontinent Independent System Operator, Inc. ("MISO") and Southwest Power Pool, Inc. ("SPP"). I have testified before FERC as well as the New Hampshire Public Utilities Commission.

**[Blazunas and Hammer]** Our professional backgrounds and relevant experience are provided in Exhibit No. PTO-0002.

## II. BACKGROUND

**Q. What is the background for this proceeding?**

A. **[Blazunas and Hammer]** In this proceeding, the PJM Transmission Owners submitted for filing revisions to the PJM Interconnection, L.L.C. ("PJM") Open Access Transmission Tariff ("Tariff"). The proposed Tariff revisions establish rates, cost allocation and cost recovery mechanisms, financial protections, revenue-crediting requirements, and transparency measures associated with transmission service to be taken by Eligible Customers on behalf of Co-Located Loads and Large Loads. These revisions respond to the Commission's preliminary finding in its June 18, 2026 *Order Instituting Proceeding*

*Under Section 206 of the Federal Power Act* in Docket No. EL26-67-000 ("Show Cause Order"). The proposed revisions also comply with the Commission's June 18, 2026 *Order on Rehearing, Clarification, Compliance Filing and Paper Hearing* in Docket Nos. EL25-49, *et al*. ("Co-Located Load Paper Hearing Order"). The PJM Transmission Owners' filing consists of several key elements, which we address in detail in our testimony below. These are:

**1. Rates for transmission services available to Eligible Customers taking service on behalf of Large Loads and Co-Located Loads.**

The new services available to Eligible Customers taking service on behalf of Large Loads and Co-Located Loads include: (i) Firm Contract Demand Transmission Service ("FCDS"); (ii) Non-Firm Contract Demand Transmission Service ("NFCDS"); and (iii) Interim Network Integration Transmission Service ("Interim NITS"). The Co-Located Load Paper Hearing Order found the PJM Transmission Owners' rate treatment proposals for FCDS and Interim NITS just and reasonable.[1] However, the Commission rejected the PJM Transmission Owners' proposed NFCDS maximum rate and required a lower maximum rate or nondiscriminatory discounts supported by transparent calculations. Accordingly, the PJM Transmission Owners' filing implements the rate treatments already found just and reasonable for FCDS and Interim NITS through compliance tariff records,[2] and proposes a revised NFCDS discounted rate methodology and related tariff provisions in compliance with the Commission's directives.[3] The filing extends and adapts those rates

---

1 Co-Located Load Paper Hearing Order at PP 398, 572.

2 *Id*. at PP 398, 400, 401.

3 *Id*. at PP 400, 401, 412.

to Eligible Customers taking service on behalf of Large Loads based on the eligibility criteria set forth in the filing PJM submits on this same date.

### 2. A *pro forma* Cost Recovery Agreement and related implementing Tariff provisions.

The *pro forma* Cost Recovery Agreement ("CRA") and related Tariff provisions address the Commission's concerns regarding the lack of an adequate mechanism in the Tariff to mitigate the risk of cost shifting among wholesale transmission customers.[4] The *pro forma* CRA accomplishes this through imposing on Large Load customers a financially secured minimum transmission-revenue contribution associated with the amount of firm transmission service requested from PJM by an Eligible Customer on behalf of the Large Load, along with a shortfall payment and crediting mechanism and financial security obligations, in order to ensure that each customer's minimum commitment is satisfied over the term of the CRA. The PJM Transmission Owners' proposed *pro forma* CRA also appropriately recognizes that voluntary cost recovery agreements and other ratepayer protection mechanisms have been, and continue to be, utilized at the retail and wholesale level by utilities within PJM. It makes clear that Transmission Owners in PJM will continue to be permitted to utilize existing as well as new consumer protection arrangements, as alternatives to the *pro forma* CRA, so long as those arrangements result in comparable protections and are accepted for filing by the Commission.[5]

The *pro forma* CRA is a three-party agreement among the Transmission Owner, the Large Load Customer, and the Eligible Customer that takes transmission service on the

---

[4] Show Cause Order at PP 77-81.

[5] Proposed Tariff, Part VIII, Subpart N, sections 441(a)(ii), 441(e)(v).

Large Load's behalf. The Large Load Customer controls the project, so it bears the payment and credit support obligations. The Eligible Customer remains the transmission customer, and the Transmission Owner administers the agreement and credits the amounts it collects. The Large Load must execute the CRA and post credit support before it can proceed through PJM's Fast Energization Process. That up-front commitment is intended to discourage speculative or duplicative requests. The commitment is first set from the Large Load's expected demand and ramp schedule. It is then updated after PJM's study to reflect when service can actually be provided, without financial penalty for that schedule adjustment.[6]

Once service begins, the Transmission Owner compares, at least once a year, the revenue actually produced by the Large Load's firm transmission service with a committed minimum of 80 to 100 percent of the anticipated full-service revenue. The Large Load pays any shortfall, and that payment reduces the Transmission Owner's revenue requirement, thereby protecting other customers in the Transmission Owner's zone against the risk of cost shifting.[7] If the project is cancelled or permanently reduced, the Large Load pays a termination amount that increases as the project advances. If termination occurs before service begins – that payment is first applied to the Project Development Costs associated with the transmission facilities needed to serve the Large Load, in accordance with the Tariff's allocation provisions. Any remainder is credited against the transmission

[6] *Id*. at section 441(d); Proposed *pro forma* Cost Recovery Agreement, Part IX, Subpart P at Preamble and Articles 3.1-3.2, 6.1.

[7] *Id.* at Articles 5.1-5.5, 7.6 and Exhibit B.

revenue requirements of the applicable Transmission Owners, reducing the amounts otherwise recovered from transmission customers.[8]

### 3. Tariff provisions addressing the recovery of the costs of transmission upgrades necessary to provide transmission service to Large Loads and interconnection service to generators on a combined study basis.

The Tariff revisions include a methodology for allocating and recovering the costs of transmission upgrades, referred to as "Interconnection Reliability Reinforcements," resulting from PJM's proposed Fast Energization Process. The allocation methodology is based on a modified version of PJM's existing proportional impact allocation methodology for customers in its New Service Request process. Cost responsibility will be assigned to those Zones containing Large Loads being studied for transmission service in the PJM Fast Energization Process via a new Interconnection Reliability Reinforcement Charge ("IRRC"). The PJM Transmission Owners are also proposing a Generator Reliability Reinforcement Fee ("GRRF") that PJM will assess to generators in each Fast Energization study cycle to recover a commercially reasonable portion of overall portfolio costs based on each generator's proportional impact on the reliability constraints mitigated by the portfolio of Interconnection Reliability Reinforcements. The GRRF revenues will be credited to transmission customers in those Zones based on their allocation of IRRCs.[9]

### 4. Transparency and customer protection commitments.

In addition to the basic cost allocation and rate design features of the PJM Transmission Owners' proposal, the PJM Transmission Owners are committing to make, on compliance,

---

[8] Proposed Tariff, Part VIII, Subpart N, section 441(e); Proposed *pro forma* CRA, Part IX, Subpart P at Article 9.12.

[9] Proposed Schedule 12, Sections (f)(1)-(6).

necessary changes to their formula rate templates to: (i) provide transparency to state regulators and other interested parties regarding the costs of transmission facilities being constructed by the Transmission Owner to provide transmission service to Large Loads; and (ii) adopt a mechanism designed to protect wholesale transmission customers not regulated at the retail level (municipals, cooperatives, and other applicable load-serving entities) from having to bear excessive large-load-related transmission upgrade costs.

## III. PURPOSE OF TESTIMONY

**Q. What is the purpose of your testimony?**

A. **[Blazunas and Hammer]** The purpose of this testimony is to describe and support certain PJM Transmission Owners' Tariff revisions submitted in response to the Show Cause Order and Co-Located Load Paper Hearing Order. Specifically, this testimony addresses the proposed extension of new transmission services to Eligible Customers taking service on behalf of flexible Large Loads; the proposed discounted rate for NFCDS; the recovery of transmission-upgrade costs associated with Large Loads and generation; transparency and customer-protection commitments; and the proposed CRA.

## IV. EXTENSION OF APPROVED RATE DESIGN ELEMENTS TO LARGE LOAD-RELATED TRANSMISSION SERVICE REQUESTS

**Q. Please describe the PJM Transmission Owners' proposal to extend the rates and financial penalty framework approved with respect to new transmission services for Co-Located Loads to Eligible Customers taking service on behalf of Large Loads.**

A. **[Blazunas]** In the Show Cause Order, the Commission expressed concerns that "PJM's tariff does not include transmission services that reflect the use of the transmission system by Eligible Customers on behalf of flexible large load, on both an interim and permanent

basis."[10] In its filing in response to the Show Cause Order, PJM is proposing to extend the new transmission services (FCDS, NFCDS, and Interim NITS) to Eligible Customers taking service on behalf of Large Load customers, in addition to Co-Located Load. Consequently, the PJM Transmission Owners propose to extend the rates and financial penalty framework for unreserved transmission system use developed for Co-Located Load and approved by the Commission in the Co-Located Load Paper Hearing Order to Eligible Customers taking service on behalf of Large Loads. Accordingly, the PJM Transmission Owners propose to extend the approved rates for FCDS and Interim NITS to Eligible Customers taking service on behalf of Large Loads.[11] The PJM Transmission Owners also propose to extend their new proposed rate design for NFCDS, as discussed below, to Eligible Customers on behalf of Large Loads.

The PJM Transmission Owners' proposal to extend these services to all eligible large load customers is consistent with the "operational reality that large loads may use the transmission system to differing extents and certain large loads are willing and able to limit their use of the transmission system under certain conditions."[12] These services are functionally identical to the services developed for Co-Located Loads. Therefore, it is reasonable that the same rate design approach should apply to Eligible Customers seeking one or more of these new services on behalf of either Co-Located Load or Large Load.

[10] Show Cause Order at P 87.

[11] Proposed Tariff, Part XI, Subpart A, Section 706; Tariff, Part XI, Subpart C, Section 714; and Proposed Schedules 20 and 22.

[12] Show Cause Order at P 86.

## V. PROPOSED RATE FOR NON-FIRM CONTRACT DEMAND TRANSMISSION SERVICE

**Q. Please describe the Commission's determination with respect to the PJM Transmission Owners original proposal for Non-Firm Contract Demand Service rates.**

A. **[Blazunas]** In the Co-Located Load Paper Hearing Order, the Commission rejected the PJM Transmission Owners' original proposal to charge the same maximum rate for both FCDS and NFCDS, and directed the PJM Transmission Owners to submit a compliance filing with revised rates for NFCDS.[13] Specifically, the Commission directed the PJM Transmission Owners to propose a lower maximum rate or non-discriminatory discounts for the revised NFCDS.[14] In addition, the Commission directed the PJM Transmission Owners to ensure that the revised rates for NFCDS are transparent with respect to how they will be calculated for individual customers.[15]

**Q. Please describe the PJM Transmission Owners' revised proposal for NFCDS rates.**

A. **[Blazunas]** The PJM Transmission Owners propose a discounted NFCDS rate using a reservation rate set by Zone and that is a function of the zonal FCDS rate (*i.e.*, the NFCDS maximum rate) and the transmission system load factor for a Zone. In short, the discounted NFCDS rate for a given Zone is calculated as the zonal FCDS rate multiplied by the transmission system load factor for the Zone.[16] The transmission system load factor is

---

13 Co-Located Load Paper Hearing Order at PP 402, 404, 412.

14 *Id*. at P 412.

15 *Id*.

16 Proposed Tariff, Part XI, Subpart C, Section 715 and Proposed Schedule 21.

calculated as annual zonal energy divided by the product of zonal peak demand for an annual period multiplied by 8,760 hours. An example calculation of the proposed discounted NFCDS rate is provided below:

**Table 1: Example Calculation of Discounted Non-Firm Contract Demand Transmission Service Rate**

| Component | Calculation | Amount |
|---|---|---|
| (a) Zonal Firm Contract Demand Rate ($/MW-Year) | | $90,000 |
| (b) Zonal Peak Demand (MW) | | 150,000 |
| (c) Zonal Annual Energy (MWh) | | 850,000,000 |
| (d) Hours Per Year | | 8,760 |
| (e) Zonal Discounted Non-Firm Contract Demand Rate ($/MW-Year) | = (a) x [(c) ÷ ((b) x (d))] | $58,219 |
| (f) Implied Discount to Maximum Rate | = 1 – [(e) ÷ (a)] | 35.3% |

The underlying rationale for this methodology is the fact that the transmission system is built to accommodate a peak demand that is driven by firm load. The difference between actual zonal annual energy and zonal annual energy at a 100 percent load factor represents a reasonable proxy for the "excess capacity" for which non-firm load is arguably not responsible. A lower system load factor for a Zone indicates relatively more "excess capacity" and justifies a higher discount for non-firm load's use of that "excess capacity," and vice-versa. The PJM Transmission Owners' proposal meets the directives that the Commission set forth in the Co-Located Load Paper Hearing Order insofar as it results in a non-discriminatory and transparent discount for NFCDS for each PJM Zone that can be calculated using publicly available data.

## VI. ALLOCATION AND RECOVERY OF COSTS ASSOCIATED WITH UPGRADES IDENTIFIED IN PJM'S FAST ENERGIZATION PROCESS

### A. Summary of Cost Allocation and Recovery

**Q. Why are the PJM Transmission Owners proposing a new cost allocation methodology as part of the response to the Commission's Show Cause Order?**

A. **[Hammer]** The Transmission Owners are proposing a new cost allocation framework because PJM's proposed Fast Energization Process will study Large Load transmission service requests in the same study cycle as existing New Service Requests, including generation and long-term firm transmission service requests. These different service requests will result in a single overall portfolio of projects needed to address the reliability constraints identified through PJM's Fast Energization Process, as opposed to a process in which specific projects are attributable to specific service requests. Therefore, a methodology is needed to allocate the costs of the transmission facilities, known as "Interconnection Reliability Reinforcements," required to resolve those constraints.

PJM's existing interconnection cost allocation procedures were not designed to allocate the costs of a single cohesive portfolio of transmission facilities resulting from a study process involving both generation interconnection requests and transmission service requests made by Eligible Customers on behalf of Large Loads. The PJM Transmission Owners have therefore developed a proportional impact assessment framework based on PJM's existing proportional impact allocation methodology for New Service Requests. This framework measures each request's relative contribution to the identified reliability

constraints and uses those impacts to allocate the costs of the resulting Interconnection Reliability Reinforcements.[17]

**Q. What are Interconnection Reliability Reinforcements, and why is it necessary to establish a specific methodology for allocating the costs of those facilities?**

A. **[Hammer]** Interconnection Reliability Reinforcements are the transmission facilities identified by PJM through the Fast Energization Process as necessary to address reliability violations associated with the generation interconnection requests and transmission service requests made by Eligible Customers on behalf of Large Loads that PJM examines in the cluster study. Because those reliability violations may result from the combined impacts of generator and Large Load requests, it is necessary to establish a methodology that assigns cost responsibility based on each request's contribution to the identified reliability constraints, rather than by allocating the costs of individual upgrades to individual requests.

**Q. Please provide an overview of the cost recovery provisions proposed by the PJM Transmission Owners in this filing.**

A. **[Blazunas]** Under the PJM Transmission Owners' cost allocation methodology, cost responsibility for Interconnection Reliability Reinforcements will be determined using a modified version of PJM's proportional impact methodology and initially assigned to those Zones containing Large Loads being studied for transmission service in the PJM Fast Energization Process. Those costs will be included in the rate base of the Transmission Owners designated to construct and own the Interconnection Reliability Reinforcements

[17] Proposed Schedule 12, Sections (f)(1)-(2).

and recovered from transmission customers in the applicable Zones through a new IRRC assessed based on the calculated impact of the Large Loads within the Zones. This allocation methodology will apply to all portfolios of Interconnection Reliability Reinforcements identified through PJM's Fast Energization Process for 15 years, after which the remaining costs of the upgrade will be subject to regional allocation using the then-current Schedule 12 methodology that applies to Regional Transmission Expansion Plan ("RTEP") reliability projects.

Under the PJM Transmission Owners' proposal, generators in the Fast Energization Process will pay a fee, referred to as the Generator Reliability Reinforcement Fee (or GRRF), representing their appropriate share of the costs of the Interconnection Reliability Reinforcement portfolio, to be billed and collected by PJM over a 15-year period. In order to provide certainty to generators as early in the process as possible, the GRRF will be calculated at the end of the PJM Fast Energization study process based on the estimated costs of the Interconnection Reliability Reinforcements available at that time, along with an appropriate carrying charge calculation. Revenues collected by PJM via the GRRF will be credited to transmission customers in the Zones that have been assigned cost responsibility for the relevant Interconnection Reliability Reinforcements. Likewise, IRRCs assessed to external Zones based on the calculated impact of Large Loads within the Zones will be credited to firm transmission customers in the Zones where the Interconnection Reliability Reinforcements are located. The practical impact of this crediting approach is that it ensures that no customer pays twice for the same facilities.

In addition to the basic cost allocation and rate design features of the PJM Transmission Owners' proposal, the PJM Transmission Owners are committing to make,

on compliance, necessary changes to their respective formula rate templates to: (1) provide transparency to state regulators and other interested parties regarding the costs of transmission facilities being constructed by the Transmission Owner to provide transmission service to Large Loads; and (2) adopt a mechanism designed to protect wholesale transmission customers not regulated at the retail level (municipals, cooperatives, and other applicable load-serving entities) from having to bear excessive large-load-related transmission upgrade costs.

### B. Proportional Impact Methodology

**Q. What is the proportional impact methodology?**

A. **[Hammer]** A proportional impact allocation methodology is a cluster-based cost allocation framework that determines the relative contribution to a portfolio of shared transmission upgrades based on a customer's quantified impact on identified transmission constraints. Specifically, applied to the Fast Energization Process, it evaluates how much each generator interconnection request and transmission service request made by an Eligible Customer on behalf of a Large Load impacts the aggregate reliability constraints addressed by a portfolio of Interconnection Reliability Reinforcements. Each request's impacts are then weighted and aggregated to determine its proportional impact on the constraints driving the need for the Interconnection Reliability Reinforcement portfolio.[18]

[18] Proposed Schedule 12, Section (f)(2)(A)-(C).

**Q. Why is a proportional impact methodology appropriate for determining Interconnection Reliability Reinforcement cost allocation and the resulting charges?**

A. **[Hammer]** A proportional impact methodology is appropriate because it establishes an engineering-based relationship between each request's contribution to the reliability constraints and the allocation of the costs of the Interconnection Reliability Reinforcements needed to address these constraints. Unlike an allocation based on project size or requested MWs of service, the proportional impact methodology measures the extent to which the generation interconnection and Large Load transmission service requests impact the underlying reliability needs and the resulting portfolio of Interconnection Reliability Reinforcements. This aligns cost allocation and recovery with the principle of cost causation. This approach is also consistent with the proportional impact approach reflected in FERC Order No. 2023 for allocating the costs of certain shared Network Upgrades.[19]

**Q. How are the proportional impacts calculated?**

A. **[Hammer]** The Transmission Owners' proposal uses violation-based distribution factors ("DFAX") to measure the relative impacts of generation and Large Load requests on the reliability constraints identified in a cluster study. For identified constraints, PJM would first calculate a DFAX, representing the percentage of an energy transfer that flows across a constrained facility. For a generator, the applicable DFAX is multiplied by the MW capacity studied in the Fast Energization Process to determine the generator's MW impact on the constrained facility. For a Large Load, the applicable DFAX is multiplied by the

[19] *See Improvements to Generator Interconnection Procs. and Agreements*, Order No. 2023, 184 FERC ¶ 61,054, at PP 455, 486 (2023), *order on reh'g*, Order No. 2023-A, 186 FERC ¶ 61,199 (2024).

MW amount of Firm Transmission Service requested. Only impacts that exceed the applicable thresholds specified in the PJM Manuals are included in the allocation.[20]

The qualifying impacts for each request are then converted into proportional MW impacts representing the pro rata share of all MW impacts on the same constrained facility.[21] Those proportional MW impacts are weighted and aggregated to develop each request's share of the overall portfolio of Interconnection Reliability Reinforcements.

**Q. Why does the proposal weigh and aggregate impacts across constrained facilities?**

A. **[Hammer]** Weighting is necessary because a MW of impact on one constrained facility does not necessarily have the same transmission investment significance as a MW of impact on another. For example, a 1 MW impact on a 20-mile, 138 kV constrained facility may have materially different transmission investment implications than a 1 MW impact on a 150-mile, 500 kV constrained facility. Simply adding those MW impacts on an unweighted basis could therefore treat materially different transmission impacts as equivalent. Weighting is intended to place impacts across different constrained facilities on a reasonably comparable basis before they are aggregated. The detailed weighting methodology will be developed by the PJM Transmission Owners, specified in the PJM Manuals, and applied consistently to all requests studied through the Fast Energization Process.

Aggregation is necessary because a single request may contribute to violations on multiple constrained facilities. The proposal aggregates the request's weighted impacts

---

[20] Proposed Schedule 12, Section (f)(2)(A)(3).

[21] *Id*. at Section (f)(2)(A)(4).

across constrained facilities to develop a measure of its overall contribution to the reliability needs addressed by the Interconnection Reliability Reinforcement portfolio.[22]

**Q. How does the proposed proportional impact methodology differ from PJM's existing interconnection cost allocation approach detailed in Manual 14H?**

A. **[Hammer]** The proposed methodology builds on concepts used in PJM's existing interconnection cost allocation methodology detailed in Manual 14H, including the use of DFAX, MW impacts, applicable thresholds, and proportional contribution to reliability violations. The key difference is that the proposed methodology for allocating the costs of Interconnection Reliability Reinforcements determines cost responsibility at the portfolio level rather than on a facility-by-facility basis. Because the Fast Energization Process develops a portfolio of Interconnection Reliability Reinforcements to address the aggregate reliability constraints identified in the cluster study, each request's qualifying impacts across those constraints are weighted and aggregated to establish its proportional impact on the constraints addressed by the Interconnection Reliability Reinforcement portfolio. Thus, the proposal preserves the existing impact-based approach while adapting it to a portfolio-based reliability solution.[23]

**Q. Why is a portfolio approach appropriate for the Fast Energization Process?**

A. **[Hammer]** A portfolio approach is appropriate because the Fast Energization Process develops a portfolio of upgrades to address reliability violations resulting from the combined impacts of generator interconnection and transmission service requests, rather

---

22 *Id*. at Section (f)(2)(C).

23 *Id*. at Section (f)(2)(A)-(C).

than assigning individual upgrades directly to individual requests. The proposed methodology therefore determines each request's relative contribution to the need for the Interconnection Reliability Reinforcement portfolio as a whole.[24]

**Q. Can you provide a simple example to illustrate the proposed proportional impact methodology?**

A. **[Hammer]** Yes. Assume that a PJM Fast Energization Process Cycle includes two requests: a 200 MW generation interconnection request, which I will refer to as Gen 1, and 300 MW Large Load transmission service request, which I will refer to as Load 1.

The first step is to determine the extent to which each request impacts the identified constrained facilities. For purposes of this simplified example, the impact is calculated by multiplying each request's MW quantity by its DFAX on each constrained facility. For example, Gen 1 has an 8 percent DFAX on Facility 1. Multiplying its 200 MW request by 8 percent results in a 16 MW impact on Facility 1.

| Constrained Facilities | Gen 1 DFAX | Load 1 DFAX | Gen 1 MW Impact | Load 1 MW Impact | Total MW Impact |
|---|---|---|---|---|---|
| Facility 1 | 8% | 0% | 16 | 0 | 16 |
| Facility 2 | 4% | 9% | 8 | 27 | 35 |
| Facility 3 | 0% | 6% | 0 | 18 | 18 |

The MW impacts are then converted to proportional impact on each constrained facility based on the *pro rata* shares of their MW impact on the constrained facility.

[24] *Id*. at Section (f)(2)(C).

| Constrained Facilities | Gen 1 Proportional Impact | Load 1 Proportional Impact |
|---|---|---|
| Facility 1 | 100.00% | 0.00% |
| Facility 2 | 22.86% | 77.14% |
| Facility 3 | 0.00% | 100.00% |

The next step is to apply a weighting factor that reflects the relative characteristics of each constrained facility. In this example, the weighting factor is based on the product of the facility's voltage and line length, expressed as kV-miles. Facility 1, with the lowest kV-mile value, is assigned a weighting factor of 1.00, and the other facilities are weighted relative to Facility 1.[25]

| Constrained Facilities | Voltage (kV) | Miles | kV x Miles | Weighting Factor |
|---|---|---|---|---|
| Facility 1 | 138 | 30 | 4,140 | 1.00 |
| Facility 2 | 345 | 20 | 6,900 | 1.67 |
| Facility 3 | 500 | 100 | 50,000 | 12.08 |

These weighting factors are then applied to each request's unweighted proportional impact on each constrained facility.

| Constrained Facilities | Weighting Factor | Gen 1 Proportional Impact | Load 1 Proportional Impact | Gen 1 Weighted Proportional Impact | Load 1 Weighted Proportional Impact |
|---|---|---|---|---|---|
| Facility 1 | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 |
| Facility 2 | 1.67 | 0.23 | 0.77 | 0.38 | 1.29 |
| Facility 3 | 12.08 | 0.00 | 1.00 | 0.00 | 12.08 |
| Portfolio Total | - | - | - | 1.38 | 13.37 |

[25] It is important to note that this specific calculation is provided for illustrative purposes. The PJM Transmission Owners intend to propose a methodology for determining these weighting factors in future filings.

Each request's weighted proportional impact on the constrained facility is summed to calculate its portfolio weighted proportional impact. The portfolio cost allocator for each request is then calculated by dividing that request's portfolio weighted proportional impact by the total portfolio weighted proportional impact of all requests in the portfolio. The resulting allocation percentages are then used to determine the applicable IRRCs and GRRFs for recovery of the costs of the portfolio of Interconnection Reliability Reinforcements.[26]

| | **Gen 1** | **Load 1** |
|---|---|---|
| Portfolio Weighted Proportional Impact | 1.38 | 13.37 |
| Portfolio Cost Allocator (%) | 9.37% | 90.63% |

**Q. Please provide a simple example of this transmission cost recovery construct.**

A. **[Blazunas]** Assume that a study cycle of the PJM Fast Energization Process identifies Interconnection Reliability Reinforcements necessary to provide service to a group of generator interconnection requests and transmission service requests made by Eligible Customers on behalf of Large Loads. These Interconnection Reliability Reinforcements ultimately cost $100 million to construct. The full $100 million investment would be included in the transmission revenue requirements of the Transmission Owners that are designated to construct and own the Interconnection Reliability Reinforcements. This amount would be billed and recovered via IRRCs assessed to transmission customers in PJM Zones based on the calculated impact of Large Loads within those Zones.[27]

---

[26] Proposed Schedule 12, Section (f)(2)(A), (C).

[27] *Id*. at Sections (f)(2)(C), (f)(3)–(4).

Assume also that at the end of the relevant Fast Energization Process study, the Interconnection Reliability Reinforcements were estimated to cost $90 million, and the proportional impacts of the generators in the cycle represented 40 percent of the overall impacts. This would result in PJM calculating GRRFs for each of the generators equal to $36 million (40 percent of $90 million), along with the applicable carrying charge, and billing those amounts to the applicable generators once they enter service.[28]

Revenues from both the GRRFs and the IRRCs would be returned in the form of credits to other transmission customers. Specifically, GRRF revenues collected by PJM would be credited back to transmission customers in the Zones assigned cost responsibility for the Interconnection Reliability Reinforcements through the IRRC. Likewise, IRRC revenues collected by PJM would be credited to firm transmission customers in the applicable Zones where the Interconnection Reliability Reinforcements are located. This approach ensures that the various costs are allocated in a manner that is roughly commensurate with the benefits of the overall portfolio of Interconnection Reliability Reinforcements, while preventing double recovery by the Transmission Owners that own the Interconnection Reliability Reinforcements and are including them in their rate bases.[29]

**Q. How does the PJM Transmission Owners' proposal address short-circuit constraints?**

A. **[Hammer]** The proposal measures each request's contribution to fault current relative to the interrupting capability of the circuit breaker, consistent with PJM's existing methodology.

---

[28] *Id*. at Section (f)(6)(B)-(C).

[29] *Id*. at Sections (f)(5), (f)(6)(D).

Although the engineering measure differs, the underlying cost allocation principle is the same: the methodology applies an engineering metric appropriate to each type of reliability constraint to measure each request's relative contribution to the underlying reliability need, thereby aligning cost responsibility with cost causation.

**Q. In your opinion, is the proportional impact methodology appropriate?**

A. **[Hammer]** The proportional impact methodology is appropriate because it builds on the proportional impact approach already used in PJM's existing New Service Request framework and is consistent with the cost allocation principles reflected in FERC Order No. 2023. For reliability constraints, the methodology uses violation-based DFAX to measure the relative contribution of each generation and Large Load request to the identified constraints and uses those relative impacts as the basis for both the IRRCs and GRRFs.[30] It therefore aligns with cost causation principles, as I understand them, by allocating and recovering costs based on each request's contribution to the underlying need being addressed. The proposal adapts an established, engineering-based approach that accounts for the fact that generation and Large Load requests are studied together and the reliability solution consists of an integrated portfolio of Interconnection Reliability Reinforcements.

[30] *Id*. at Section (f)(2)(A), (C).

### C. Generator Reliability Reinforcement Fee

**Q. Please describe the PJM Transmission Owners' proposed Generator Reliability Reinforcement Fee.**

A. **[Blazunas]** As noted above, the PJM Transmission Owners are proposing a GRRF calculated to recover an appropriate portion of the Interconnection Reliability Reinforcements from Generator Interconnection Customers in each PJM Fast Energization Process Cycle. The GRRF will be calculated after each System Impact Study Phase as part of the PJM Fast Energization Process based on the following formula:

$$GRRF = GCAP \times TRRGP \times \{[ACCC \times (1 + ACCC)^{15}] \div [(1 + ACCC)^{15} - 1]\}$$ [31]

In this calculation, the GRRF is equal to the product of the Generator Interconnection Customer's Allocated Percentage (or "GCAP"), the Total Reliability Reinforcement Gross Plant (or "TRRGP"), and the annualization factor for recovering an investment over a 15-year period, which itself includes the Annual Carrying Charge Component (or "ACCC"). The GCAP represents the Generator Interconnection Customer's proportional impact on the portfolio of Interconnection Reliability Reinforcements in the relevant Cycle. The TRRGP represents the estimated gross plant of all Interconnection Reliability Reinforcements approved by the PJM Board with respect to the relevant Cycle and for which the Generator Interconnection Customer has been determined to have an impact per the GCAP calculation. This estimate is determined at the end of the applicable System Impact Study Phase. The ACCC represents the weighted average of the Weighted Average Costs of Capital for all Transmission Owners with Interconnection Reliability

[31] *Id*. at Section (f)(6)(B).

Reinforcements included in the RTEP approved by the PJM Board with respect to the New Service Request Cycle that contains the Generator Interconnection Customer.[32] The GRRF is calculated as an annual amount that will be recovered by PJM via a monthly charge.[33] Revenues received from the GRRF will, as discussed above, be credited to firm transmission customers in each Zone on a *pro rata* basis as described in the Tariff.[34]

**Q. Please describe the underlying rationale for the PJM Transmission Owners' proposed Generator Reliability Reinforcement Fee.**

A. **[Blazunas]** As designed, the proposed Generator Reliability Reinforcement Fee ensures that Generator Interconnection Customers bear an appropriate share of the costs incurred to serve them, while also ensuring commercial feasibility by limiting the term over which those costs are recovered as well as providing the Generator Interconnection Customer with upfront certainty as to the size of the required payment. The use of a 15-year period for the term of the GRRF balances the longer life of the associated transmission assets constructed to serve the Generator Interconnection Customer with consideration of the fact that the payment should not be so long as to place excessive financial burdens on generators. This latter need is particularly relevant in the current environment where, especially in PJM, capacity is short and the need for additional capacity is acute. This 15-

---

[32] For purposes of calculating such weighted average, each applicable Transmission Owner's Weighted Average Cost of Capital shall be weighted based on the ratio of the final estimated costs of the Interconnection Reliability Reinforcements that it has been designated to construct and own to the final estimated costs for all Interconnection Reliability Reinforcements. *See* Proposed Schedule 12, Section (f)(6)(B).

[33] *Id.* at Section (f)(6)(C).

[34] *Id*. at Section (f)(6)(D).

year payment period also harmonizes with the 15-year allocation transition mechanism I mentioned above and discuss in greater detail below.[35]

Finally, the Annual Carrying Charge component of the calculation ensures that Transmission Owners, and their customers, are fairly compensated for the carrying costs associated with the Interconnection Reliability Reinforcement investment. The Annual Carrying Charge is based on the applicable Transmission Owners' Weighted Average Cost of Capital.[36] Again, this approach strikes an appropriate balance between recovering a fair portion of the costs of Interconnection Reliability Reinforcements from generators without imposing an excessive commercial burden that would disincentivize generation investment in PJM.

### D. Interconnection Reliability Reinforcement Charge and Cost Allocation Transition Mechanism

**Q. Please explain the Interconnection Reliability Reinforcement Charge.**

A. **[Blazunas]** As I indicated earlier, the costs of Interconnection Reliability Reinforcements will be included in the rate base of the Transmission Owners designated to construct and own the Interconnection Reliability Reinforcements. However, these costs will be allocated and recovered from transmission customers throughout PJM through the IRRC. PJM will calculate and assess the IRRC based on the proportional impact of the Large Loads within each Zone and the revenue requirements for the Interconnection Reliability

---

35 Proposed Schedule 12, Sections (f)(3), (f)(6)(B)-(C).

36 *Id*. at Section (f)(6)(B).

Reinforcements as determined by the Transmission Owners owning those facilities, based on their formula rate templates.[37]

**Q. How will the revenues associated with Interconnection Reliability Reinforcement Charges be treated?**

A. **[Blazunas]** Revenues associated with IRRCs collected by PJM will be credited back to the Zones in which the Interconnection Reliability Reinforcements are located and included in Transmission Owner rate base. This avoids any issue with potential double recovery.[38]

**Q. Is there any existing analogue in PJM to the Interconnection Reliability Reinforcement Charge?**

A. **[Blazunas]** Yes, the manner in which the IRRC is determined and recovered is very similar to the existing Transmission Enhancement Charge ("TEC"), which PJM calculates and bills in order to recover the costs of transmission upgrades identified in the PJM RTEP and allocated regionally. As with the TEC, the IRRC will be determined based on allocation factors established pursuant to a formula set forth in Schedule 12 of the Tariff along with the revenue requirements associated with the upgrades as determined by the applicable Transmission Owners using their formula rate templates. Moreover, revenues collected by PJM pursuant to the IRRC, just like the TEC, will be credited back to transmission customers in the Zones where the upgrades are located, so as to avoid potential double recovery due to the fact that both regionally-allocated RTEP projects and Interconnection

---

37 *Id*. at Sections (f)(2)(C), (f)(3)-(4).

38 *Id*. at Section (f)(5).

Reliability Reinforcements will be included in Transmission Owners' transmission rate base.[39]

**Q. Will the costs of Interconnection Reliability Reinforcements be allocated and recovered based on the Interconnection Reliability Reinforcement Charge over the entire life of the assets?**

A. **[Blazunas]** No. The PJM Transmission Owners propose to allocate and recover the costs of Interconnection Reliability Reinforcements using the IRRC mechanism for a period of 15 years after they enter service. After 15 years, the remaining costs of Interconnection Reliability Reinforcements shall be allocated and recovered pursuant to the existing regional cost allocation methodology set forth in Schedule 12. That methodology relies on a combination of solution-based DFAX and load-ratio share allocation approaches depending on the type of upgrade at issue.[40]

**Q. Please explain why the PJM Transmission Owners are proposing a 15-year transition period for allocating the costs of Interconnection Reliability Reinforcements.**

A. **[Blazunas]** The use of a 15-year allocation period recognizes the fact that the topology of the transmission system changes over time in terms of both load and generation, meaning that over time, more customers will be benefitting from the use of the Interconnection Reliability Reinforcements. For instance, as shown in Section (I) of Exhibit No. PTO-0003, the 2026 PJM Load Forecast Report reflects a wide range of rates of growth of summer and winter peak load across Zones over a 15-year period, with the Dominion

---

[39] *Id*. at Sections (f)(2)(C), (f)(4)-(5).

[40] *Id.* at Section (f)(3).

Virginia Power zone forecast to have annualized 15-year summer and winter peak load growth rates of 4.90 percent and 4.70 percent, respectively.[41] The overall PJM Regional Transmission Organization is forecast to have annualized 15-year summer and winter peak load growth rates of 2.90 percent and 3.30 percent, respectively. As load grows and more transmission facilities are added to the system, those facilities will increasingly be used by and relied on, and therefore benefit, customers across the region.

Similarly, the generation characteristics of the PJM system have undergone significant changes over the past fifteen years. Section (II) of Exhibit No. PTO-0003 presents existing MW capacity in PJM by zone between December 31, 2011, and September 30, 2026. Between the end of 2011 and the end of the third quarter of 2026, PJM saw existing capacity increase by 2.5 percent overall. This overall increase, however, does not reflect the wide variation in the change in existing capacity in individual zones across that same period. For instance, the Dominion Virginia Power zone saw existing capacity increase by 38 percent across that period whereas the Dayton Power & Light zone saw its equivalent figure decrease by 71 percent. The ability of both load and generation to change significantly across these periods supports the idea that the transmission system is dynamic and, consequently, transmission assets constructed to primarily serve one set of customers today can reasonably be expected to benefit other customers in the future. These changes in the topology of the transmission system reduce the meaningfulness of constraint impacts measured at a single point in time as a measure of benefits to customers over time. Instead, the fact that the way transmission assets are used will change as the topology of

[41] PJM Interconnection, L.L.C., 2026 *PJM Load Forecast Report* (Jan. 14, 2026), https://www.pjm.com/ /media/DotCom/library/reports-notices/load-forecast/2026-load-report.pdf.

the transmission system changes supports the need to transition the recovery of the costs of the transmission assets to a broader base of customers.

Accordingly, I believe that 15 years represents a reasonable balance consistent with cost-causation and beneficiary-pays principles, recognizing that the Interconnection Reliability Reinforcements are initially driven by generation interconnection requests and transmission service requests made by Eligible Customers on behalf of Large Loads, but that the benefits associated with these facilities will broaden as the transmission system changes over time.

### E. Ratepayer Protection Mechanisms

**Q. Does the PJM Transmission Owners' proposal address potential cost shifts among wholesale transmission customers?**

A. **[Hammer]** Yes. First, as discussed below, the PJM Transmission Owners proposal includes a *pro forma* CRA that, along with comparable individual agreements, will ensure that Large Load customers commit to a minimum contribution to each Transmission Owner's revenue requirement.[42]

Second, each PJM Transmission Owner commits to make a compliance filing to include in its formula rate provisions a mechanism designed to protect wholesale transmission customers in its Zone from having to bear excessive large-load-related system upgrade costs when they do not have service requests associated with Large Load in a cluster. In particular, this mechanism will protect municipal and cooperative entities that are not regulated by states, and therefore state jurisdictional retail efforts cannot insulate

[42] Proposed Tariff, Part VIII, Subpart N, section 441(a); Proposed *pro forma* CRA, Part IX, Subpart P at Articles 5-7.

them from bearing a potentially disproportionate amount of costs associated with reinforcements necessary to provide transmission service to Large Load. The PJM Transmission Owners have deliberately avoided specifying a single mechanism for implementing this commitment due to the need for flexibility so that Transmission Owners can design and propose wholesale customer protection mechanisms that are consistent with any applicable retail allocation or charge mechanisms.

**Q. Does the PJM Transmission Owners' proposal address potential cost shifts among retail customers within the same utility?**

A. **[Hammer]** Consistent with the Commission's findings in the Show Cause Order, the PJM Transmission Owners' proposal focuses on cost allocation and potential cost shifts at the wholesale transmission level. The allocation of transmission costs among retail customer classes, including Large Load customers, is generally addressed through retail rate design subject to state regulatory jurisdiction. However, to facilitate the ability of state regulators to allocate costs at the retail level and to provide the transparency desired by the Commission as expressed in the Show Cause Order, the PJM Transmission Owners are committing to make, on compliance, necessary changes to their formula rate templates to include information regarding the costs of transmission facilities being constructed by the Transmission Owner to provide transmission service to Large Loads.[43] This information is similar to information already provided by PJM Transmission Owners regarding PJM RTEP projects subject to regional cost allocation, and recovered through the TEC. Based

[43] Proposed Schedule 12, Sections (f)(3)-(5). The Transmission Owner's annual transmission revenue requirement associated with an Interconnection Reliability Reinforcement will be determined pursuant to the formula rate in effect applicable to the Transmission Owner's rates for Firm Transmission Service. Transmission Owners will make a compliance filing to be submitted within 120 days after the Commission issues an order accepting this filing to include any necessary revisions to the Transmission Owner's formula rate template to identify each IRR.

on this information, state regulators may then determine whether and how such costs should be assigned to Large Load customers through retail Large Load tariffs, special contracts, riders, minimum demand or revenue requirements, or other retail rate mechanisms.

**Q. How would the cost allocation proposal apply to a co-located Large Load and generation arrangement?**

A. **[Hammer]** For a co-located arrangement, the proposed methodology separately evaluates the generation interconnection request and the Large Load transmission service request. At the same time, consistent with the Commission's directive, the co-located generation may reduce the amount of Firm Transmission Service required by the Large Load and, therefore, the Large Load's impact on the transmission system and the Interconnection Reliability Reinforcements required to serve it.

For example, assume a co-located facility consists of a 500 MW Large Load and 400 MW of generation. If the Large Load requests 100 MW of Firm Contract Demand Transmission Service and the generator requests 400 MW of generator interconnection service, the generator's proportional impact would be evaluated based on the generation studied through the Fast Energization Process, while the Large Load's proportional impact would be evaluated based on its 100 MW Firm Transmission Service request.[44]

[44] Proposed Schedule 12, Sections (f)(2)(A), (C).

## VIII. COST RECOVERY AGREEMENT

**Q. What concern identified by the Commission in the Show Cause Order is the proposed Cost Recovery Agreement intended to address?**

A. **[Hammer]** The Commission expressed concern that transmission costs incurred to serve a Large Load could be shifted to other wholesale transmission customers if the Large Load does not materialize, ramps more slowly than expected, or reduces or terminates service.[45] The proposed *pro forma* CRA addresses this risk by establishing financial protections designed to ensure that the Large Load Customer bears an appropriate share of the financial risk associated with its Firm Transmission Service commitment, thereby protecting other wholesale transmission customers from potential cost shifts.

**Q. Please provide an overview of the proposed CRA.**

A. **[Hammer]** The proposed CRA is a three-party agreement among the Transmission Owner, the Eligible Customer taking transmission service on behalf of the Large Load Customer, and the underlying Large Load Customer designed to protect other wholesale transmission customers from cost shifts associated with serving a Large Load. The CRA includes a commitment extending for a minimum of ten years after the first Service Date and several key financial protections, including a minimum revenue commitment and associated shortfall payment mechanism, credit support, and early and partial termination amounts that collectively address the risk that the anticipated transmission revenues associated with the Large Load's Firm Transmission Service commitment will not materialize over the

[45] Show Cause Order at PP 79, 83.

term of the CRA, thereby reducing the risk that the resulting revenue exposure will be borne by other wholesale transmission customers.[46]

The CRA initially reflects the Large Load Customer's anticipated load demand and ramp schedule, including the anticipated dates for each stage of service, together with the amount and type of firm transmission service that the Eligible Customer intends to request on the Large Load Customer's behalf, which establish the customer's initial commitment before completion of PJM's Fast Energization Process. Following completion of PJM's transmission Fast Energization Process and execution of the Final PJM Agreement, the CRA is updated to reflect the type of and amount of Firm Transmission Service, load ramp, and Service Dates established through that process. These amounts and dates establish the Large Load Customer's Firm Load Commitment, which identifies the committed load level, corresponding level of Firm Transmission Service, and applicable load-ramp milestones and Service Dates. The Firm Load Commitment serves as the benchmark for determining the Large Load Customer's minimum transmission-revenue obligation.[47]

Beginning on each applicable Service Date, and no more frequently than annually, the applicable Transmission Owner calculates the minimum transmission-revenue contribution associated with the Firm Load Commitment, referred to as the Committed Revenue Contribution, and compares that amount against qualifying revenues attributable to the firm transmission service actually taken to serve the Large Load, referred to as the Actual Revenue Contribution. If the Actual Revenue Contribution is less than the

---

[46] Proposed *pro forma* CRA, Part IX, Subpart P at Preamble and Articles 4.2, 5-6, 9.

[47] *Id.* at Articles 3.1-3.2 and Exhibit A.

Committed Revenue Contribution for the applicable Measurement Period, the Large Load Customer is required to pay only the difference, or Shortfall Amount. Credit Support secures the Large Load Customer's payment and other financial obligations under the CRA, including any Shortfall Amount, Early Termination Amount, or Partial Termination Amount.[48] The CRA's early and partial termination provisions likewise protect against the applicable portion of the remaining projected revenue commitment if the transmission request or commitment is withdrawn, the Large Load is abandoned or terminated, or its capacity is permanently reduced. In the event of termination before the first Service Date, the Transmission Owner may draw on Credit Support to satisfy the applicable termination payment. That payment is applied first to Project Development Costs associated with transmission facilities that will no longer be needed to serve the Large Load, including such costs incurred by other Transmission Owners, thereby ensuring that these costs will not be included in transmission rate base and recovered from other customers.[49]

**Q. Please explain how the proposed CRA is designed to address the risk of cost shifts among wholesale transmission customers.**

A. **[Hammer]** The PJM Transmission Owners' proposed CRA combines a minimum revenue contribution, financial-security requirements, and flexibility to tailor specified terms to the applicable Transmission Owner and customer parties. That framework is intended to provide necessary wholesale customer protections while promoting timely Large Load integration. Each of the CRA's financial security requirement addresses a different aspect

---

[48] *Id*. at Articles 5.1-5.5, 6.1–6.5, 7.6 and Exhibits B–C.

[49] Proposed Tariff, Part VIII, Subpart N, section 441(e); Proposed *pro forma* CRA, Part IX, Subpart P at Articles 9.1-9.12 and Exhibit D.

of wholesale transmission cost shift risk. The minimum revenue commitment addresses the risk that anticipated Firm Transmission Service revenues associated with serving a Large Load do not materialize. Credit Support provides financial assurance that the Large Load Customer can satisfy its transmission payment obligations over the remaining term of the CRA. Finally, early and partial termination amounts protect against the loss of the anticipated revenue contribution if the Large Load Customer terminates or permanently reduces its commitment before the end of the agreed period. Together, these protections provide reasonable assurance that the financial risks associated with the Large Load Customer's Firm Transmission Service commitment are not shifted to other wholesale transmission customers.[50]

**Q. Please explain the minimum revenue contribution mechanism and how it protects other wholesale transmission customers from potential cost shifts.**

A. **[Hammer]** The minimum revenue contribution mechanism establishes a minimum level of transmission revenue that the Large Load Customer is responsible for providing, through transmission service payments made by an Eligible Customer on its behalf, during each Measurement Period, generally one year. The CRA establishes a Committed Revenue Contribution based on the projected Firm Transmission Service charges associated with the applicable load commitment, multiplied by the applicable Minimum Commitment Percentage, which ranges from 80 to 100 percent. For each Measurement Period, the Transmission Owner then compares the customer's actual contribution to the Transmission Owner's revenue requirement, based on its actual use, to its Committed Revenue

[50] Proposed Tariff, Part VIII, Subpart N, section 441(a); Proposed *pro forma* CRA, Part IX, Subpart P at Articles 5-6, 9.

Contribution. If actual revenues fall below the committed amount, the Large Load Customer must pay the difference as a Shortfall Amount. The minimum revenue contribution is initially determined at CRA execution prior to the Large Load customer entering the PJM Fast Energization Process based on the amount of service to be requested on behalf of the Large Load (the "Initial Load Commitment"), and then updated at the end of the PJM Fast Energization Process based on any changes made during that process (the "Firm Load Commitment").[51]

This mechanism mitigates potential cost shifts by ensuring that the Large Load Customer provides a minimum level of revenue associated with its Firm Transmission Service commitment, even if its load does not materialize or ramp as expected. At the same time, revenues attributable to serving the Large Load are counted against that commitment, so the Shortfall Amount reflects only the difference needed to satisfy the agreed minimum contribution. Shortfall Amounts are credited against the Transmission Owner's transmission revenue requirement, thereby reducing the costs that otherwise could be recovered from other wholesale transmission customers.[52]

**Q. Why is the proposed Minimum Commitment Percentage range of 80 to 100 percent reasonable?**

A. **[Hammer]** In my opinion, the proposed range is reasonable because it establishes a meaningful minimum revenue commitment while allowing individual Transmission Owners to require a higher commitment where appropriate based on their particular

---

51 Proposed *pro forma* CRA, Part IX, Subpart P at Articles 3.1-3.2, 5.1-5.5 and Exhibits A-B.

52 *Id*. at Article 7.6.

circumstances. The 80 percent floor is also consistent with prior agreements accepted by the Commission.[53]

**Q. How is the Credit Support Requirement determined?**

A. **[Hammer]** The Credit Support Requirement is designed to secure the Transmission Owner's projected Firm Transmission Service revenue exposure associated with the Large Load Customer's commitment over the remaining term of the CRA. It equals the aggregate Projected Full Firm Transmission Service Benchmarks for the Measurement Periods remaining in the Term, including any incomplete portion of the applicable Measurement Period. Initially, it is based on 100 percent of the projected Firm Transmission Service-related charges associated with the Initial Load Commitment over the CRA term. Following completion of the PJM Fast Energization Process and execution of the relevant service agreement with PJM (referred to in the filing as the "Final PJM Agreement"), that amount is recalculated based on the Firm Load Commitment, Service Dates, and other information established following the Final PJM Agreement. The Credit Support Requirement is then recalculated after each Measurement Period. Once the Large Load Customer has satisfied its obligations for a Measurement Period, that period is removed from the calculation. As a result, the Credit Support Requirement generally declines as completed Measurement Periods are reconciled, paid, and removed from the calculation, although it may also be adjusted when other relevant inputs change.[54]

---

[53] *See Commonwealth Edison Co.*, 194 FERC ¶ 61,109 (2026); *Commonwealth Edison Co.*, 194 FERC ¶ 61,185 (2026); *PECO Energy Co.*, 193 FERC ¶ 61,148 (2025).

[54] Proposed *pro forma* CRA, Part IX, Subpart P at Articles 6.1, 6.5 and Exhibit C.

**Q. How is the Projected Full Firm Transmission Service Benchmark determined?**

A. **[Hammer]** The Projected Full Firm Transmission Service Benchmark represents the projected charges for 100 percent of the Large Load Customer's applicable Firm Transmission Service for each Measurement Period. For each Measurement Period included in the Credit Support Requirement, the Projected Full Firm Transmission Service Benchmark equals the Firm Transmission Service-related charges that would apply if Eligible Customer took Firm Transmission Service corresponding to the Initial Load Commitment or Firm Load Commitment, as applicable, scheduled to apply during that Measurement Period. It is calculated using the customer's Firm Load Commitment, the applicable Firm Transmission Service rates, and the portion of the Measurement Period during which those load levels and rates apply. The calculation also reflects any rate change accepted by the Commission and scheduled to become effective during the applicable Measurement Period.[55]

**Q. Why is the Credit Support Requirement adjusted over the life of the CRA, and why is that approach reasonable?**

A. **[Hammer]** The Credit Support Requirement is adjusted over the life of the CRA so that the amount of financial security continues to reflect the Transmission Owner's full projected Firm Transmission Service revenue exposure over the remaining term of the CRA. After each Measurement Period is finally reconciled and the Large Load Customer has paid all amounts due for that period, that Measurement Period is removed from the Credit Support Requirement. The requirement is also recalculated when relevant inputs

---

[55] *Id*. at Exhibit C, Sections 1-3.

change, such as the Firm Load Commitment, Service Dates, or applicable Firm Transmission Service rates.[56]

This approach is reasonable because it appropriately aligns the amount of financial security with the exposure that remains under the CRA. The Transmission Owner, to the benefit of other customers, retains financial assurance for its full projected exposure over the remaining term, while the Large Load Customer receives the benefit of a reduction in Credit Support as it satisfies its obligations over time. Once a Measurement Period has been completed, reconciled, and paid, there is no longer a need to include that period in the amount being secured. The result is a Credit Support Requirement that remains sufficient to protect against prospective revenue risk without requiring the Large Load Customer to collateralize exposure that has already been eliminated through performance.

**Q. What are the early and partial termination provisions?**

A. **[Hammer]** The early and partial termination provisions address circumstances in which the Firm Transmission Service request is: (i) withdrawn or abandoned, (ii) the CRA terminates before the end of its agreed term, (iii) the project is abandoned or ceases operations, or (iv) the Large Load Customer permanently reduces its Firm Load Commitment. In those circumstances, the Large Load Customer is responsible for an Early Termination Amount or Partial Termination Amount. The Early Termination Amount protects a specified portion of the revenue contribution projected for the remainder of the CRA and is generally based on the applicable Termination Percentage and the present value of the remaining Projected Committed Revenue Contributions, less applicable credits. For

[56] *Id*. at Article 6.5 and Exhibit C, Sections 1-4.

a partial termination, the amount is adjusted to reflect the permanent reduction in the Large Load Customer's Firm Load Commitment.[57]

**Q. Why are these termination provisions necessary?**

A. **[Hammer]** These termination provisions are necessary because the Transmission Owner may make long-term transmission planning and investment decisions based on the Large Load Customer's Firm Load Commitment. If the customer terminates or materially reduces that commitment, the associated transmission revenues may no longer materialize. The termination provisions mitigate that risk by assigning an appropriate portion of the remaining revenue exposure to the Large Load Customer whose project and Firm Load Commitment gave rise to the exposure, thereby reducing the potential for the resulting revenue shortfall to be shifted to other wholesale transmission customers.

**Q. How are the Early Termination Amount and Partial Termination Amount determined?**

A. **[Hammer]** The Early Termination Amount is generally calculated by applying the applicable Termination Percentage to the present value of the remaining Projected Committed Revenue Contributions, less any applicable credits. The Termination Percentage increases as the project progresses, from 25 percent before execution of the Final PJM Agreement, to 50 percent during the first 180 days following execution of the Final PJM Agreement, to 75 percent thereafter and before the first Service Date, and to 100 percent on and after the first Service Date.[58] The present value calculation reflects the

---

57 *Id*. at Articles 9.1-9.9 and Exhibit D.

58 *Id.* at Exhibit D, Section 1.

Large Load Customer's remaining Firm Load Commitment, the Minimum Commitment Percentage, applicable transmission service rates, rate components and billing determinants identified in Exhibit B to the CRA, and the Transmission Owner's then-effective FERC-approved Weighted Average Cost of Capital as the discount rate.

The Partial Termination Amount applies the same framework to the portion of the Firm Load Commitment that is permanently reduced. Generally, it is determined by multiplying the Early Termination Amount by the percentage of committed MW being reduced.[59]

**Q. How are the Termination Percentages determined and why are they reasonable?**

A. **[Hammer]** The Termination Percentages increase as the project progresses, reflecting the increasing financial exposure associated with the Large Load Customer's commitment. Under the CRA, the applicable percentage increases from 25 percent prior to execution of the Final PJM Agreement to 100 percent on and after the first Service Date.[60]

This approach is reasonable because it aligns the customer's termination responsibility with the stage of its commitment and the Transmission Owner's increasing exposure as the project advances. At earlier stages, when the project is less advanced and the Transmission Owner's exposure is correspondingly lower, only a portion of the remaining committed revenue exposure is assigned to the Large Load Customer. As the project advances and the Transmission Owner increasingly relies on the Firm Load Commitment for planning, investment, and anticipated revenue recovery, the Large Load

---

59 *Id*. at Articles 9.7-9.9 and Exhibit D, Sections 1-5.

60 *Id*. at Exhibit D, Section 1.

Customer assumes a greater share of that exposure. Once service begins, the Large Load Customer is responsible for 100 percent of its remaining committed revenue obligation in the event of termination.

**Q. Why is the Termination Amount based on the minimum revenue obligation rather than projected full transmission revenues, as used to calculate the Credit Support Requirement?**

A. **[Hammer]** The Termination Amount represents an actual payment obligation, whereas the Credit Support Requirement represents financial security for potential exposure. Because the Large Load Customer's contractual minimum revenue obligation is determined by applying the Minimum Commitment Percentage to projected transmission revenues, it is reasonable for the Termination Amount to be based on that committed revenue obligation rather than 100 percent of projected revenues. This distinction ensures that the more conservative Credit Support Requirement provides financial assurance against potential exposure without converting that higher level of security into a greater payment obligation upon termination.

Thus, the two provisions serve different but complementary purposes: Credit Support secures the Transmission Owner's full projected exposure, while the Termination Amount reflects the Large Load Customer's contractual payment responsibility upon termination.[61]

---

[61] *Id*. at Exhibit C, Sections 1-3, 7 and Exhibit D, Sections 2-3.

**Q. In your opinion, does the proposed CRA provide an appropriate framework for mitigating potential cost shifts associated with Large Loads among wholesale transmission customers?**

A. **[Hammer]** Yes. The proposed CRA provides an appropriate set of financial protections designed to mitigate the risk that costs associated with serving a Large Load will be shifted to other wholesale transmission customers. It achieves this through a set of interlocking mechanisms.

The proposed CRA establishes a minimum revenue commitment to provide a defined level of transmission revenue even if the Large Load does not materialize or ramp as expected. It requires Credit Support based on 100 percent of projected Firm Transmission Service revenues, providing a strong financial backstop for the Transmission Owner's potential exposure. And, if the customer terminates or reduces its commitment, the early and partial termination provisions require the customer to bear an appropriate portion of its remaining committed revenue obligation.[62]

Collectively, these provisions appropriately allocate the financial risks associated with the Large Load Customer's Firm Transmission Service commitment to that customer, while calibrating the customer's payment and Credit Support obligations to the nature and extent of the exposure being addressed.

**Q. Does this complete your testimony at this time?**

A. **[Blazunas and Hammer]** Yes.

---

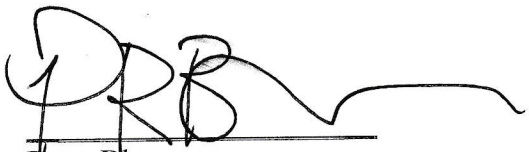
[62] *Id*. at Articles 5-6, 9 and Exhibits B-D.

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

| | | |
|---|---|---|
| Exelon Corporation, *et al.* | ) | Docket No. ER27-___-000 |

## DECLARATION OF PETER BLAZUNAS

I depose and state under penalty of perjury that the foregoing exhibits were prepared or assembled by me or under my direction, and that I have read the foregoing questions and answers labeled as my testimony: that if asked the same questions my answers in response would be as shown; and that the facts contained in my answers are true to the best of my knowledge, information, and belief.



Peter Blazunas

November 16, 2026

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

| | | |
|---|---|---|
| Exelon Corporation, *et al*. | ) | Docket No. ER27-___-000 |

## DECLARATION OF HANHAN HAMMER

I depose and state under penalty of perjury that the foregoing exhibits were prepared or assembled by me or under my direction, and that I have read the foregoing questions and answers labeled as my testimony: that if asked the same questions my answers in response would be as shown; and that the facts contained in my answers are true to the best of my knowledge, information, and belief.



Hanhan Hammer

November 16, 2026

CONCENTRIC ENERGY ADVISORS

**PETER BLAZUNAS**
VICE PRESIDENT

Mr. Blazunas specializes in regulatory strategy and rate case expertise for regulated electric and gas utility rate proceedings. He joined Concentric in 2021 after nine years in progressively senior roles within the regulatory departments of large investor-owned electric utilities. Most recently, at Exelon Corp., he managed a team overseeing cost of service, revenue allocation, rate design, revenue decoupling, and rate administration for Pepco's Maryland and District of Columbia jurisdictions. At Concentric, Peter Blazunas has led diverse projects, including staff augmentation for a New England gas and electric utility's pricing team, assisting in the development of the revenue requirement and minimum filing requirements for the multiyear rate plan application of a large Midwestern electric utility, and testifying on rate design and revenue decoupling for mid-Atlantic electric utilities in multiyear rate plan applications. He is a seasoned expert witness, having testified in traditional base distribution rate cases and multiyear rate plan proceedings before regulatory commissions in Delaware, the District of Columbia, Maryland, Ohio, and Rhode Island. Mr. Blazunas has also testified before the Federal Energy Regulatory Commission. Mr. Blazunas earned a B.A. and M.A. in Economics from the University of Dayton and the University of Akron, respectively. He has also taught undergraduate and graduate economics at the University of Akron and Cuyahoga Community College.

## PROFESSIONAL HISTORY

**Concentric Energy Advisors, Inc.**
Vice President (January 2026 – Present)
Assistant Vice President (January 2024 – December 2025)
Senior Project Manager (January 2023 - December 2023)
Project Manager (October 2021 - December 2022)

- Currently serve as the project manager and expert witness for a long-term staff augmentation engagement with Narragansett Electric Company ("NECO", also known as Rhode Island Energy) following its acquisition by PPL from National Grid. Staff augmentation services include the provision of expert witness testimony and analyst support in the litigation of gas and electric rate mechanism proceedings, the execution of both internal and external monthly reporting, the development of written processes and procedures, and the training of new personnel.
- Executes projects and initiatives related to cost of service and rate design and, where appropriate, serves as an expert witness in regulatory proceedings.
- A recent engagement included the provision of expert witness testimony with respect to rate design in a multi-year rate plan application for an electric utility in Maryland.
- Manages all phases of assigned projects with teams of senior staff and supporting analysts across multiple offices.

**Pepco (Exelon Corp.), Washington, D.C.**
Manager of Rate Administration (November 2018 – January 2021)
Senior Rate Analyst (July 2017 – November 2018)

- Managed a team of four rate analysts responsible for the cost of service and rate design functions with respect to Pepco's base distribution rates.
- Served as the rate design witness for Pepco's Maryland and District of Columbia base distribution rate case and multi-year rate plan proceedings, with a focus on revenue allocation, rate design, and decoupling in both traditional and non-traditional contexts.
- Served as the rate design and cost recovery witness for several of Exelon's Pepco Holdings Inc. ("PHI") jurisdictions with respect to transportation electrification.
- Oversaw the development of self-contained cost-of-service ("COS") and rate design Microsoft Excel models for use in regulatory proceedings.
- Guided the creation of concise and well-written processes and procedures as it relates to the development of base distribution rates, numerous distribution riders, and transmission retail rates.
- Directed the development of internal project plan templates for use in executing initiatives related to the implementation of traditional and innovative rates.
- Supervised the development of internal documents to direct Pepco's policy positions on a range of issues in work group settings with a diverse set of external stakeholders (primarily, the Maryland Public Service Commission Public Conference 44 Rate Design Working Group and the District of Columbia Public Service Commission Rate Design Working Group).

**First Energy Corp., Akron, OH**
State Regulatory Analyst (January 2012 – June 2017)

- Served as the lead analyst for the FirstEnergy Ohio operating companies' Delivery Capital Recovery Rider ("Rider DCR"). Duties included the preparation of a detailed quarterly filing with the Public Utilities Commission of Ohio ("PUCO") that requires complex revenue requirement calculations, extensive intra-company communication and collaboration in the development of financial inputs, month-to-month analysis, and participation in an annual audit conducted by an outside consultant on behalf of the PUCO.
- Duties also included (a) the role of Rates and Regulatory Affairs Department point of contact for internal customers in relation to the application of The Cleveland Electric Illuminating Company's and The Toledo Edison Company's tariffs and (b) participation in various state regulatory proceedings, including testifying in front of the PUCO.

**Cuyahoga Community College, Highland Hills, OH**
Adjunct Faculty (Hybrid) (January 2022 – May 2022)

- Courses Taught: Principles of Microeconomics (Undergraduate)

**University of Akron, Akron, OH**
Assistant Lecturer (In-Person) (September 2023 – Present)

- Courses Taught: Introduction to Economic Analysis (Undergraduate); Economic Decision Making for Business (Graduate); Regulatory Economics (Undergraduate/Graduate)

Associate Lecturer (Online) (January 2018 – May 2018)

- Courses Taught: Survey of Basic Economics (Undergraduate)

Associate Lecturer (In-Person) (August 2012 – May 2017)

- Courses Taught: Principles of Microeconomics and Principles of Macroeconomics (Undergraduate)

## EDUCATION

**University of Akron (Akron, Ohio), December 2011**
Master of Arts, Economics

**University of Dayton (Dayton, Ohio), May 2009**
Bachelor of Arts, Economics, Summa Cum Laude

## CONTINUED EDUCATION

**Utility Accounting and Finance Seminar, January 2018**
Financial Accounting Institute, Washington, D.C.

**Morgan Stanley Investment Banking Client Training Program, April 2016**
Training the Street, New York City, NY

**Edison Electric Institute Advanced Ratemaking Course, August 2013**
Edison Electric Institute, Madison, WI

| SPONSOR | DATE | CASE/APPLICANT | DOCKET | SUBJECT |
|---|---|---|---|---|
| **Federal Energy Regulatory Commission** | | | | |
| PJM Transmission Owners | 2026 | PJM Transmission Owners | Docket No. EL25-49 | Rate Design |
| **Delaware Public Service Commission** | | | | |
| Delmarva Power and Light Company | 2018 | Delmarva Power and Light Company | Docket No. 17-1094 | Rate Design and Cost Recovery (Transportation Electrification) |
| **Public Service Commission of the District of Columbia** | | | | |
| Potomac Electric Power Company | 2019 | Potomac Electric Power Company | Formal Case No. 1156 | Rate Design (Multi-Year Rate Plan) |
| Potomac Electric Power Company | 2019 | Potomac Electric Power Company | Formal Case No. 1145/1159 | Rate Design and Cost Recovery (Undergrounding Application) |
| Potomac Electric Power Company | 2018 | Potomac Electric Power Company | Formal Case No. 1130 | Rate Design and Cost Recovery (Transportation Electrification) |
| **Maryland Public Service Commission** | | | | |
| Potomac Electric Power Company | 2025 | Potomac Electric Power Company | Case No. 9820 | Rate Design (Fully Forecasted Test Year) |
| Potomac Electric Power Company | 2023 | Potomac Electric Power Company | Case No. 9702 | Rate Design (Multi-Year Rate Plan) |
| Delmarva Power and Light Company | 2022 | Delmarva Power and Light Company | Case No. 9681 | Rate Design (Multi-Year Rate Plan) |
| Potomac Electric Power Company | 2020 | Potomac Electric Power Company | Case No. 9655 | Rate Design (Multi-Year Rate Plan) |
| Potomac Electric Power Company | 2019 | Potomac Electric Power Company | Case No. 9602 | Rate Design (Traditional Rate Case) |
| Potomac Electric Power Company | 2018 | Potomac Electric Power Company | Case No. 9472 | Rate Design (Traditional Rate Case) |
| **Public Utilities Commission of Ohio** | | | | |
| The Cleveland Electric Illuminating Company | 2017 | The Cleveland Electric Illuminating Company | Case No. 16-2213-EL-CSS | Customer Complaint Case |
| The Toledo Edison Company | 2014 | The Toledo Edison Company | Case No. 13-2145-EL-CSS | Customer Complaint Case |
| **Rhode Island Public Utilities Commission** | | | | |
| Rhode Island Energy | 2025 | Rhode Island Energy | Docket No. 25-45-GE | Rate Design (General Rate Case) |
| Rhode Island Energy | 2025 | Rhode Island Energy | Docket No. 25-23-REG | Rate Design and Cost Recovery (Renewable Energy Program) |
| Rhode Island Energy | 2025 | Rhode Island Energy | Docket No. 25-04-REG | Rate Design and Cost Recovery (Annual Retail Rate Filing) |
| Rhode Island Energy | 2024 | Rhode Island Energy | Docket No. 24-48-REG | Rate Design and Cost Recovery (Renewable Energy Program) |
| Rhode Island Energy | 2024 | Rhode Island Energy | Docket No. 24-29-NG | Rate Design and Cost Recovery (Distribution Adjustment Charge and Gas Cost Recovery) |
| Rhode Island Energy | 2024 | Rhode Island Energy | Docket No. 23-45-EL | Rate Design and Cost Recovery (Renewable Resource Rider) |

| SPONSOR | DATE | CASE/APPLICANT | DOCKET | SUBJECT |
|---|---|---|---|---|
| Rhode Island Energy | 2024 | Rhode Island Energy | Docket No. 24-18-EL | Rate Design and Cost Recovery (Electric Revenue Decoupling Mechanism) |
| Rhode Island Energy | 2024 | Rhode Island Energy | Docket No. 24-17-EL | Rate Design and Cost Recovery (Residential Assistance Recovery Filing) |
| Rhode Island Energy | 2024 | Rhode Island Energy | Docket No. 24-07-EL | Rate Design and Cost Recovery (Annual Retail Rate Filing) |
| Rhode Island Energy | 2023 | Rhode Island Energy | Docket No. 23-05-EL | Tariff Advice (Net Metering) |
| Rhode Island Energy | 2023 | Rhode Island Energy | Docket No. 23-23-NG | Rate Design and Cost Recovery (Distribution Adjustment Charge and Gas Cost Recovery) |
| Rhode Island Energy | 2023 | Rhode Island Energy | Docket No. 23-24-REG | Rate Design and Cost Recovery (Renewable Energy Program) |
| Rhode Island Energy | 2023 | Rhode Island Energy | Docket No. 23-03-EL | Rate Design and Cost Recovery (Annual Retail Rate Filing) |
| Rhode Island Energy | 2022 | Rhode Island Energy | Docket No. 22-04-REG | Rate Design and Cost Recovery (Renewable Energy Program) |
| Rhode Island Energy | 2022 | Rhode Island Energy | Docket No. 22-13-NG | Rate Design and Cost Recovery (Distribution Adjustment Charge) |
| Rhode Island Energy | 2022 | Rhode Island Energy | Docket No. 5098 | Rate Design (Rider Reconciliation) |
| Rhode Island Energy | 2022 | Rhode Island Energy | Docket No. 22-20-NG | Rate Design and Cost Recovery (Gas Cost Recovery) |
| Rhode Island Energy | 2022 | Rhode Island Energy | Docket No. 22-54-NG | Rate Design and Cost Recovery (Infrastructure, Safety, and Reliability Program) |
| Rhode Island Energy | 2022 | Rhode Island Energy | Docket No. 22-53-EL | Rate Design and Cost Recovery (Infrastructure, Safety, and Reliability Program) |

## HANHAN HAMMER
SENIOR PROJECT MANAGER

Ms. Hammer is a recognized expert in the energy industry with over 17 years of experience in utility regulation and ISO/RTO operation, planning, and markets. At Concentric, she advises utilities, developers, grid operators, and regulators on complex regulatory, commercial, and market issues, including large load tariffs, transmission ratemaking and cost allocation, resource and transmission planning, compliance with FERC orders, and wholesale market strategies. Ms. Hammer has provided expert testimony before the Federal Energy Regulatory Commission and New Hampshire Public Utilities Commission. Her work has helped clients secure critical regulatory approvals, optimize capital investments, and unlock new revenue opportunities.

### EXPERTISE & KEY SKILLS

- **Energy Industry Expertise** – 17+ years of experience in ISO/RTO markets and stakeholder process, utility regulation, transmission ratemaking, wholesale and retail tariff design, market revenue forecasting, resource and transmission planning, and regulatory compliance.
- **Regulatory Strategy & Testimony** – Extensive experience preparing tariff filings, provided expert witness testimony, and advising clients through FERC and state regulatory proceedings.
- **Wholesale Power Markets** – Led design of market rules for DERs, energy storage, and ancillary services; skilled in market power analysis, revenue forecasting, and locational marginal price formation.
- **Strategic Communication** – Effective at translating complex regulatory and technical issues into clear insights for executives, regulators, policymakers, and industry forums.
- **Project & Team Leadership** – Strong record of managing cross-functional teams, guiding complex initiatives under fixed budgets, and delivering results. Directed cross-functional project teams, ensuring projects were completed on scope, budget, and schedule; presented findings to executives and regulators to support high-stakes decision-making.

### PROFESSIONAL HISTORY

**Concentric Energy Advisors (2024 – Present)**
Senior Project Manager

- Shaped client regulatory strategy by supporting filings and expert testimony on large load tariffs, transmission ratemaking, ancillary service rates in merger cases, and market power analyses, directly informing multimillion-dollar business decisions.
- Advised utilities and developers on compliance and opportunity capture under evolving federal and state rules (e.g., Order 2222, transmission–distribution coordination, data center interconnection/colocation), enabling clients to position early for regulatory and market advantages.



- Delivered market and revenue analyses that optimized generation and storage investment decisions, improving projected returns and clarifying participation strategies across wholesale and retail programs.
- Recommended ISO market design enhancements that incentivized preferred generation resources, influencing stakeholder discussions and policy direction.

**ISO New England (2014-2024)**
Principal/Lead Analyst

- Designed wholesale market rules enabling DERs, storage, and renewables to participate; developed ancillary service products and reliability solutions.
- Prepared tariff filings, provided expert testimony, and presented initiatives to regulators, legislators, and stakeholders.
- Advised project teams and senior management on policy trends and market design opportunities.

**Southwest Power Pool (2011-2014)**
Senior Market Analyst

- Evaluated nodal pricing and transmission congestion to support power trading hubs; authored State of the Market reports and presented to stakeholders and FERC.
- Developed analytic dashboards to monitor market performance, identify trends, and brief executives and boards.

**Potomac Economics (2009-2011)**
Senior Market Monitor

- Monitored the Midcontinent ISO (MISO) wholesale markets to detect anti-competitive behavior; prepared FERC referrals and supported regulatory enforcement.
- Advised investor-owned utilities on operational efficiency and market performance to inform strategic decisions.

## EDUCATION

**University of Arkansas**
Master of Business Administration

**Western Illinois University**
Master of Art in Economics

**Anhui University of Technology**
Bachler of Art in Economics and International Trade

| SPONSOR | DATE | CASE/APPLICANT | DOCKET NO. | SUBJECT |
|---|---|---|---|---|
| **Federal Energy Regulatory Commission** | | | | |
| ISO New England Inc. and New England Power Pool | 2016 | ISO New England Inc. and New England Power Pool | ER16-1838-000 | Real-Time Energy Market and Real-Time reserves |
| ISO New England Inc. | 2016 | ISO New England Inc. | ER17-680-000 | Net Commitment Period Compensation ("NCPC") credit rules |
| ISO New England Inc. and New England Power Pool | 2017 | ISO New England Inc. and New England Power Pool | ER17-1706-000 | Market Rule 1 Revisions to Permit Use of Five-Minute Revenue Quality Meter Data in Energy Market Settlement |
| ISO New England Inc. and New England Power Pool | 2018 | ISO New England Inc. and New England Power Pool | ER18-897-000 | The designation and settlement of Operating Reserves in the Real-Time Energy Market |
| PJM Transmission Owners | 2026 | PJM Transmission Owners | EL25-49 | Large load co-location arrangement in PJM |
| **Superior Court of the State of California County of Los Angeles** | | | | |
| Los Angeles Department of Water and Power ("LADWP") | 2025 | Class Counsel Kabateck LLP | Lead Case No., BC577267 | LADWP key performance Indicators compliance |
| **New Hampshire Public Utilities Commission** | | | | |
| Liberty Utilities (Granite State Electric) | 2026 | Liberty Utilities (Granite State Electric) | DE 25-030 | Default Service Solicitation |

**(I) PJM Zonal 15-Year Annualized Peak Load Growth Rates**

| | (a) | (b) | (c) |
|---|---|---|---|
| | **Zone** | **Summer** | **Winter** |
| **(1)** | AE | 0.5% | 1.0% |
| **(2)** | BGE | 0.5% | 0.7% |
| **(3)** | DPL | 0.3% | 0.2% |
| **(4)** | JCPL | 1.4% | 2.2% |
| **(5)** | METED | 1.7% | 1.8% |
| **(6)** | PECO | 1.5% | 1.9% |
| **(7)** | PENLC | 0.4% | 0.4% |
| **(8)** | PEPCO | 1.7% | 1.8% |
| **(9)** | PL | 4.4% | 4.4% |
| **(10)** | PS | 2.1% | 3.1% |
| **(11)** | RECO | 0.4% | 1.2% |
| **(12)** | UGI | 0.2% | 0.1% |
| **(13)** | AEP | 4.1% | 4.4% |
| **(14)** | APS | 2.3% | 2.2% |
| **(15)** | ATSI | 1.4% | 1.8% |
| **(16)** | COMED | 2.6% | 3.8% |
| **(17)** | DAYTON | 3.6% | 3.9% |
| **(18)** | DEOK | 0.8% | 0.8% |
| **(19)** | DLCO | 0.8% | 1.0% |
| **(20)** | EKPC | 0.6% | 0.3% |
| **(21)** | DOM | 4.9% | 4.7% |
| **(22)** | **PJM RTO** | **2.9%** | **3.3%** |
| **(23)** | **Minimum** | **0.2%** | **0.1%** |
| **(24)** | **Maximum** | **4.9%** | **4.7%** |
| **(25)** | **Minimum** | **UGI** | **UGI** |
| **(26)** | **Maximum** | **DOM** | **DOM** |

**Source: Pages 9 and 14-34 of *2026 PJM Load Forecast Report* (January 14, 2026).**

**(II) PJM: Existing Capacity by Zone (MW)**

| | (a) | (b) | (c) | (d) = (c) - (b) | (e) = (d) ÷ (b) |
|---|---|---|---|---|---|
| | **Zone** | **2011** | **Q3 2026** | **Difference** | **% Difference** |
| **(1)** | AE | 1,990 | 1,274 | (716) | -36.0% |
| **(2)** | BGE | 5,554 | 4,288 | (1,266) | -22.8% |
| **(3)** | DPL | 4,819 | 5,038 | 219 | 4.5% |
| **(4)** | JCPL | 3,980 | 3,629 | (351) | -8.8% |
| **(5)** | METED | 4,167 | 3,650 | (517) | -12.4% |
| **(6)** | OVEC | - | 2,389 | 2,389 | - |
| **(7)** | PECO | 11,743 | 11,978 | 235 | 2.0% |
| **(8)** | PENLC | 8,366 | 9,665 | 1,299 | 15.5% |
| **(9)** | PEPCO | 6,248 | 4,025 | (2,223) | -35.6% |
| **(10)** | PL | 11,274 | 14,590 | 3,316 | 29.4% |
| **(11)** | PS | 11,534 | 9,118 | (2,416) | -20.9% |
| **(12)** | AEP | 34,938 | 38,844 | 3,906 | 11.2% |
| **(13)** | APS | 11,702 | 11,109 | (593) | -5.1% |
| **(14)** | ATSI | 12,530 | 10,645 | (1,885) | -15.0% |
| **(15)** | COMED | 28,183 | 30,464 | 2,281 | 8.1% |
| **(16)** | DAYTON | 5,785 | 1,674 | (4,111) | -71.1% |
| **(17)** | DEOK | - | 2,892 | 2,892 | - |
| **(18)** | DLCO | 3,286 | 2,173 | (1,113) | -33.9% |
| **(19)** | EKPC | - | 2,802 | 2,802 | - |
| **(20)** | DOM | 23,383 | 32,241 | 8,858 | 37.9% |
| **(21)** | External | 8,943 | 3,241 | (5,702) | -63.8% |
| **(22)** | **PJM RTO** | **198,425** | **205,730** | **7,305** | **3.7%** |
| **(23)** | **Minimum** | **1,990** | **1,274** | **(5,702)** | **-71.1%** |
| **(24)** | **Maximum** | **34,938** | **38,844** | **8,858** | **37.9%** |
| **(25)** | **Minimum** | **AE** | **AE** | **External** | **DAYTON** |
| **(26)** | **Maximum** | **AEP** | **AEP** | **DOM** | **DOM** |

**Sources:**

**(b) See the *2011 State of the Market Report for PJM* , Table 11-8 (March 15, 2012).**

**(c)**

**See the *2026 Quarterly State of the Market Report for PJM: January through September* , Table 12-1 (November 12, 2026).**