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VIA ELECTRONIC FILING

Hon. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

**Re: PJM Transmission Owners
Revisions to the PJM Interconnection, L.L.C. Open Access Transmission Tariff, Docket No. ER19-2105-000**

Dear Secretary Bose:

Pursuant to Section 205 of the Federal Power Act ("FPA"), Section 35.13 of the Rules and Regulations of the Federal Energy Regulatory Commission ("Commission") and Section 9.1(a) of the PJM Interconnection, L.L.C. ("PJM") Open Access Transmission Tariff ("Tariff"), the PJM Transmission Owners, acting through the PJM Consolidated Transmission Owners Agreement ("CTOA"),[1] respectfully submit for filing revisions to Schedule 7, Schedule 8, and Attachment H-A of the Tariff, along with a new definition and several technical corrections to the Tariff (together, "Proposed Revisions").[2] The Proposed Revisions will replace the existing stated rates for both Point-to-Point Transmission Service

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[1] The amendments to the PJM Tariff described herein have been authorized pursuant to the individual and weighted voting requirements in Section 8.5 of the CTOA. In addition, on December 3, 2018, pursuant to Section 9.1(b) of the PJM Tariff, the PJM Transmission Owners initiated consultation with PJM and with the PJM Members Committee by providing notice of the modifications proposed in this filing, together with a draft of those modifications and an illustrative example based on then current PJM data. That notice requested the submission of written comments by January 7, 2018. The PJM Transmission Owners also held an open stakeholder conference call on January 30, 2019 to answer questions and discuss the comments received.

[2] Pursuant to Order No. 714, this filing is submitted by PJM on behalf of the PJM Transmission Owners as part of an XML filing package that conforms with the Commission's regulations. PJM has agreed to make all filings on behalf of the PJM Transmission Owners in order to retain administrative control over the PJM Tariff. Thus, the PJM Transmission Owners have requested PJM submit this Agreement in the eTariff system as part of PJM's electronic Intra PJM Tariff.

to the Border of PJM and Network Integration Transmission Service ("NITS") for Non-Zone Network Load with a methodology for updating these rates on an annual basis beginning with the calendar year 2020. The PJM Transmission Owners request that the proposed tariff sheets be made effective 60 days from the date of this filing.

I. INTRODUCTION

The PJM Transmission Owners are revising the PJM Tariff to update the rates in Schedules 7 and 8 for Firm and Non-firm Point-to-Point Transmission Service to the Border of PJM ("Border Rate") and the Annual Transmission Rate in Attachment H-A for NITS to Non-Zone Network Load ("Non-Zone Service Rate"). As discussed in detail below, these rates have not been revised since 2004, despite significant growth in the PJM transmission infrastructure and corresponding increases in Transmission Owner revenue requirements for providing transmission service,[3] as well as the addition of new transmission owners to the PJM Region. Taken together, the Proposed Revisions implement a mechanism that will allow PJM to update the Border and Non-Zone Service Rates on an annual basis to more accurately reflect the composite or average cost of providing such service in the PJM Region.

Importantly, the Proposed Revisions will end the cross-subsidy that Zonal NITS customers in PJM have been providing to Border Rate and Non-Zone Service Rate customers. Revenue from customers taking service under each of these rates is either directly or eventually credited back to Zonal NITS customers.[4] Therefore, because Border Rate and Non-Zone Service Rate customers' rates do not reflect the true costs of providing them transmission service, Zonal NITS customers' costs are higher than they would otherwise be; *i.e.,* the Zonal NITS customers are bearing the costs associated with serving Border Rate and Non-Zone Service Rate customers that are more appropriately recovered from Border Rate and Non-Zone Service Rate customers. The Proposed Revisions would eliminate this cross-subsidization, ensuring that the costs of serving Border Rate and Non-

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[3] The annual transmission required revenue requirement is often referred to by the term, "ATRR." However, in PJM most Transmission Owners using formula rates base their revenue requirement on a partial or fully projected revenue requirement, which is later trued-up, often referred to as "PTRR." The distinction between ATRR and PTRR is not material to the Proposed Revisions, since, as explained below, the Proposed Revisions employ the revenue requirement that each Transmission Owner uses to establish transmission rates.

[4] For Transmission Owners with formula rates, revenue from Firm Point-to-Point Border Rate and Non-Zone Service is either included as a credit that reduces a Transmission Owner's revenue requirement for providing NITS, or is included as a credit on customers' PJM invoices. In either case, such revenue directly reduces Zonal NITS customers' transmission costs. For Transmission Owners with stated rates, this revenue is considered in establishing rates under Section 205 or Section 206 of the FPA. Under Section 27A of the PJM Tariff, revenue from Non-Firm Point-to-Point Transmission Service is credited to NITS customers and Firm Point-to-Point Transmission Service customers in proportion to their Demand Charges.

Zone Service Rate customers are charged to them on an ongoing basis as those costs change over time.

The Proposed Revisions do not increase the *total* cost of providing transmission service in PJM. Rather, while the Proposed Revisions result in a rate increase for customers taking service under the Border Rate or Non-Zone Service Rate, that increase is offset by a rate decrease for Zonal NITS customers and establish a methodology to prevent the cross-subsidy of Border Rate or Non-Zone Service Rate customers from re-emerging in the future.

II. BACKGROUND

PJM offers Firm and Non-Firm Point-to-Point Transmission Service to each Zone in PJM and to the Border of the PJM Region under Part II of the PJM Tariff.[5] The rates for Firm Point-to-Point Service are set forth in Schedule 7 to the PJM Tariff, and the rates for Non-Firm Point-to-Point Service are included in Schedule 8. The rates for Firm and Non-Firm Point-to-Point Transmission Service to a Zone are set by the Transmission Owners in that Zone.[6] In addition to Zonal NITS service offered under Part III of the PJM Tariff, PJM also offers NITS service to Non-Zone Network Load, *i.e*. network load outside of the PJM Region that is served from within PJM ("Non-Zone Service").[7] The rate for Non-Zone Service is set forth in Attachment H-A to the PJM Tariff. Because neither the Border Rate nor the Non-Zone Service Rate depends on the source or sink point,[8] both the Border Rate and the Non-Zone Service Rate are intended to reflect the composite or average cost of service in the PJM Region.

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[5] The rate for service to the Border of PJM applies as well to service *through* PJM, *i.e.*, transmission service originating in a neighboring region, traveling through PJM, and exiting PJM to a different neighboring region. Such a rate is often referred to as the "Regional Through and Out Rate," or the "RTOR."

[6] Zonal delivery rates are either stated rates or linked to the Transmission Owner's formula rate set forth in Attachment H of the PJM Tariff. With the exception of several ministerial corrections discussed below in Section III.B.3, these Zonal delivery rates are not addressed by this filing.

[7] *See* PJM Tariff at Definitions.

[8] There is no charge, however, under PJM, Schedules 7 and 8 for points of delivery within the Midcontinent Independent System Operator, Inc. ("MISO") Region. *See Midwest Indep. Transmission Sys. Operator, Inc.,* 109 FERC ¶ 61,168 at P 80 (2004) ("MISO Order"). The Proposed Revisions do not include any proposal to change the exemption for deliveries to MISO.

A. The Border Rate – Schedules 7 and 8 of the PJM Tariff

1. The Existing Border Rate

The original Border Rate was approved as part of the Commission's November 25, 1997 Order approving PJM's restructuring as an independent system operator and conditionally accepting the PJM Tariff.[9] As explained in the November 1997 Order, the Border Rate is a single point-to-point rate for all deliveries to the border of the PJM Region.[10] Unlike NITS, where a transmission service customer initially paid only its load ratio share of the costs of transmission facilities within the Zone in which its load was located, the Border Rate was based on the composite costs of all Transmission Owners within the PJM Region, since the Border Rate remains the same regardless of the sink and source points for Border Rate service.[11] The initial Border Rate and all subsequent modifications were calculated based on the sum of the revenue requirements for all PJM Transmission Owners, which are stated in Attachment H to the PJM Tariff ("Attachment H").[12] This sum was divided by the sum of the Zonal average monthly coincident peak loads ("12-CP") to yield the Border Rate for annual point-to-point transmission service.[13] The rates for monthly, weekly, or daily service were then separately determined by further dividing the yearly charge or monthly charge by the applicable denominator.[14] However, as discussed in detail below, notwithstanding the Commission's approval of the methodology used to develop the Border Rate, the current Border Rate is a stated rate that does not update automatically. Because the Border Rate has not been updated since 2004, it does not reflect the revenue requirements of the Transmission Owners that have joined PJM since that time, nor does it reflect the changes in the revenue requirements of those Transmission Owners who were PJM members as of that date.

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[9] *Pennsylvania-New Jersey-Maryland Interconnection*, *et al.*, 81 FERC ¶ 61,257 (1997) ("November 1997 Order").

[10] November 1997 Order at 62,240.

[11] November 1997 Order at n. 76.

[12] *See* PJM Tariff, Attachment H. Each Transmission Owner in PJM recovering its revenue requirement under the PJM Tariff maintains a rate for transmission service and associated protocols, if applicable, in Attachment H. At the time that the Border Rate was last updated, all of the then PJM Transmission Owners had stated rates. However, over time, the majority of Transmission Owners have converted from stated rates to formula rates.

[13] This calculation has occasionally been stated as the load-weighted average Zonal rate, which yields an identical result.

[14] Thus, the Border Rate for monthly service is the annual rate divided by 12. The weekly rate is the annual rate divided by 52. The Border Rate for on-peak daily service is the weekly rate divided by 5, while the daily service off-peak rate is the weekly rate divided by 7.

The Border Rate is included in the "Summary of Charges" for Firm Point-to-Point Transmission Service in Section 1 of Schedule 7, and for Non-Firm Point-to-Point Transmission Service in Section 1 of Schedule 8. In addition to the charges for Border Rate service in Section 1 of Schedules 7 and 8, both Schedules provide that transmission customers are also subject to Congestion, Losses and Capacity Export charges,[15] charges for Other Supporting Fees and Taxes,[16] and Transmission Enhancement Charges ("TECs").[17] Additionally, under an agreement approved by the Commission resolving issues arising out of the integration of the American Electric Power Companies ("AEP"), Commonwealth Edison ("ComEd"), and the Dayton Power & Light Company ("Dayton") into PJM, as noted above, Schedules 7 and 8 provide that there is no charge for points of delivery within the MISO Region.[18] Although the rates for service are identical, Schedule 8 also includes rates for Hourly On-Peak and Hourly Off-Peak service to the PJM Border.[19] However, notwithstanding the rates listed in Schedule 8, PJM currently charges a uniform discounted rate for Non-Firm Point-to-Point Service to the Border of $0.67 per MWH.[20]

As noted above, the Border Rate, like the original Zonal point-to-point and NITS rates, is a stated rate that currently does not update automatically to reflect changes to the aggregate cost of transmission service in PJM. Historically, the Border Rate was updated regularly according to the methodology approved in the November 1997 Order. Each time a Transmission Owner filed for a new revenue requirement, or a new Transmission Owner joined PJM, the filing generally included an update to the Border Rate to reflect the new or additional cost and aggregate 12-CP data.[21] However, the last change to the Border Rate

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[15] Schedule 7 § 4; Schedule 8 § 5.

[16] Schedule 7 § 5; Schedule 8 § 6.

[17] Schedule 7 § 7; Schedule 8 § 7. *See also* PJM Tariff § 25. Section 25, as well as Schedules 7 and 8 themselves, state that customers taking service under Schedules 7 and 8 may also be subject to TECs as provided in Schedule 12 to the PJM Tariff.

[18] *See, supra,* n. 8.

[19] The rate for on-peak hourly service is the annual rate divided by 4,160, while the rate for off-peak service is the annual rate divided by 8,760.

[20] PJM Manual 27, § 6.1.2. The Proposed Revisions do not include any proposal to change the standard discounted rate for Non-Firm Point-to-Point Service to the Border. Thus, the revision to the Border Rate under Schedule 8 should be viewed as a maximum rate that could be charged in the event that the existing discount is changed.

[21] When a new Transmission Owner joined PJM, both its revenue requirement and Zonal 12-CP were added to those of the existing PJM Transmission Owners to calculate the updated Border Rate.

occurred over 14 years ago when AEP and Dayton joined PJM.[22] As part of the settlement resolving issues relating to the integration of AEP, Dayton and ComEd, the PJM Transmission Owners agreed to freeze the Border Rate at the then existing rate of $1.574 per kW-month (18.888 per kW-year) through November 30, 2004.[23] Although the Border Rate freeze ended on November 30, 2004, the Border Rate was not updated to reflect changed circumstances, such as the addition of new PJM Transmission Owners or the growth and enhancement of the PJM Transmission System. Thus, the Proposed Revisions constitute the first update to the Border Rate since 2004.

2. Treatment of Transmission Enhancement Charges under Schedules 7 and 8

Under Schedules 7 and 8 and Schedule 12 of the PJM Tariff ("Schedule 12"),[24] customers taking service under the Border Rate are deemed to be "Responsible Customers" as defined in Schedule 12, and are therefore required to pay their respective share of all TECs, *i.e.* charges for transmission facilities constructed pursuant to the PJM's Regional Transmission Expansion Plan ("RTEP") assessed under Schedule 12.[25] Pursuant to Schedules 7 and 8, these TECs should be charged to Border Rate customers along with the charges for Border Rate service specified in Section 1 of each Schedule. However, it is not apparent that customers taking Border Rate service have been consistently charged TECs, perhaps due to the ambiguity as to which TECs applied to Border Rate service. To the extent that Border Rate customers have not been charged for TECs, the additional costs of these TECs have been borne by NITS customers, who receive Schedule 7 and Schedule 8 revenues as a credit either on their PJM transmission invoices or in the form of a reduction of their NITS rate.[26] Recently, in Docket No. EL18-54-000, the PJM Transmission Owners informed the Commission that they would submit a filing clarifying how TECs apply to Border Rate service.[27] As discussed below, the Proposed Revisions clarify this issue by including TECs

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[22] *See PJM Interconnection, L.L.C., AEP East Operating Companies, and The Dayton Power & Light Company,* Docket No. ER04-1068 (filed July 30, 2004).

[23] *Midwest Indep. Transmission Sys. Operator, Inc.*, 106 FERC 61,262 at P 8 (2004).

[24] PJM Tariff, Schedule 12.

[25] *See* Schedule 7 § 7; Schedule 8 § 7; Schedule 12 §§ (b)(viii), (c)(5); *see also* PJM Tariff § 3E ("The Transmission Provider shall collect from designated customers using Point-to-Point Transmission Service and Network Integration Transmission Service the charges of Transmission Owners related to the costs of Required Transmission Enhancements under Tariff, Schedule 12 'Transmission Enhancement Charges'.")

[26] *See* note 4, *supra.*

[27] *New Jersey Board of Public Utilities v. PJM Interconnection, L.L.C., et al.*, Comments of the PJM Transmission Owners, Docket No. EL18-54-000 at n. 37 (filed Feb. 23, 2018).

in the calculation of the Transmission Owners' aggregate revenue requirements for the purposes of calculating the Border Rate, thus removing the need for PJM to include TECs as a separate line item charge for Border Rate service.

B. <u>Attachment H-A - Service to Non-Zone Network Load</u>

The Non-Zone Network Service Rate in Attachment H-A applies to NITS service to Non-Zone Network Load. Accordingly, Non-Zone Network Service essentially provides the same service as Point-to-Point service to the Border of PJM. It allows the customer to utilize any part of the PJM Transmission System to deliver power to the Border of PJM, from which it then moves over non-PJM facilities to the customer's load.

Historically, the PJM Transmission Owners updated the Non-Zone Service Rate whenever a Transmission Owner filed a new NITS rate and revenue requirement or when a new Transmission Owner joined PJM.[28] However, as in the case of the Border Rate, the last update to the Non-Zone Service Rate occurred in 2004, when Duquesne joined PJM.[29] Like the Border Rate, the Non-Zone Service Rate was initially calculated based on the sum of the Zonal 12-CP loads. However, the Commission subsequently ruled that the rate for NITS (of which the Non-Zone Service Rate is a part) must be calculated on the same basis as the distribution of Firm Transmission Rights in PJM.[30] Accordingly, comparable to the Zonal NITS rates, the Non-Zone Service Rate is now based on the sum of the Zonal peak loads in the PJM Region.

While no customers currently take service under the Non-Zone Service Rate, it remains a part of the PJM Tariff and is available to applicable customers. As in the case of the Border Rate, the Proposed Revisions update the Non-Zone Service Rate to ensure that it accurately reflects the overall cost of transmission service in PJM on a going-forward basis and is not subsidized by Zonal NITS customers.

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[28] *See, e.g., PJM Interconnection, L.L.C. and Duquesne Light Co.,* Docket No. ER05-85-000 (filed Oct. 28, 2004).

[29] *Id.*

[30] *Pennsylvania-New Jersey-Maryland Interconnection, et al.,* 82 FERC ¶ 61,068 at 61,237 (1998); *see Pennsylvania-New Jersey-Maryland Interconnection, et al.,* 92 FERC ¶ 61,282 at 61,957 (2000).

III. PROPOSED REVISIONS

A. Overview of the Changes

As explained in greater detail below, the PJM Transmission Owners propose revising the Border Rate and Non-Zone Service Rate to ensure that both accurately reflect the cost of providing a service in PJM that is provided on a regional, rather than a Zonal basis. The Proposed Revisions will require that customers taking these services pay their fair share of the costs of the PJM Transmission System rather than being subsidized by NITS customers. Importantly, the PJM Transmission Owners are not proposing significant changes to the Commission-approved methodology used to determine these rates. Rather, the Proposed Revisions would apply that methodology on an ongoing, annual basis to update the Border Rate and Non-Zone Service Rate.

Under the proposed methodology, PJM will calculate the "Border Yearly Charge" ("BYC"), which is the basis for the kW-year charge for Border Rate service (and shorter firm service reservations) and MW-year charge for Non-Zone Service. The BYC will be the sum of the revenue requirements of each PJM Transmission Owner, as listed in Attachment H (referred to as the "Sum of Attachment H Revenue Requirements" or "SHRR"), divided by the sum of all Zonal peak loads (referred to as "SZPL"). While some PJM Transmission Owners still maintain stated rates, the majority of PJM Transmission Owners now have formula rates. As these formula rates update annually, and as revised stated rates are approved by the Commission, the BYC will update as well, ensuring it more accurately reflects the cost of the region-wide facilities available to support Border Rate service and Non-Zone Service. Additionally, by changing the denominator of the Border Rate from the 12-CP sum to the sum of all Zonal peak loads, the Border Rate will be calculated using the same denominator used to calculate the NITS rate. Since the SZPL yields a larger number than the 12-CP sum, use of the Zonal peaks loads will result in a lower BYC and, in turn, a lower Border Rate than would have been established using a 12-CP denominator.[31]

Importantly, because the BYC is based on the sum of all PJM Transmission Owner revenue requirements, Border Rate customers will no longer be separately liable for TECs under Schedule 12, as these charges will already be included in the BYC.[32] This change

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[31] No change is being proposed to the continued use of a 12-CP denominator to determine Zonal Point-to-Point rates.

[32] As discussed below, the determination of BYC includes an adjustment mechanism to ensure that any TECs or other revenues that reduce a Transmission Owner's revenue requirement are added back in when calculating the SHRR.

addresses potential confusion over which TECs should apply to a Border Rate reservation that includes multiple points of delivery, and ensures that Border Rate customers pay their share of TECs in PJM.[33]

As detailed below, the principal changes necessary to implement the Proposed Revisions are found in Schedule 7, which includes the procedures for calculating and implementing the BYC annually. However, calculation and implementation of the BYC also applies to Schedule 8 and Attachment H-A, with the latter two revised to refer to the newly defined term, "Border Yearly Charge," calculated under Schedule 7.

B. <u>Revisions to Schedule 7 of the PJM Tariff</u>

1. The Border Yearly Charge – Schedule 7, § 11.

a. The Border Yearly Charge Calculation

The PJM Transmission Owners propose revising Schedule 7 to implement a methodology for determining the BYC. Importantly, this methodology will also apply to the maximum BYC under Schedule 8 and the rate for Non-Zone Service. The Proposed Revisions clarify that the rate for service under each is calculated pursuant Schedule 7.

Currently, Section 1 of Schedule 7 includes fixed dollar amounts in the "Summary of Charges" for the yearly, monthly, weekly, and daily Border Rate service.[34] As shown on Exhibit A-1, the PJM Transmission Owners are deleting the fixed dollar amounts and replacing them with the applicable references to the BYC.[35] The methodology for determining the BYC is set forth in a new Section 11 of Schedule 7. PJM will calculate the BYC pursuant to the following equation:

BYC = SHRR/SZPL

SHRR is the sum of the revenue requirements for each Transmission Owner used to calculate NITS, as set forth in Attachment H to the PJM Tariff. Additionally, as explained in Section III.B.1.a, below, Schedule 7, § 11 requires that PJM add back any applicable revenue credits when calculating certain Transmission Owner revenue requirements in order to ensure

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[33] Under Schedule 12, TECs are assigned to Zones or MTFs.

[34] *See* "Summary of Charges," Schedule 7 § 1.

[35] For example, the "Yearly Charge" for Border Rate service is now "the Rate established pursuant to Section (11)." Each of the Monthly, Weekly, and Daily charges for Border Rate service are represented as the BYC divided by the applicable denominator (*i.e.* 12 for Monthly service, 52 for Weekly service, etc.).

that the SHRR accurately reflects the complete cost of service in the PJM Region. SZPL is the sum of each Zone's annual Network Service Peak Load from the most recently completed 12-month period ending on October 31 of each year. Once calculated, PJM will then use the BYC to determine the rates for monthly, weekly, daily, and hourly service, as applicable.

b. Treatment of Formula Rate Credits

As noted above, Schedule 7, § 11 also includes a mechanism for ensuring that all revenue credits to formula rates are properly included when calculating the SHRR. Most Transmission Owners in PJM determine their revenue requirements through formula rates. However, these formula rates vary in how they treat sources of revenue other than NITS charges, such as TECs for RTEP project cost responsibility assigned to other Zones, Border Rate revenue, Attachment H-A revenue, and other revenue for transmission service not paid by NITS customers (collectively, "Revenue Credits"). Some formula rates do not factor in these Revenue Credits when calculating the revenue requirement, and instead provide these credits directly to customers paying the zonal NITS charge on their PJM invoices. In these instances, the BYC formula can use the revenue requirement used to determine the NITS rate directly without modification, as the NITS rate fully reflects the Transmission Owners' cost of service.

However, other formula rates factor in Revenue Credits when calculating the cost of service, such that the revenue requirement is reduced by the amount of the Revenue Credits prior to determining the NITS rate. For these formula rates, Schedule 7, § 11 requires that PJM increase a Transmission Owner's revenue requirement by the amount of any Revenue Credits used to reduce the NITS charge to Zonal Network customers. If these credits were not restored, there would be an under-statement of these Transmission Owner revenue requirements and, hence, the aggregate PJM transmission revenue requirement (*i.e.*, the SHRR) when calculating the BYC. Including these Revenue Credits ensures that the full composite cost of all transmission facilities available for use by Border Rate customers is properly included in the BYC.[36]

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[36] November 1997 Order at n. 76. A simple example demonstrates why restoration of Revenue Credits is necessary. Assume that a RTO has two zones. Zone A's transmission owner has a revenue requirement of $50, which includes $10 of TECs assigned to Zone B. Zone A's formula rate credits the $10 in TEC revenue from Zone B before determining the transmission owner's revenue requirement, resulting in an revenue requirement for NITS of $40 ($50 - $10 = $40). Zone B's transmission owner has a revenue requirement of $100 that includes $5 of TECs assigned to Zone A. However, Zone B's formula rate does not credit the revenue received from Zone A in determining the transmission owner's $100 revenue requirement for NITS. Rather, that revenue is credited directly to its NITS customers on their RTO bills. Under the proposed Border Rate crediting mechanism, the $10 in TECs paid by Zone B customers to Zone A's transmission owner is added back to the

Importantly, and as noted above, this adjustment only applies to Transmission Owners with formula rates that apply credits to reduce their NITS revenue requirement. Schedule 7, § 11 is clear that this mechanism is not applicable to Transmission Owners with formula rates that separately credit these revenues to customers or to Transmission Owners using stated rates.

c. Treatment of Firm Service to Merchant Transmission Facilities

Schedule 7, § 11 also includes two clarifications regarding the treatment of and charges applicable to Point-to-Point Service to Merchant Transmission Facilities ("MTFs"). First, Schedule 7, §11(G) clarifies that Point-to-Point Transmission Service under Schedules 7 and 8 to an MTF providing service to a neighboring region constitutes "service at the Border of PJM."[37]

Second, as discussed above, customers taking Border Rate service will not be separately liable for TECs because the cost of TECs will already be factored into each Transmission Owner's revenue requirement when calculating the BYC. However, MTFs holding Firm Transmission Withdrawal Rights ("FTWRs")[38] in PJM remain separately liable under the PJM Tariff for TECs associated with the FTWRs.[39] Thus, in order to prevent MTFs or their customers from being charged twice for the same TECs, Schedule 7, § 11(H) includes a credit that removes the TECs paid in connection with the MTF's FTWRs from cost of Border Rate service. Specifically, Schedule 7, § 11(H) provides that a Border Rate customer taking service to an MTF holding FTWRs shall receive a Merchant Transmission Facility Credit ("MTFC") equal to the percentage that TECs paid by the MTF represent of

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Zone A transmission owner revenue requirement before determining the total RTO revenue requirement of \$150 ((\$40 + \$10) + \$100). This is the same net total amount in NITS charges paid by Zone A and B customers. Zone A customers pay \$40 in NITS charges plus \$5 in TECs to Zone B's transmission owner (\$40 + \$5 = \$45). Zone B's customers pay \$100 in NITS charges plus \$10 in TECs to Zone A's transmission owner less \$5 in credits for TECs paid by Zone A (\$100 + \$ 10 - \$5 = \$105). This adds up to the RTO revenue requirement of \$150 (\$45 + \$105 = \$150).

[37] While it is conceivable that an MTF could offer service between two points within the PJM Region, the language in Schedule 7, § 11(G) makes clear that this provision applies to "a Merchant Transmission Facility *that provides service to a neighboring transmission system*." *See* Exhibit A-1 (emphasis added).

[38] FTWRs are the rights to schedule energy and capacity withdrawals from a Point of Interconnection of a Merchant Transmission Facility on the PJM Transmission System. Firm Transmission Withdrawal Rights are awarded only to a Merchant D.C. Transmission Facility that connects PJM with a neighboring system. *See* PJM Tariff, Definitions.

[39] *See* Schedule 12 § (b)(x)(B)(2). Under Schedule 12 of the PJM Tariff, MTFs holding FTWRs may be designated as Responsible Customers for a portion of the cost responsibility for RTEP projects.

SHRR.[40] Pursuant to Schedule 7, § 11(H), PJM will credit such customers on a monthly basis during those months that they take Point-to-Point service to the MTF under Schedule 7.[41] Importantly, this credit will only apply where MTFs hold FTWRs in PJM. There will be no credit applied where MTFs do not or no longer hold FTWRs,[42] nor does anything in this filing seek to impose TECs on MTF facilities or services.

2. Implementation of the BYC

Section 11 of Schedule 7 also establishes the process through which PJM will implement and update the BYC and associated rates on an annual basis. The PJM Transmission Owners include a detailed explanation of the implementation of the Proposed Revisions in Section III.F, below.

3. Other Ministerial Revisions

Along with the above, the Proposed Revisions include several ministerial and clean-up revisions to both Schedules 7 and 8. First, the PJM Transmission Owners propose revising the language in Schedule 7, § 1 to clarify that, consistent with existing provisions of Schedule 7 and the Commission's directives in the MISO Order, the updated Border Rate does not apply to cross-border transactions where the point of delivery is within the MISO region. Second, the PJM Transmission Owners propose deleting Schedule 7, § 6 – "Transition Revenue Neutrality Charges." This section was implemented to compensate Allegheny Power for lost through-and-out revenue at the time it joined PJM. However, the charges under this Section have long since been collected, and this Section is no longer applicable. Third, at the request of AEP, the PJM Transmission Owners propose revising the row of the table of charges in Schedules 7 and 8 setting forth the charges for Firm Point-to-Point Service with a Point of Delivery at the AEP East Zone to add a reference to Attachment H-20 as well as to Attachment H-14. Attachment H-20 sets forth the rates for the AEP Transmission Companies that are also applicable to the AEP East Zone. In addition, each of the entries in the AEP East Zone rows will be modified to refer to "Rate Pursuant to

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[40] By way of example, if the MTF is assigned and paid $50 million in TECs based on its FTWRs in a year, and the SHRR is $5 billion, the MTF would receive a credit equal to 1% of the BYC ($50 million/$5 billion).

[41] The MTFC will always be credited to the customer reserving Border Rate service. Ultimate responsibility for the cost of such Border Rate service or the TECs assigned to an MTF with FTWRs is a matter of contract between an MTF and its customers.

[42] The MTFC also applies to the maximum Border Rate under Schedule 8. However, PJM currently charges the standard discounted rate of $0.67 per MWH for Non-Firm Point-to-Point Service to the Border; accordingly, the MTFC will not apply to discounted Non-Firm Service.

Attachment H-14 and Attachment H-20" since all of the specific reservation period rates are set forth in those Attachments. Finally, the Zonal delivery rates for Rockland Electric Company in both Schedules 7 and 8 do not reflect the latest revisions accepted by the Commission.[43] The Proposed Revisions include corrections to conform to the accepted rates.

C. Revisions to Schedule 8 of the PJM Tariff

The PJM Transmission Owners propose revising Schedule 8 to specify that the maximum rate for Non-Firm Point-to-Point Transmission Service to the Border of PJM will be the BYC as calculated in Schedule 7. As shown in Exhibit A-2, the PJM Transmission Owners propose replacing the existing service rates with methodologies to calculate the charge for each service type based on the references to the BYC and the applicable denominator. Thus, each of the Monthly, Weekly, Daily, and Hourly charges for Border Rate service under Schedule 8 are represented as the BYC divided by the relevant denominator (*i.e.* "12" for Monthly service, "52" for Weekly service, etc.). The PJM Transmission Owners also propose revising Schedule 8 § 7 (Transmission Enhancement Charges) to clarify that customers taking Border Rate service under Schedule 8 will not separately be charged for TECs as provided by proposed new Section 11 of Schedule 7. Also, as noted above, the Proposed Revisions also include several ministerial and clean-up revisions to Schedule 8 and described in Section III.B.3, above, as well as a corrected second page of the table listing the rates for Non-Firm Point-to-Point Service to specific Zones to restore the rates for Hourly Peak and Hourly Off-Peak Non-Firm Service, which are missing.

Finally, as noted above, nothing in this proposal is intended to affect the PJM standard discounted rate for Non-firm Border Rate service of $0.67 per MWH.

D. Revisions to Attachment H-A of the PJM Tariff

Similar to the revisions to Schedule 8, the PJM Transmission Owners propose revising Attachment H-A to specify that the Non-Zone Service rate will be the BYC established under Schedule 7. The PJM Transmission Owners also propose adding language to Attachment H-A clarifying that: (1) PJM shall update the Non-Zone Service Rate annually in accordance with the implementation and update procedures in Schedule 7; (2) consistent with Schedule 7, the Non-Zone Service Rate includes all TECs applicable to Non-Zone Service; and (3) that any customers taking Non-Zone Service to an MTF holding FTWRs will receive a credit (MTFC) calculated in accordance with Schedule 7, § 11. Taken

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[43] *See Rockland Electric Company et al.,* 165 FERC ¶ 61,123 (2018).

together, these revisions ensure that the rate for Non-Zone Service will be calculated and updated in a manner identical to the rates for Border Rate service under Schedules 7.

The PJM Transmission Owners have included a marked version of Attachment H-A showing the above changes in Exhibit A-3.

E. Revisions to Section 1 (Definitions) of the PJM Tariff

Along with the above revisions, the PJM Transmission Owners also propose revising the "Definitions" section of the PJM Tariff to include the definition of the "Border Yearly Charge." Including the definition of the BYC in the PJM Tariff is appropriate, as the BYC is a universal definition that applies equally to Schedule 7, Schedule 8, and Attachment H-A.

F. Implementation and Annual Calculation of the BYC

The process through which PJM will calculate and implement the BYC is set forth in Schedule 7, § 11 subsections (B) through (E). Section 11(B) provides that PJM shall determine the inputs to the BYC (*i.e.,* the SHRR and SZPL) and calculate the BYC as of January 1 of each year. All of the information necessary to calculate the BYC will be taken from Attachment H or derived pursuant to formula rate protocols set out in the relevant sections of Attachment H. Specifically, revenue requirements for Transmission Owners with stated rates will be taken directly from the rates stated in Attachment H and in effect on January 1 if approved by the Commission prior to the October 31 cut-off date. For those Transmission Owners with formula rates, PJM will use the revenue requirement from each Transmission Owner's most recent formula rate annual update information filed with the Commission or posted on the PJM website no later than the October 31 information cut-off date and effective no later than January 1 of the following year.[44] Thus, if a PJM Transmission Owner with a formula rate files or posts its annual update on or before October 31, 2019, to be effective January 1, 2020, PJM will use the revenue requirement in that annual update to calculate the 2020 Border Rate.

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[44] Each Transmission Owner with formula rates posts its formula rate updates on the PJM website. *See Formula Rates*, PJM, https://www.pjm.com/markets-and-operations/billing-settlements-and-credit/formula-rates.aspx. Although PJM Transmission Owners with formula rates generally also make an annual update informational filing with the Commission, some formula rate protocols call for the posting of a projected revenue requirements prior to that informational filing that is used to set rates for the coming rate year. In order to use the most recent revenue requirement applicable to the January 1 rate year for the BYC, the Proposed Revisions authorize PJM to use either the informational filing or the PJM website posting in its determination of SHRR.

The PJM Transmission Owners are not proposing separate protocols governing the calculation of the Border Rate. Schedule 7, § 11(C) requires that all of the inputs used to calculate the BYC come directly from the stated and formula rates on-file or posted for each Transmission Owner in PJM. No cost of service figures will need to be derived or calculated. Each of the cost of service figures, including any credits added back to a PJM Transmission Owner's revenue requirement, will be taken directly from either Attachment H or from an annual formula rate informational filing or posting.

Furthermore, each of the cost of service inputs used to determine and update the BYC will have already been subjected to review, either under the procedures required by each Transmission Owners' formula rate protocols or through the Section 205 or 206 proceedings in which a stated rate was established or ordered by the Commission. The calculation of the denominator, SZPL, is the identical calculation used by PJM to calculate load-ratio share cost allocation of Regional Facilities under Schedule 12.[45] Accordingly, the Border Rate will be based entirely on inputs from other rates, each of which was already subject to stakeholder input and/or review by the Commission. Similarly, any interested party can obtain all of the information necessary to duplicate the BYC calculation through information posted and available on PJM's website as well as in the relevant Commission dockets associated with each rate.[46]

Schedule 7, § 11(C) requires PJM to post on its website all of the inputs and calculations used to determine the BYC no later than December 1 of each year. That posting will include a variance report documenting any changes to the inputs used to calculate the updated BYC from the then-effective BYC. The updated BYC will go into effect on January 1 of the following year. Schedule 7, § 11(E) also requires that PJM file the information included in its December 1 posting — the inputs and calculations used to determine the BYC and the BYC variance report — as an informational filing with the Commission. Each informational filing will be submitted in the docket in which the Proposed Revisions are accepted.

The purpose of the advance notice is to permit customers to plan for the new rates and adjust any other agreements or proposals that may be affected by the revised rates. Once in

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[45] Under Schedule 12, PJM annually updates the cost responsibility assignments among Responsible Customers for 50 percent of the costs of Regional Facilities and Necessary Lower Voltage Facilities. PJM Tariff, Schedule 12, § (b)(i)(A)(1).

[46] Both the Southwest Power Pool ("SPP") and MISO utilize similar methodologies to establish their through-and-out rates based on filed stated or formula rates. Neither RTO uses a separate set of formula rate protocols applicable to their through-and-out rates.

effect, the Border Rate will remain in effect for the entire year. Any PJM Transmission Owner-initiated change to its revenue requirement (including true-up adjustments), changes to formula rate updates ordered by the Commission and implemented through true-up adjustments, or changes resulting from a change to the number of Transmission Owners in PJM will be implemented in the following year's update.[47] Any change to a Transmission Owner's revenue requirement following the October 31 cut-off implemented through a formula rate true-up will automatically include interest calculated in accordance with the applicable formula rate protocols, since the Transmission Owner's revenue requirement used to calculate the SHRR is the same as that used to determine its NITS charges.[48]

While changes to PJM Transmission Owner revenue requirements will not be considered after the October 31 cut-off date, PJM is required correct any errors in the BYC discovered during a given rate year. Specifically, Schedule 7, § 11(D) requires that if PJM is advised of or discovers that the BYC for a given rate year was calculated using an incorrect input or calculation, PJM must correct the error and post an updated BYC determined using the correct input or calculation. Schedule 7, § 11(D) provides that if PJM's correction results in a change to the BYC currently in effect, the updated BYC will take effect on the first day of the month that begins at least 30 days after PJM posts the correction. Schedule 7, § 11(D) also requires that, to the extent permitted by the PJM Tariff, PJM adjust the bills of affected Transmission Customers with respect to any month affected by the BYC correction. As in the case of the annual BYC update, under Schedule 7, § (E), PJM is also required to file the corrected BYC and a variance report showing the changes with the Commission as an informational filing.

Importantly, Schedule 7, § 11(D) makes clear that any correction to the BYC is limited to errors in the calculation of the BYC or the selection of the BYC inputs. The provisions of Schedule 7, § 11(D) are not applicable to inquiries into the data or information filed or posted by a Transmission Owner which PJM used to determine the BYC. As discussed above, these inquiries can be made through each Transmission Owners' formula

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[47] PJM will use the period between the October 31 cut-off date and the December 1 posting date, as necessary, to verify any BYC input data, such as the Zonal peak loads. In the event that a Transmission Owner posts a correction to its formula rate posting after October 31, PJM may use the corrected data as long as there is sufficient time to meet the December 1 BYC posting date.

[48] Notwithstanding the limitation on changes to the BYC to the annual update process, in the event that the Commission orders refunds (as distinct from formula rate true-ups) of any of the inputs used to determine the BYC, Border Rate customers would be entitled to refunds based on a recalculation of the applicable BYC for the period covered by those refunds. Any such recalculation, as in the case of refunds from other rates revised pursuant to Commission order, would be determined through a refund report submitted by PJM.

rate annual update process or in a Transmission Owner's stated rate proceeding at the Commission.

As noted above, under the Proposed Revisions, PJM will publish the first annual update on December 1, 2019 to take effect on January 1, 2020. However, the PJM Transmission Owners request that the Commission approve the Proposed Revisions within sixty days of the date of this filing. The PJM Transmission Owners are mindful that when implemented, the Proposed Revisions represent a significant, albeit long overdue, revision of the Border Rate. Some comments received during the stakeholder process under Section 9.1(b) of the PJM Tariff reflected a desire for a multi-year phase-in of the Proposed Revisions. However, such a phase-in period would be unfair to Zonal NITS customers that have been subsidizing customers taking service under the Border Rate service and Non-Zone Service for almost 15 years. Nonetheless, in order to afford existing and prospective Border Rate and Non-Zone Service Rate customers a reasonable time to adjust to the new rates and, if necessary, modify commercial arrangements, it is reasonable to provide these customers with as much certainty regarding future rates as possible. Timely Commission approval of the Proposed Revisions will provide existing and prospective Border Rate and Non-Zone Service Rate customers about six months advance notice and represents a just and reasonable accommodation between their interests and the interests of Zonal NITS customers.[49]

Exhibit C is an example of the PJM posting of the annual Border Rate update that PJM would post under the Proposed Revisions, using information from the 2019 Rate Year. It is based on Transmission Owner SHRR and the SZPL posted as of October 31, 2018 and effective on January 1, 2019 and identifies all of the data used to determine the BYC.[50] The process by which PJM compiled Exhibit C and will compile the annual updates under the

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[49] Postponing the initial update of the BYC will also allow more time for PJM Transmission Owners to implement Commission rulings related to the impact on transmission rates of the Tax Cuts and Jobs Act, Pub. L. No. 115-97, 131 Stat. 2054 (2017).

[50] On the tab labelled, "Numerator Calculations 2019" of Exhibit C, Column C lists the section of Attachment H containing the applicable stated or formula rate. Column D specifies whether the data comes from a stated or formula rate and, if the latter, provides a hyperlink to the formula rate update on the PJM website that will be in effect on January 1. The source of each cell in columns G through K that contains data is the indicated Transmission Owner's formula rate. The specific location of the source of this data is identified in a corresponding cell on the Tab labelled "BYC Inputs 2019." Exhibit C also includes comparable, but currently unpopulated tabs showing the variance from the prior year's information.

Proposed Revisions is explained in the attached Affidavit of Jonathan Kern ("Kern Affidavit"). A copy of the Kern Affidavit is included as Exhibit D.[51]

IV. THE PROPOSED REVISIONS ARE JUST AND REASONABLE

In 2004, the last time that the Border Rate and the Non-Zone Service Rate were updated, PJM consisted of less than 50,000 miles of transmission lines.[52] Since that time, it has grown by two-thirds to over 84,000 miles.[53] In 2004, there were 15 transmission Zones in PJM covering 138,510 square miles.[54] Today there are 21 Zones covering 243,417 square miles.[55] As of the end of 2004, the PJM Board had approved just over $1 billion in transmission upgrades under the Regional Transmission Expansion Planning Protocol.[56] Today that number is over $35 billion.[57] Local facilities that are part of the integrated PJM Transmission System have also been expanded and upgraded as well. By any measure, the transmission system available to customers seeking to export power from or through PJM is much larger and more robust than it was in 2004.

As noted above, the proposed revisions to the Border Rate and Non-Zone Service Rate implement, on an ongoing, annual basis, the average rate methodology accepted by the Commission in the November 1997 Order and which the PJM Transmission Owners used with Commission approval in each subsequent update to Border Rate and Non-Zone Service Rate. The only difference is that the methodology will use a larger denominator, the sum of the Zonal peak loads, instead of the sum of the Zonal 12-CP loads to determine the Border Rate, resulting in a lower rate that is determined on a basis comparable to charges for Zonal NITS. Furthermore, both SPP and MISO use the same "average rate" methodology. Indeed, the Commission cited to its use in PJM and MISO in approving SPP's more recent proposal to adopt it.[58] In that order, the Commission explained the rationale behind the methodology:

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[51] The values shown in Exhibit C, while subject to update under the Proposed Revisions, are reasonably representative of the difference between the stated Border Rate currently in effect and the level of the BYC under the Proposed Revisions.

[52] PJM 2004 Annual Report at 2.

[53] PJM 2017 Annual Report at 22.

[54] *PJM History*, PJM, https://www.pjm.com/about-pjm/who-we-are/pjm-history.aspx; PJM 2004 Annual Report at 2.

[55] PJM Tariff at Attachment J; PJM 2017 Annual Report at 22.

[56] PJM 2004 Annual Report at 8.

[57] PJM 2017 Annual Report at 12.

[58] *Southwest Power Pool, Inc.,* 142 FERC ¶ 61,070 at P 31 (2013) ("SPP Order").

> We also find that the resulting rates paid by through-and-out customers will be consistent with the cost causation principle. As SPP explains, through-and-out transactions do not sink within, and thus are not associated with, any specific zone. Accordingly, use of a region-wide average rate for through-and-out service fairly and equitably recovers the Schedule 11 zonal costs when transmission service sinks outside of the SPP footprint.[59]

In the SPP Order, the Commission also addressed two concerns regarding the use of the average rate methodology for determining a through-and out rate like the Border Rate. First, it determined that it was not discriminatory under the FPA to charge a different rate for Zonal delivery service in the Zone where the power exited the region. It noted that through-and-out service customers serve load outside the region and the rate need not reflect the cost of local transmission facilities since through-and-out service was a different type of service than Zonal delivery service.[60]

Second, the Commission addressed the concern that the cost of all transmission facilities, not just high voltage facilities that are regionally allocated, are included in the determination of the regional through-and-out rate. It noted that both PJM and MISO allocated the costs of certain high voltage facilities regionally, but used an average rate methodology based on the costs of both high and lower voltage facilities to determine the rate for through-and-out service.[61] This, of course, makes sense. Border Rate service and Non-Zone Service in PJM permit the customer to source power from anywhere in PJM and export it at any or multiple points of delivery on the Border, regardless of the voltage of the facilities over which the power flows. Similarly, a Border Rate service customer can enter and exit PJM at any voltage on the PJM Transmission System interconnected to a neighboring system. The laws of physics determine which of the more than 84,000 miles of PJM's integrated transmission facilities are used to provide Border Rate service and Non-Zone Service, but all of them are available to support the transaction.

The adoption of a methodology in the Tariff to calculate the Border Rate and Non-Zone Service Rate, rather than stated values, is also just and reasonable. Before 2004, all PJM Zonal NITS rates were based on stated revenue requirements. Filings to change those stated rates were infrequent, as were the addition of new transmission Zones to PJM. However, since 2004, the majority of PJM Transmission Owners have adopted formula rates

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[59] *Id.* at P 29.

[60] *Id.* at P 30. SPP previously charged through-and-out service customers based on the Zone of exit.

[61] *Id.* at P 31.

that update at least annually. Additionally, PJM has expanded to include several new Zones and numerous new Transmission Owners. Since the methodology for determining the Border Rate was accepted by the Commission in 1997, the number of revenue requirements used to establish the Border Rate has more than tripled and now numbers 31 stated and formula rates. Updating the Border Rate and Non-Zone Service rate to reflect the cost of providing service through stated rate Section 205 filings is no longer practical. As noted above, the Commission has approved the use of a similar methodology to the one that the PJM Transmission Owners propose here to update through-and-out rates in both MISO and SPP.[62]

Finally, while the increase in the Border Rate and Non-Zone Service rates from the 2004 stated rates currently in effect is expected to be significant,[63] Border Rate service and Non-Zone Service have been subsidized by Zonal NITS customers for almost 15 years. Zonal NITS customers are charged for the PJM Transmission System in place in 2019. Border Rate and Non-Zone Service customers are being charged for the PJM Transmission System as it existed in 2004. The result is that Zonal NITS customers are subsidizing the transmission service to the Border of PJM. If the Proposed Revisions are approved, once they are implemented, Zonal NITS customers will see relief from the subsidies they have been bearing, since revenue from the increased Border Rate will reduce Zonal NITS charges.

Accordingly, the Proposed Revisions are just and reasonable in that Border Rate and Non-Zone Service customers will be charged for the true cost of the service they are receiving, while Zonal NITS customers will no longer subsidize that service. As the Commission held in the SPP Order: "[t]hrough-and-out customers have paid lower rates on average than internal customers, and SPP's proposal promptly brings through-and-out rates more inline with the cost causation principle on a going forward basis."[64]

V. EFFECTIVE DATE

The PJM Transmission Owners request that the Proposed Revisions be made effective 60 days from the date of this filing. As discussed above, if the Proposed Revisions are approved by the Commission, the Border Rate and Non-Zone Service Rate will be updated on December 1, 2019, to take effect on January 1, 2020.

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[62] *See* MISO FERC Electric Tariff, Schedule 7 and Attachment O; SPP Open Access Transmission Tariff, Schedule 11 and Revenue Requirements and Rates File ("RRR File").

[63] *See* Exhibit C.

[64] SPP Order at P 32.

VI. CORRESPONDENCE AND COMMUNICATIONS

Correspondence and communications with respect to this filing should be sent to:

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VII. ADDITIONAL INFORMATION REQUIRED UNDER 18 C.F.R. § 35.13(b)

A. Documents Submitted with this Filing

Along with this transmittal letter, the PJM Transmission Owners submit the following exhibits with this filing:

1. **Exhibit A** – Marked versions of Schedule 7, Schedule 8, Attachment H-A, and the Definitions to the PJM Tariff reflecting the changes proposed herein.

2. **Exhibit B –** Clean versions of Schedule 7, Schedule 8, Attachment H-A, and the Definitions to the PJM Tariff reflecting the changes proposed herein.

3. **Exhibit C** – Illustrative Example of the annual Border Yearly Charge update calculation posting by PJM.

4. **Exhibit D** –Declaration of Jonathan Kern.

B. 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,[65] PJM will post a copy of this filing to the

[65] 18 C.F.R. §§35.2(e) and 385.2010(f)(3).

FERC filings section of its internet site, located at the following link: http://www.pjm.com/documents/ferc-manuals/ferc-filings.aspx with a specific link to the newly-filed document, 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[66] 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.

C. Description of and Reason for Rate Change

A detailed description of the rate change is included in Section III, above.

D. Agreement Required for Rate Change

As indicated in note 1, above, this rate change has been authorized pursuant to the individual and weighted voting requirements in Section 8.5 of the CTOA.

E. 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. § 31.13. As discussed above, all of the information and inputs used to calculate the Border Rate are based on information already filed with and accepted by the Commission through transmission formula rates or stated rates.

VIII. IMPACT OF THE RATE CHANGE – 18 C.F.R. § 35.13(C)(1)

Exhibit C shows the updated BYC that would result if the Proposed Revisions were in effect at the time of this filing. As explained in the body of this filing, the actual rate that would be in effect will be established effective January 1, 2020 based on data filed or posted on or before October 31, 2019. The revised Border Rate would apply to firm service under Schedule 7 of the PJM Tariff and be the maximum rate under Schedule 8 of the PJM Tariff. However, this filing would not affect the standard PJM discount for Non-Firm Point-to-Point Service to the Border of PJM which would remain at $0.67 as set forth in PJM Manual 27.

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

As stated above, the PJM Transmission Owners are not proposing to change the exemption from the Border Rate for Points of Delivery to the MISO Region.

Exhibit C also shows the updated Non-Zone Service Rate that would result if the Proposed Revisions were in effect at the time of this filing. As explained in the body of this filing, the actual rate that would be in effect will be established effective January 1, 2020 based on data posted on or before October 31, 2019.

The Border Yearly Charge established effective January 1, 2020, would remain in effect for one year until updated in accordance with the methodology set out in proposed new Section 11 of Schedule 7.

IX. CONCLUSION

For the reasons set forth herein, the PJM Transmission Owners respectfully request that the Commission accept these Proposed Revisions to the PJM Tariff, and allow these changes to become effective sixty days from the date of this filing, as requested herein.

Sincerely,

/s/ Donald A. Kaplan

Donald A. Kaplan
Benjamin L. Tejblum
K&L Gates LLP
1601 K Street, N.W.
Washington, DC 20006

Attorneys for PPL Electric Utilities Corporation on behalf of the PJM Transmission Owners

Exhibit A

PJM Open Access Transmission Tariff

(Redline)

Definitions – A - B

Abnormal Condition:

"Abnormal Condition" shall mean any condition on the Interconnection Facilities which, determined in accordance with Good Utility Practice, is: (i) outside normal operating parameters such that facilities are operating outside their normal ratings or that reasonable operating limits have been exceeded; and (ii) could reasonably be expected to materially and adversely affect the safe and reliable operation of the Interconnection Facilities; but which, in any case, could reasonably be expected to result in an Emergency Condition. Any condition or situation that results from lack of sufficient generating capacity to meet load requirements or that results solely from economic conditions shall not, standing alone, constitute an Abnormal Condition.

Acceleration Request:

"Acceleration Request" shall mean a request pursuant to Operating Agreement, Schedule 1, section 1.9.4A, and the parallel provisions of Tariff, Attachment K-Appendix, section 1.9.4A, to accelerate or reschedule a transmission outage scheduled pursuant to Operating Agreement, Schedule 1, section 1.9.2 or Operating Agreement, Schedule 1, section 1.9.4, and the parallel provisions of Tariff, Attachment K-Appendix, section 1.9.2 or Tariff, Attachment K-Appendix, section 1.9.4.

Additional Day-ahead Scheduling Reserves Requirement:

"Additional Day-ahead Scheduling Reserves Requirement" shall mean the portion of the Day-ahead Scheduling Reserves Requirement that is required in addition to the Base Day-ahead Scheduling Reserves Requirement to ensure adequate resources are procured to meet real-time load and operational needs, as specified in the PJM Manuals.

Affected System:

"Affected System" shall mean an electric system other than the Transmission Provider's Transmission System that may be affected by a proposed interconnection or on which a proposed interconnection or addition of facilities or upgrades may require modifications or upgrades to the Transmission System.

Affected System Operator:

"Affected System Operator" shall mean an entity that operates an Affected System or, if the Affected System is under the operational control of an independent system operator or a regional transmission organization, such independent entity.

Affiliate:

"Affiliate" shall mean any two or more entities, one of which controls the other or that are under common control. "Control" shall mean the possession, directly or indirectly, of the power to direct the management or policies of an entity. Ownership of publicly-traded equity securities of another entity shall not result in control or affiliation for purposes of the Tariff or Operating Agreement if the securities are held as an investment, the holder owns (in its name or via intermediaries) less than 10 percent of the outstanding securities of the entity, the holder does not have representation on the entity's board of directors (or equivalent managing entity) or vice versa, and the holder does not in fact exercise influence over day-to-day management decisions. Unless the contrary is demonstrated to the satisfaction of the Members Committee, control shall be presumed to arise from the ownership of or the power to vote, directly or indirectly, ten percent or more of the voting securities of such entity.

Agreements:

"Agreements" shall mean the Amended and Restated Operating Agreement of PJM Interconnection, L.L.C., the PJM Open Access Transmission Tariff, the Reliability Assurance Agreement, and/or other agreements between PJM Interconnection, L.L.C. and its Members.

Ancillary Services:

"Ancillary Services" shall mean those services that are necessary to support the transmission of capacity and energy from resources to loads while maintaining reliable operation of the Transmission Provider's Transmission System in accordance with Good Utility Practice.

Annual Demand Resource:

"Annual Demand Resource" shall have the meaning specified in the Reliability Assurance Agreement.

Annual Energy Efficiency Resource:

"Annual Energy Efficiency Resource" shall have the meaning specified in the Reliability Assurance Agreement.

Annual Resource:

"Annual Resource" shall mean a Generation Capacity Resource, an Annual Energy Efficiency Resource or an Annual Demand Resource.

Annual Resource Price Adder:

"Annual Resource Price Adder" shall mean, for Delivery Years starting June 1, 2014 and ending May 31, 2017, an addition to the marginal value of Unforced Capacity and the Extended Summer Resource Price Adder as necessary to reflect the price of Annual Resources required to meet the applicable Minimum Annual Resource Requirement.

Annual Revenue Rate:

"Annual Revenue Rate" shall mean the rate employed to assess a compliance penalty charge on a

Curtailment Service Provider under Tariff, Attachment DD, section 11.

Annual Transmission Costs:

"Annual Transmission Costs" shall mean the total annual cost of the Transmission System for purposes of Network Integration Transmission Service shall be the amount specified in Attachment H for each Zone until amended by the applicable Transmission Owner or modified by the Commission.

Applicable Laws and Regulations:

"Applicable Laws and Regulations" shall mean all duly promulgated applicable federal, State and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority having jurisdiction over the relevant parties, their respective facilities, and/or the respective services they provide.

Applicable Regional Entity:

"Applicable Regional Entity" shall mean the Regional Entity for the region in which a Network Customer, Transmission Customer, New Service Customer, or Transmission Owner operates.

Applicable Standards:

"Applicable Standards" shall mean the requirements and guidelines of NERC, the Applicable Regional Entity, and the Control Area in which the Customer Facility is electrically located; the PJM Manuals; and Applicable Technical Requirements and Standards.

Applicable Technical Requirements and Standards:

"Applicable Technical Requirements and Standards" shall mean those certain technical requirements and standards applicable to interconnections of generation and/or transmission facilities with the facilities of an Interconnected Transmission Owner or, as the case may be and to the extent applicable, of an Electric Distributor, as published by Transmission Provider in a PJM Manual provided, however, that, with respect to any generation facilities with maximum generating capacity of 2 MW or less (synchronous) or 5 MW or less (inverter-based) for which the Interconnection Customer executes a Construction Service Agreement or Interconnection Service Agreement on or after March 19, 2005, "Applicable Technical Requirements and Standards" shall refer to the "PJM Small Generator Interconnection Applicable Technical Requirements and Standards." All Applicable Technical Requirements and Standards shall be publicly available through postings on Transmission Provider's internet website.

Applicant:

"Applicant" shall mean an entity desiring to become a PJM Member, or to take Transmission Service that has submitted the PJMSettlement credit application, PJMSettlement credit agreement and other required submittals as set forth in Tariff, Attachment Q.

Application:

“Application” shall mean a request by an Eligible Customer for transmission service pursuant to the provisions of the Tariff.

Attachment Facilities:

“Attachment Facilities” shall mean the facilities necessary to physically connect a Customer Facility to the Transmission System or interconnected distribution facilities.

Attachment H:

“Attachment H” shall refer collectively to the Attachments to the PJM Tariff with the prefix “H-” that set forth, among other things, the Annual Transmission Rates for Network Integration Transmission Service in the PJM Zones.

Auction Revenue Rights:

“Auction Revenue Rights” or “ARRs” shall mean the right to receive the revenue from the Financial Transmission Right auction, as further described in Operating Agreement, Schedule 1, section 7.4, and the parallel provisions of Tariff, Attachment K-Appendix, section 7.4.

Auction Revenue Rights Credits:

“Auction Revenue Rights Credits” shall mean the allocated share of total FTR auction revenues or costs credited to each holder of Auction Revenue Rights, calculated and allocated as specified in Operating Agreement, Schedule 1, section 7.4.3, and the parallel provisions of Tariff, Attachment K-Appendix, section 7.4.3.

Authorized Government Agency:

“Authorized Government Agency” means a regulatory body or government agency, with jurisdiction over PJM, the PJM Market, or any entity doing business in the PJM Market, including, but not limited to, the Commission, State Commissions, and state and federal attorneys general.

Avoidable Cost Rate:

“Avoidable Cost Rate” shall mean a component of the Market Seller Offer Cap calculated in accordance with Tariff, Attachment DD, section 6.

Balancing Congestion Charges:

"Balancing Congestion Charges" shall be equal to the sum of congestion charges collected from Market Participants that are purchasing energy in the Real-time Energy Market minus [the sum of congestion charges paid to Market Participants that are selling energy in the Real-time Energy Market plus any congestion charges calculated pursuant to the Joint Operating Agreement between the Midcontinent Independent Transmission System Operator, Inc. and PJM Interconnection, L.L.C. (PJM Rate Schedule FERC No. 38), plus any congestion charges calculated pursuant to the Joint Operating Agreement Among and Between New York Independent System Operator Inc. and PJM Interconnection, L.L.C. (PJM Rate Schedule FERC No. 45), plus any congestion charges calculated pursuant to agreements between the Office of the Interconnection and other entities, plus any charges or credits calculated pursuant to Operating Agreement, Schedule 1, section 3.8, and the parallel provisions of Tariff, Attachment K-Appendix, section 3.8, as applicable)].

Balancing Ratio:

"Balancing Ratio" shall have the meaning provided in Tariff, Attachment DD, section 10A.

Base Capacity Demand Resource:

"Base Capacity Demand Resource" shall have the meaning specified in the Reliability Assurance Agreement.

Base Capacity Demand Resource Constraint:

"Base Capacity Demand Resource Constraint" for the PJM Region or an LDA, shall mean, for the 2018/2019 and 2019/2020 Delivery Years, the maximum Unforced Capacity amount, determined by PJM, of Base Capacity Demand Resources and Base Capacity Energy Efficiency Resources that is consistent with the maintenance of reliability. As more fully set forth in the PJM Manuals, PJM calculates the Base Capacity Demand Resource Constraint for the PJM Region or an LDA, by first determining a reference annual loss of load expectation ("LOLE") assuming no Base Capacity Resources, including no Base Capacity Demand Resources or Base Capacity Energy Efficiency Resources. The calculation for 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 Installed Reserve Margin 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 Base Capacity Demand Resources and Base Capacity Energy Efficiency Resources (displacing otherwise committed generation) as interruptible from June 1 through September 30 and unavailable the rest of the Delivery Year in question and calculates the LOLE at each DR and EE level. The Base Capacity Demand Resource Constraint is the combined amount of Base Capacity Demand Resources and Base Capacity Energy Efficiency Resources, stated as a percentage of the unrestricted annual peak load, that produces no more than a five percent increase in the LOLE, compared to the reference value. The Base Capacity Demand Resource Constraint 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 forecasted peak load of the PJM Region or such LDA, reduced by the amount of load served under the FRR Alternative].

Base Capacity Demand Resource Price Decrement:

"Base Capacity Demand Resource Price Decrement" shall mean, for the 2018/2019 and 2019/2020 Delivery Years, a difference between the clearing price for Base Capacity Demand Resources and Base Capacity Energy Efficiency Resources and the clearing price for Base Capacity Resources and Capacity Performance Resources, representing the cost to procure additional Base Capacity Resources or Capacity Performance Resources out of merit order when the Base Capacity Demand Resource Constraint is binding.

Base Capacity Energy Efficiency Resource:

"Base Capacity Energy Efficiency Resource" shall have the meaning specified in the Reliability Assurance Agreement.

Base Capacity Resource:

"Base Capacity Resource" shall mean a Capacity Resource as described in Tariff, Attachment DD, section 5.5A(b).

Base Capacity Resource Constraint:

"Base Capacity Resource Constraint" for the PJM Region or an LDA, shall mean, for the 2018/2019 and 2019/2020 Delivery Years, the maximum Unforced Capacity amount, determined by PJM, of Base Capacity Resources, including Base Capacity Demand Resources and Base Capacity Energy Efficiency Resources, that is consistent with the maintenance of reliability. As more fully set forth in the PJM Manuals, PJM calculates the above Base Capacity Resource Constraint for the PJM Region or an LDA, by first determining a reference annual loss of load expectation ("LOLE") assuming no Base Capacity Resources, including no Base Capacity Demand Resources or Base Capacity Energy Efficiency Resources. The calculation for the PJM Region uses the weekly load distribution from the Installed Reserve Margin study for the Delivery Year in question (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 weekly load distribution (based on the Installed Reserve Margin study and 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 Installed Reserve Margin 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. Additionally, for the PJM Region and relevant LDA calculation, the weekly capacity distributions are adjusted to reflect winter ratings.

For both the PJM Region and LDA analyses, PJM models the commitment of an amount of Base Capacity Demand Resources and Base Capacity Energy Efficiency Resources equal to the Base Capacity Demand Resource Constraint (displacing otherwise committed generation). PJM then models the commitment of varying amounts of Base Capacity Resources (displacing otherwise committed generation) as unavailable during the peak week of winter and available the rest of the Delivery Year in question and calculates the LOLE at each Base Capacity Resource level. The Base Capacity Resource Constraint is the combined amount of Base Capacity Demand Resources, Base Capacity Energy Efficiency Resources and Base Capacity Resources, stated as a percentage of the unrestricted annual peak load, that produces no more than a ten percent increase in the LOLE, compared to the reference value. The Base Capacity Resource Constraint 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 [one minus the pool-wide average EFORd] times [the forecasted peak load of the PJM Region or such LDA, reduced by the amount of load served under the FRR Alternative].

Base Capacity Resource Price Decrement:

"Base Capacity Resource Price Decrement" shall mean, for the 2018/2019 and 2019/2020 Delivery Years, a difference between the clearing price for Base Capacity Resources and the clearing price for Capacity Performance Resources, representing the cost to procure additional Capacity Performance Resources out of merit order when the Base Capacity Resource Constraint is binding.

Base Day-ahead Scheduling Reserves Requirement:

"Base Day-ahead Scheduling Reserves Requirement" shall mean the thirty-minute reserve requirement for the PJM Region established consistent with the Applicable Standards, plus any additional thirty-minute reserves scheduled in response to an RTO-wide Hot or Cold Weather Alert or other reasons for conservative operations.

Base Load Generation Resource

"Base Load Generation Resource" shall mean a Generation Capacity Resource that operates at least 90 percent of the hours that it is available to operate, as determined by the Office of the Interconnection in accordance with the PJM Manuals.

Base Offer Segment:

"Base Offer Segment" shall mean a component of a Sell Offer based on an existing Generation

Capacity Resource, equal to the Unforced Capacity of such resource, as determined in accordance with the PJM Manuals. If the Sell Offers of multiple Market Sellers are based on a single Existing Generation Capacity Resource, the Base Offer Segments of such Market Sellers shall be determined pro rata based on their entitlements to Unforced Capacity from such resource.

Base Residual Auction:

"Base Residual Auction" shall mean the auction conducted three years prior to the start of the Delivery Year to secure commitments from Capacity Resources as necessary to satisfy any portion of the Unforced Capacity Obligation of the PJM Region not satisfied through Self-Supply.

Batch Load Demand Resource:

"Batch Load Demand Resource" shall mean a Demand Resource that has a cyclical production process such that at most times during the process it is consuming energy, but at consistent regular intervals, ordinarily for periods of less than ten minutes, it reduces its consumption of energy for its production processes to minimal or zero megawatts.

Behind The Meter Generation:

"Behind The Meter Generation" shall refer to a generation unit that delivers energy to load without using the Transmission System or any distribution facilities (unless the entity that owns or leases the distribution facilities has consented to such use of the distribution facilities and such consent has been demonstrated to the satisfaction of the Office of the Interconnection); provided, however, that Behind The Meter Generation does not include (i) at any time, any portion of such generating unit's capacity that is designated as a Generation Capacity Resource; or (ii) in an hour, any portion of the output of such generating unit that is sold to another entity for consumption at another electrical location or into the PJM Interchange Energy Market.

Black Start Service:

"Black Start Service" shall mean the capability of generating units to start without an outside electrical supply or the demonstrated ability of a generating unit with a high operating factor (subject to Transmission Provider concurrence) to automatically remain operating at reduced levels when disconnected from the grid.

Border Yearly Charge:

"Border Yearly Charge" shall mean the yearly charge determined in accordance with Tariff, Schedule 7.

Breach:

"Breach" shall mean the failure of a party to perform or observe any material term or condition of Tariff, Part IV or Part VI, or any agreement entered into thereunder as described in the relevant provisions of such agreement.

Breaching Party:

"Breaching Party" shall mean a party that is in Breach of Tariff, Part IV or Part VI and/or an agreement entered into thereunder.

Business Day:

"Business Day" shall mean a day in which the Federal Reserve System is open for business and is not a scheduled PJM holiday.

Buy Bid:

"Buy Bid" shall mean a bid to buy Capacity Resources in any Incremental Auction.

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/]	~~18.888~~Border Yearly Charge established pursuant to section 11 below	~~1.574~~Yearly Charge /12	~~0.3632~~Yearly Charge /52	~~0.0726~~Weekly Charge /5	~~0.0519~~Weekly Charge /7
AE Zone	23.809	1.984	0.4580	0.0920	0.0650
BG~~&~~E 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: * AEC: 0.463 UGI: *	PPL: * AEC: 0.039 UGI: *	PPL: * AEC: 0.0089 UGI: *	PPL: * AEC: 0.0018 UGI: *	PPL: * AEC: 0.0013 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	20.847	1.737	0.4009	0.0802	0.0573
Rockland Zone	~~49.695~~42.548	~~4.141~~3.546	~~0.9557~~0.8182	~~0.1911~~0.1636	~~0.1365~~0.1169
ComEd Zone[~~4~~3/]	[~~5~~4/]				
AEP East Zone[~~6~~5/]	~~Monthly Charge X 12~~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~~Yearly Charge / 52~~	Rate Pursuant to Attachment H-14 and Attachment H-20~~Weekly Charge / 5~~	Rate Pursuant to Attachment H-14 and Attachment H-20~~Weekly Charge / 7~~
Dayton Zone	15.674	1.306	0.3014	0.0603	0.0431
Duquesne Zone	14.17	1.18	0.27	0.0540	0.0386
Dominion Zone[~~7~~6/]					
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.

~~Effective December 1, 2004, the charge for Points of Delivery at the Border of PJM and the Transitional Revenue Neutrality Charge under this Schedule 7 shall not apply to any Reserved Capacity with a Point of Delivery of the Midwest Independent Transmission System Operator, Inc. obtained pursuant to requests submitted on or after November 17, 2003, for service commencing on or after April 1, 2004. Effective April 1, 2006, the charge for Points of Delivery at the Border of PJM and the Transitional Revenue Neutrality Charge under this Schedule 7 shall not apply to any Reserved Capacity with a Point of Delivery of the Midwest Independent Transmission System Operator, Inc.~~

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~~4/ 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.

~~5~~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.

~~6~~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) ~~**Transitional Revenue Neutrality Charge:** In addition to the rates set forth in section (1) of this schedule and any other applicable charges, the Transmission Customer shall also pay for Reserved Capacity for delivery at the border of the PJM Region a non-discountable charge of $3.60/kw/year, $0.30/kw/mo., $0.0692/kw/week, $0.0099/kw/day-off-peak, or $0.0138/kw/day-on-peak. PJM shall distribute all revenues from the Transitional Revenue Neutrality Charge to Allegheny Power. The charge provided for under this section (6) shall terminate effective as of the day on which the sum total of the revenues collected by this charge, the Transitional Revenue Neutrality Charge under Schedule 8, and the Transitional Market Expansion Charge under Schedule 11 equal $84,993,360.~~ **[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, ~~I~~in addition to the rates set forth in s~~S~~ection (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) **Formula for Determining the Border Yearly Charge:**

(A) 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. Where the Revenue Requirement of a Transmission Owner is determined pursuant to a formula rate, 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; or (iv) other agreements for transmission service over PJM Transmission Facilities; 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;

SZPL is the sum of each Zone's annual peak load from the most recently completed 12-month period ending October 31.

(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 December 1 of each year, the Transmission Provider shall post on the Transmission Provider's website the inputs and calculations used to determine the Border Yearly Charge. The posting shall also include a variance report, which will document how the inputs used to determine the Border Yearly Charge to go into effect as of January 1 have changed from the inputs used to determine the Border Yearly Charge then in effect, including any changes in the sources of such inputs. 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) If, at any time, it is brought to the Transmission Provider's attention or the Transmission Provider believes that the Border Yearly Charge may be based on an incorrect input or calculation and the Transmission Provider concludes that an incorrect input or calculation was used to determine the Border Yearly Charge, the Transmission Provider shall post on the Transmission Provider's website the correction to any inputs or calculations used to determine the Border Yearly Charge and a variance report documenting the changes from the Border Yearly Charge that was based on an incorrect input or calculation. If such correction affects a Border Yearly Charge currently in effect, the correction shall take effect on the first day of the month that begins at least 30 days after the correction is posted. To the extent permitted by section 10.4 of this Tariff, PJMSettlement, on behalf of itself or as agent for PJM, shall adjust the bills of Transmission Customers with respect to any month affected by the correction. Any correction under this subsection (D) shall 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. Nothing in this subsection (D) shall authorize an inquiry into the data or information filed or posted by a Transmission Owner which the Transmission Provider used to determine the Border Yearly Charge.

(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) The Border Yearly Charge determined under this section (11) and any charge for Point-to-Point Transmission Service at the Border of PJM for shorter periods based on the Border Yearly Charge include all Transmission Enhancements Charges applicable to Point-to-Point Transmission Service at the Border of PJM. Payment of the charges set forth in this Schedule does not relieve any Transmission Customer or Merchant Transmission Facility of responsibility for Transmission Enhancement Charges assigned to such Merchant Transmission Facility pursuant to Schedule 12 of the PJM 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 holding Firm Transmission Withdrawal Rights 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 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 8
Non-Firm Point-To-Point Transmission Service

1) The Transmission Customer shall pay for Non-Firm Point-To-Point Transmission Service up to the sum of the applicable charges set forth below for the Point of Delivery:

Summary of Charges

Point of Delivery	Monthly Charge ($/kW)	Weekly Charge ($/kW)	Daily On-Peak[1/] Charge ($/kW)	Daily Off-Peak[2/] Charge ($/kW)	Hourly On-Peak[3/] Charge ($/MWh)	Hourly Off-Peak[4/] Charge ($/MWh)
Border of PJM[5/]	~~1.574~~Border Yearly Charge /12	~~0.3632~~Border Yearly Charge /52	~~0.0726~~Weekly Charge /5	~~0.0519~~Weekly Charge /7	~~4.54~~Border Yearly Charge /4160	~~2.16~~Border Yearly Charge /8760
AE Zone	1.984	0.4580	0.0920	0.0650	5.7	2.72
BG&E Zone	1.306	0.3010	0.0600	0.0430	3.8	1.80
Delmarva Zone	1.615	0.3730	0.0750	0.0530	4.6	2.21
JCPL Zone	1.259	0.2906	0.0581	0.0414	3.6	1.73
MetEd Zone	1.259	0.2906	0.0581	0.0414	3.6	1.73
Penelec Zone	1.259	0.2906	0.0581	0.0414	3.6	1.73
PECO Zone	2.189	0.5051	0.1010	0.0722	6.3	3.01
PPL Zone: Total charge is the sum of the components	PPL: * AEC: 0.039 UGI: *	PPL: * AEC: 0.0089 UGI: *	PPL: * AEC: 0.0018 UGI: *	PPL: * AEC: 0.0013 UGI: *	PPL: * AEC: 0.11 UGI: *	PPL: * AEC: 0.05 UGI: *
Pepco Zone	1.750	0.4040	0.0810	0.0580	5.0	2.40

Point of Delivery	**Monthly Charge ($/kW)**	**Weekly Charge ($/kW)**	**Daily On-Peak[1/] Charge ($/kW)**	**Daily Off-Peak[2/] Charge ($/kW)**	**Hourly On-Peak[3/] Charge ($/MWh)**	**Hourly Off-Peak[4/] Charge ($/MWh)**
PSE&G Zone	1.975	0.4557	0.0911	0.0651	5.7	2.71
AP Zone	1.737	0.4009	0.0802	0.0573	5.0	2.39
Rockland Zone	~~4.141~~3.546	~~0.9557~~0.8182	~~0.1911~~0.1636	~~0.1365~~0.1169	~~11.98~~10.2	~~5.69~~4.87
ComEd Zone[~~5~~6/]	[~~6~~7/]					
AEP East Zone[~~7~~8/] ~~Nov. 1, 2005 SECA Ended W-JF Line In~~	~~AEP East Zone[8~~7/~~]~~Rate Pursuant to Attachment H-14 and Attachment H-20	Rate Pursuant to Attachment H-14 and Attachment H-20	~~Monthly Charge X 12 /52 0.24948~~Rate Pursuant to Attachment H-14 and Attachment H-20	~~Weekly Charge /5~~Attachment H-14 and Attachment H-20	~~Weekly Charge /7~~Attachment H-14 and Attachment H-20	~~Daily On-Peak Charge /16~~Attachment H-14 and Attachment H-20
Dayton Zone	1.306~~Dayton Zone~~	0.3014~~1.306~~	0.0603~~0.3014~~	0.0431~~0.0603~~	3.77~~0.0431~~	~~3.77~~1.79
Duquesne Zone	1.18~~Duquesne Zone~~	0.27~~1.18~~	0.0540~~0.27~~	0.0386~~0.0540~~	3.38~~0.0386~~	~~3.38~~1.61
Dominion Zone[~~8~~9/]	~~Dominion Zone[98/]~~					
ATSI Zone	~~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	Rate Pursuant to Attachment H-21
DEOK Zone	~~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	Rate Pursuant to Attachment H-22
EKPC Zone	~~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	Rate Pursuant to Attachment H-24
OVEC Zone	0.43	0.10	0.02	0.014	1.24	0.58

* 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/ 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.

5/ 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.

6/ Each month, revenue credits will be applied to the gross charge in accordance with ~~Paragraph~~ section 8~~9~~ below to determine the actual charge to the Transmission Customer.

7~~6~~/ The charges for the ComEd zone are posted on PJM's website. In addition to the 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.

8~~7~~/ The rates for non-firm point-to-point transmission service in the AEP Zone will be charged at the monthly, weekly, daily or hourly 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.

~~Effective December 1, 2004, the charge for Points of Delivery at the Border of PJM and the Transitional Revenue Neutrality Charge under this Schedule 8 shall not apply to any Reserved Capacity with a Point of Delivery of the Midwest Independent Transmission System Operator, Inc. obtained pursuant to requests submitted on or after November 17, 2003, for service commencing on or after April 1, 2004. Effective April 1, 2006, the charge for Points of Delivery at the Border of PJM and the Transitional Revenue Neutrality Charge under this Schedule 7 shall not apply to any Reserved Capacity with a Point of Delivery of the Midwest Independent Transmission System Operator, Inc.~~

9~~8~~/ The service period charges rounded to four decimal places for the Dominion Zone are as follows:

Monthly Charge - $/kW/month = the formula rate for Network Integration Transmission Service as described in Attachment H-16 and Attachment H-16A divided by 12 divided by 1000 kW/MW;

Weekly Charge - $/kW/week = 12 times Monthly 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;

Hourly On-Peak Charge - $/MWh = Daily On-Peak Charge / 16 hours *1000 kW/ MW;

Hourly Off-Peak Charge - $/ MWh = Daily Off-Peak Charge / 24 hours *1000 kW/ MW.

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) **Hourly delivery:** The basic charge shall be that agreed upon by the Parties at the time this service is reserved and in no event shall exceed the amounts set forth above for a Point of Delivery.

The total demand charge in any day, pursuant to a reservation for Hourly delivery, shall not exceed the rate specified in section (1) above for daily service times the highest amount in kilowatts of Reserved Capacity in any hour during such day. In addition, the total demand charge in any week, pursuant to a reservation for Hourly or Daily delivery, shall not exceed the rate specified in section (1) above for weekly service times the highest amount in kilowatts of Reserved Capacity in any hour during such week.

4) **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 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.

5) **Congestion, Losses and Capacity Export:** A Transmission Customer desiring Non-Firm Point-to-Point Transmission Service may elect to pay transmission congestion charges. If the Transmission Customer so elects, it shall either (a) if the applicable Transmission Congestion Charge as calculated pursuant to Attachment K is positive, pay the higher of the applicable Transmission Congestion Charge or the applicable rate under section (1) above, or (b) if the applicable Transmission Congestion Charge as calculated pursuant to Attachment K is negative, pay or be credited the sum of the applicable Transmission Congestion Charge and the rate under section (1) above. 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 for any applicable charges, and receive any applicable credits, for such a customer pursuant to Attachment DD.

6) **Other Supporting Facilities and Taxes:** In addition to the charges 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 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.

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 of Schedule 7, ~~I~~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) **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.

ATTACHMENT H-A

Annual Transmission Rates -- Non-Zone Network Load
for Network Integration Transmission Service

~~1. The sum of the annual transmission revenue requirements for all Zones is $1,663,626,485 and the rate for Network Integration Transmission Service to Non-Zone Network Load is $14,714 per megawatt per year.~~

~~2. The rate in (1) shall be effective until the rate for any Zone is amended by the Transmission Owner(s) or modified by the Commission.~~

1. The rate for Network Integration Transmission Service to Non-Zone Network Load is the Border Yearly Charge established pursuant to Schedule 7 of the PJM Tariff stated in dollars per megawatt per year.

2. The Transmission Provider shall update the rate for Network Integration Transmission Service to Non-Zone Network Load annually effective January 1 in accordance with the procedures for updating the Border Yearly Charge set forth in Schedule 7. Once updated, the rate for Network Integration Transmission Service to Non-Zone Network Load shall remain in effect for the remainder of the calendar year in accordance with Schedule 7.

3. The rate for Network Integration Transmission Service to Non-Zone Network Load determined under this Attachment H-A includes all Transmission Enhancements Charges applicable to such service, but does not does not relieve any Transmission Customer or Merchant Transmission Facility of responsibility for Transmission Enhancement Charges assigned to such Merchant Transmission Facility pursuant to Schedule 12 of the PJM Tariff.

4. Customers taking Network Integration Transmission Service to Non-Zone Network Load utilizing a Merchant Transmission Facility holding Firm Transmission Withdrawal Rights shall receive a credit determined in accordance with the formula set forth in Section (11) of Schedule 7.

5. The rate in section 1 shall be effective until modified by a filing under Section 205 of the Federal Power Act authorized by the PJM Transmission Owners Agreement-Administrative Committee in accordance with Section 8.5 of the Consolidated Transmission owners Agreement and approved by the Commission.

6~~3~~. In addition to the rate set forth in section 1 of this attachment, the Network Customer purchasing Network Integration Transmission Service shall pay for transmission congestion charges, in accordance with the provisions of the Tariff, and any amounts necessary to reimburse the Transmission Owners for any amounts payable by them 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.

Exhibit B

PJM Open Access Transmission Tariff

(Clean)

Definitions – A - B

Abnormal Condition:

“Abnormal Condition” shall mean any condition on the Interconnection Facilities which, determined in accordance with Good Utility Practice, is: (i) outside normal operating parameters such that facilities are operating outside their normal ratings or that reasonable operating limits have been exceeded; and (ii) could reasonably be expected to materially and adversely affect the safe and reliable operation of the Interconnection Facilities; but which, in any case, could reasonably be expected to result in an Emergency Condition. Any condition or situation that results from lack of sufficient generating capacity to meet load requirements or that results solely from economic conditions shall not, standing alone, constitute an Abnormal Condition.

Acceleration Request:

“Acceleration Request” shall mean a request pursuant to Operating Agreement, Schedule 1, section 1.9.4A, and the parallel provisions of Tariff, Attachment K-Appendix, section 1.9.4A, to accelerate or reschedule a transmission outage scheduled pursuant to Operating Agreement, Schedule 1, section 1.9.2 or Operating Agreement, Schedule 1, section 1.9.4, and the parallel provisions of Tariff, Attachment K-Appendix, section 1.9.2 or Tariff, Attachment K-Appendix, section 1.9.4.

Additional Day-ahead Scheduling Reserves Requirement:

“Additional Day-ahead Scheduling Reserves Requirement” shall mean the portion of the Day-ahead Scheduling Reserves Requirement that is required in addition to the Base Day-ahead Scheduling Reserves Requirement to ensure adequate resources are procured to meet real-time load and operational needs, as specified in the PJM Manuals.

Affected System:

“Affected System” shall mean an electric system other than the Transmission Provider’s Transmission System that may be affected by a proposed interconnection or on which a proposed interconnection or addition of facilities or upgrades may require modifications or upgrades to the Transmission System.

Affected System Operator:

“Affected System Operator” shall mean an entity that operates an Affected System or, if the Affected System is under the operational control of an independent system operator or a regional transmission organization, such independent entity.

Affiliate:

”Affiliate” shall mean any two or more entities, one of which controls the other or that are under common control. “Control” shall mean the possession, directly or indirectly, of the power to direct the management or policies of an entity. Ownership of publicly-traded equity securities of another entity shall not result in control or affiliation for purposes of the Tariff or Operating Agreement if the securities are held as an investment, the holder owns (in its name or via intermediaries) less than 10 percent of the outstanding securities of the entity, the holder does not have representation on the entity's board of directors (or equivalent managing entity) or vice versa, and the holder does not in fact exercise influence over day-to-day management decisions. Unless the contrary is demonstrated to the satisfaction of the Members Committee, control shall be presumed to arise from the ownership of or the power to vote, directly or indirectly, ten percent or more of the voting securities of such entity.

Agreements:

"Agreements" shall mean the Amended and Restated Operating Agreement of PJM Interconnection, L.L.C., the PJM Open Access Transmission Tariff, the Reliability Assurance Agreement, and/or other agreements between PJM Interconnection, L.L.C. and its Members.

Ancillary Services:

"Ancillary Services" shall mean those services that are necessary to support the transmission of capacity and energy from resources to loads while maintaining reliable operation of the Transmission Provider's Transmission System in accordance with Good Utility Practice.

Annual Demand Resource:

"Annual Demand Resource" shall have the meaning specified in the Reliability Assurance Agreement.

Annual Energy Efficiency Resource:

"Annual Energy Efficiency Resource" shall have the meaning specified in the Reliability Assurance Agreement.

Annual Resource:

"Annual Resource" shall mean a Generation Capacity Resource, an Annual Energy Efficiency Resource or an Annual Demand Resource.

Annual Resource Price Adder:

"Annual Resource Price Adder" shall mean, for Delivery Years starting June 1, 2014 and ending May 31, 2017, an addition to the marginal value of Unforced Capacity and the Extended Summer Resource Price Adder as necessary to reflect the price of Annual Resources required to meet the applicable Minimum Annual Resource Requirement.

Annual Revenue Rate:

"Annual Revenue Rate" shall mean the rate employed to assess a compliance penalty charge on a

Curtailment Service Provider under Tariff, Attachment DD, section 11.

Annual Transmission Costs:

"Annual Transmission Costs" shall mean the total annual cost of the Transmission System for purposes of Network Integration Transmission Service shall be the amount specified in Attachment H for each Zone until amended by the applicable Transmission Owner or modified by the Commission.

Applicable Laws and Regulations:

"Applicable Laws and Regulations" shall mean all duly promulgated applicable federal, State and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority having jurisdiction over the relevant parties, their respective facilities, and/or the respective services they provide.

Applicable Regional Entity:

"Applicable Regional Entity" shall mean the Regional Entity for the region in which a Network Customer, Transmission Customer, New Service Customer, or Transmission Owner operates.

Applicable Standards:

"Applicable Standards" shall mean the requirements and guidelines of NERC, the Applicable Regional Entity, and the Control Area in which the Customer Facility is electrically located; the PJM Manuals; and Applicable Technical Requirements and Standards.

Applicable Technical Requirements and Standards:

"Applicable Technical Requirements and Standards" shall mean those certain technical requirements and standards applicable to interconnections of generation and/or transmission facilities with the facilities of an Interconnected Transmission Owner or, as the case may be and to the extent applicable, of an Electric Distributor, as published by Transmission Provider in a PJM Manual provided, however, that, with respect to any generation facilities with maximum generating capacity of 2 MW or less (synchronous) or 5 MW or less (inverter-based) for which the Interconnection Customer executes a Construction Service Agreement or Interconnection Service Agreement on or after March 19, 2005, "Applicable Technical Requirements and Standards" shall refer to the "PJM Small Generator Interconnection Applicable Technical Requirements and Standards." All Applicable Technical Requirements and Standards shall be publicly available through postings on Transmission Provider's internet website.

Applicant:

"Applicant" shall mean an entity desiring to become a PJM Member, or to take Transmission Service that has submitted the PJMSettlement credit application, PJMSettlement credit agreement and other required submittals as set forth in Tariff, Attachment Q.

Application:

“Application” shall mean a request by an Eligible Customer for transmission service pursuant to the provisions of the Tariff.

Attachment Facilities:

“Attachment Facilities” shall mean the facilities necessary to physically connect a Customer Facility to the Transmission System or interconnected distribution facilities.

Attachment H:

“Attachment H” shall refer collectively to the Attachments to the PJM Tariff with the prefix “H-” that set forth, among other things, the Annual Transmission Rates for Network Integration Transmission Service in the PJM Zones.

Auction Revenue Rights:

“Auction Revenue Rights” or “ARRs” shall mean the right to receive the revenue from the Financial Transmission Right auction, as further described in Operating Agreement, Schedule 1, section 7.4, and the parallel provisions of Tariff, Attachment K-Appendix, section 7.4.

Auction Revenue Rights Credits:

“Auction Revenue Rights Credits” shall mean the allocated share of total FTR auction revenues or costs credited to each holder of Auction Revenue Rights, calculated and allocated as specified in Operating Agreement, Schedule 1, section 7.4.3, and the parallel provisions of Tariff, Attachment K-Appendix, section 7.4.3.

Authorized Government Agency:

“Authorized Government Agency” means a regulatory body or government agency, with jurisdiction over PJM, the PJM Market, or any entity doing business in the PJM Market, including, but not limited to, the Commission, State Commissions, and state and federal attorneys general.

Avoidable Cost Rate:

“Avoidable Cost Rate” shall mean a component of the Market Seller Offer Cap calculated in accordance with Tariff, Attachment DD, section 6.

Balancing Congestion Charges:

"Balancing Congestion Charges" shall be equal to the sum of congestion charges collected from Market Participants that are purchasing energy in the Real-time Energy Market minus [the sum of congestion charges paid to Market Participants that are selling energy in the Real-time Energy Market plus any congestion charges calculated pursuant to the Joint Operating Agreement between the Midcontinent Independent Transmission System Operator, Inc. and PJM Interconnection, L.L.C. (PJM Rate Schedule FERC No. 38), plus any congestion charges calculated pursuant to the Joint Operating Agreement Among and Between New York Independent System Operator Inc. and PJM Interconnection, L.L.C. (PJM Rate Schedule FERC No. 45), plus any congestion charges calculated pursuant to agreements between the Office of the Interconnection and other entities, plus any charges or credits calculated pursuant to Operating Agreement, Schedule 1, section 3.8, and the parallel provisions of Tariff, Attachment K-Appendix, section 3.8, as applicable)].

Balancing Ratio:

"Balancing Ratio" shall have the meaning provided in Tariff, Attachment DD, section 10A.

Base Capacity Demand Resource:

"Base Capacity Demand Resource" shall have the meaning specified in the Reliability Assurance Agreement.

Base Capacity Demand Resource Constraint:

"Base Capacity Demand Resource Constraint" for the PJM Region or an LDA, shall mean, for the 2018/2019 and 2019/2020 Delivery Years, the maximum Unforced Capacity amount, determined by PJM, of Base Capacity Demand Resources and Base Capacity Energy Efficiency Resources that is consistent with the maintenance of reliability. As more fully set forth in the PJM Manuals, PJM calculates the Base Capacity Demand Resource Constraint for the PJM Region or an LDA, by first determining a reference annual loss of load expectation ("LOLE") assuming no Base Capacity Resources, including no Base Capacity Demand Resources or Base Capacity Energy Efficiency Resources. The calculation for 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 Installed Reserve Margin 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 Base Capacity Demand Resources and Base Capacity Energy Efficiency Resources (displacing otherwise committed generation) as interruptible from June 1 through September 30 and unavailable the rest of the Delivery Year in question and calculates the LOLE at each DR and EE level. The Base Capacity Demand Resource Constraint is the combined amount of Base Capacity Demand Resources and Base Capacity Energy Efficiency Resources, stated as a percentage of the unrestricted annual peak load, that produces no more than a five percent increase in the LOLE, compared to the reference value. The Base Capacity Demand Resource Constraint 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 forecasted peak load of the PJM Region or such LDA, reduced by the amount of load served under the FRR Alternative].

Base Capacity Demand Resource Price Decrement:

"Base Capacity Demand Resource Price Decrement" shall mean, for the 2018/2019 and 2019/2020 Delivery Years, a difference between the clearing price for Base Capacity Demand Resources and Base Capacity Energy Efficiency Resources and the clearing price for Base Capacity Resources and Capacity Performance Resources, representing the cost to procure additional Base Capacity Resources or Capacity Performance Resources out of merit order when the Base Capacity Demand Resource Constraint is binding.

Base Capacity Energy Efficiency Resource:

"Base Capacity Energy Efficiency Resource" shall have the meaning specified in the Reliability Assurance Agreement.

Base Capacity Resource:

"Base Capacity Resource" shall mean a Capacity Resource as described in Tariff, Attachment DD, section 5.5A(b).

Base Capacity Resource Constraint:

"Base Capacity Resource Constraint" for the PJM Region or an LDA, shall mean, for the 2018/2019 and 2019/2020 Delivery Years, the maximum Unforced Capacity amount, determined by PJM, of Base Capacity Resources, including Base Capacity Demand Resources and Base Capacity Energy Efficiency Resources, that is consistent with the maintenance of reliability. As more fully set forth in the PJM Manuals, PJM calculates the above Base Capacity Resource Constraint for the PJM Region or an LDA, by first determining a reference annual loss of load expectation ("LOLE") assuming no Base Capacity Resources, including no Base Capacity Demand Resources or Base Capacity Energy Efficiency Resources. The calculation for the PJM Region uses the weekly load distribution from the Installed Reserve Margin study for the Delivery Year in question (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 weekly load distribution (based on the Installed Reserve Margin study and 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 Installed Reserve Margin 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. Additionally, for the PJM Region and relevant LDA calculation, the weekly capacity distributions are adjusted to reflect winter ratings.

For both the PJM Region and LDA analyses, PJM models the commitment of an amount of Base Capacity Demand Resources and Base Capacity Energy Efficiency Resources equal to the Base Capacity Demand Resource Constraint (displacing otherwise committed generation). PJM then models the commitment of varying amounts of Base Capacity Resources (displacing otherwise committed generation) as unavailable during the peak week of winter and available the rest of the Delivery Year in question and calculates the LOLE at each Base Capacity Resource level. The Base Capacity Resource Constraint is the combined amount of Base Capacity Demand Resources, Base Capacity Energy Efficiency Resources and Base Capacity Resources, stated as a percentage of the unrestricted annual peak load, that produces no more than a ten percent increase in the LOLE, compared to the reference value. The Base Capacity Resource Constraint 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 [one minus the pool-wide average EFORd] times [the forecasted peak load of the PJM Region or such LDA, reduced by the amount of load served under the FRR Alternative].

Base Capacity Resource Price Decrement:

"Base Capacity Resource Price Decrement" shall mean, for the 2018/2019 and 2019/2020 Delivery Years, a difference between the clearing price for Base Capacity Resources and the clearing price for Capacity Performance Resources, representing the cost to procure additional Capacity Performance Resources out of merit order when the Base Capacity Resource Constraint is binding.

Base Day-ahead Scheduling Reserves Requirement:

"Base Day-ahead Scheduling Reserves Requirement" shall mean the thirty-minute reserve requirement for the PJM Region established consistent with the Applicable Standards, plus any additional thirty-minute reserves scheduled in response to an RTO-wide Hot or Cold Weather Alert or other reasons for conservative operations.

Base Load Generation Resource

"Base Load Generation Resource" shall mean a Generation Capacity Resource that operates at least 90 percent of the hours that it is available to operate, as determined by the Office of the Interconnection in accordance with the PJM Manuals.

Base Offer Segment:

"Base Offer Segment" shall mean a component of a Sell Offer based on an existing Generation

Capacity Resource, equal to the Unforced Capacity of such resource, as determined in accordance with the PJM Manuals. If the Sell Offers of multiple Market Sellers are based on a single Existing Generation Capacity Resource, the Base Offer Segments of such Market Sellers shall be determined pro rata based on their entitlements to Unforced Capacity from such resource.

Base Residual Auction:

"Base Residual Auction" shall mean the auction conducted three years prior to the start of the Delivery Year to secure commitments from Capacity Resources as necessary to satisfy any portion of the Unforced Capacity Obligation of the PJM Region not satisfied through Self-Supply.

Batch Load Demand Resource:

"Batch Load Demand Resource" shall mean a Demand Resource that has a cyclical production process such that at most times during the process it is consuming energy, but at consistent regular intervals, ordinarily for periods of less than ten minutes, it reduces its consumption of energy for its production processes to minimal or zero megawatts.

Behind The Meter Generation:

"Behind The Meter Generation" shall refer to a generation unit that delivers energy to load without using the Transmission System or any distribution facilities (unless the entity that owns or leases the distribution facilities has consented to such use of the distribution facilities and such consent has been demonstrated to the satisfaction of the Office of the Interconnection); provided, however, that Behind The Meter Generation does not include (i) at any time, any portion of such generating unit's capacity that is designated as a Generation Capacity Resource; or (ii) in an hour, any portion of the output of such generating unit that is sold to another entity for consumption at another electrical location or into the PJM Interchange Energy Market.

Black Start Service:

"Black Start Service" shall mean the capability of generating units to start without an outside electrical supply or the demonstrated ability of a generating unit with a high operating factor (subject to Transmission Provider concurrence) to automatically remain operating at reduced levels when disconnected from the grid.

Border Yearly Charge:

"Border Yearly Charge" shall mean the yearly charge determined in accordance with Tariff, Schedule 7.

Breach:

"Breach" shall mean the failure of a party to perform or observe any material term or condition of Tariff, Part IV or Part VI, or any agreement entered into thereunder as described in the relevant provisions of such agreement.

Breaching Party:

"Breaching Party" shall mean a party that is in Breach of Tariff, Part IV or Part VI and/or an agreement entered into thereunder.

Business Day:

"Business Day" shall mean a day in which the Federal Reserve System is open for business and is not a scheduled PJM holiday.

Buy Bid:

"Buy Bid" shall mean a bid to buy Capacity Resources in any Incremental Auction.

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: * AEC: 0.463 UGI: *	PPL: * AEC: 0.039 UGI: *	PPL: * AEC: 0.0089 UGI: *	PPL: * AEC: 0.0018 UGI: *	PPL: * AEC: 0.0013 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	20.847	1.737	0.4009	0.0802	0.0573
Rockland Zone	42.548	3.546	0.8182	0.1636	0.1169
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	15.674	1.306	0.3014	0.0603	0.0431
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) **Formula for Determining the Border Yearly Charge:**

(A) 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. Where the Revenue Requirement of a Transmission Owner is determined pursuant to a formula rate, 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; or (iv) other agreements for transmission service over PJM Transmission Facilities; 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;

SZPL is the sum of each Zone's annual peak load from the most recently completed 12-month period ending October 31.

(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 December 1 of each year, the Transmission Provider shall post on the Transmission Provider's website the inputs and calculations used to determine the Border Yearly Charge. The posting shall also include a variance report, which will document how the inputs used to determine the Border Yearly Charge to go into effect as of January 1 have changed from the inputs used to determine the Border Yearly Charge then in effect, including any changes in the sources of such inputs. 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) If, at any time, it is brought to the Transmission Provider's attention or the Transmission Provider believes that the Border Yearly Charge may be based on an incorrect input or calculation and the Transmission Provider concludes that an incorrect input or calculation was used to determine the Border Yearly Charge, the Transmission Provider shall post on the Transmission Provider's website the correction to any inputs or calculations used to determine the Border Yearly Charge and a variance report documenting the changes from the Border Yearly Charge that was based on an incorrect input or calculation. If such correction affects a Border Yearly Charge currently in effect, the correction shall take effect on the first day of the month that begins at least 30 days after the correction is posted. To the extent permitted by section 10.4 of this Tariff, PJMSettlement, on behalf of itself or as agent for PJM, shall adjust the bills of Transmission Customers with respect to any month affected by the correction. Any correction under this subsection (D) shall 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. Nothing in this subsection (D) shall authorize an inquiry into the data or information filed or posted by a Transmission Owner which the Transmission Provider used to determine the Border Yearly Charge.

(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) The Border Yearly Charge determined under this section (11) and any charge for Point-to-Point Transmission Service at the Border of PJM for shorter periods based on the Border Yearly Charge include all Transmission Enhancements Charges applicable to Point-to-Point Transmission Service at the Border of PJM. Payment of the charges set forth in this Schedule does not relieve any Transmission Customer or Merchant Transmission Facility of responsibility for Transmission Enhancement Charges assigned to such Merchant Transmission Facility pursuant to Schedule 12 of the PJM 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 holding Firm Transmission Withdrawal Rights 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 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 8
Non-Firm Point-To-Point Transmission Service

1) The Transmission Customer shall pay for Non-Firm Point-To-Point Transmission Service up to the sum of the applicable charges set forth below for the Point of Delivery:

Summary of Charges

Point of Delivery	Monthly Charge ($/kW)	Weekly Charge ($/kW)	Daily On-Peak[1/] Charge ($/kW)	Daily Off-Peak[2/] Charge ($/kW)	Hourly On-Peak[3/] Charge ($/MWh)	Hourly Off-Peak[4/] Charge ($/MWh)
Border of PJM[5/]	Border Yearly Charge /12	Border Yearly Charge /52	Weekly Charge /5	Weekly Charge /7	Border Yearly Charge /4160	Border Yearly Charge /8760
AE Zone	1.984	0.4580	0.0920	0.0650	5.7	2.72
BG&E Zone	1.306	0.3010	0.0600	0.0430	3.8	1.80
Delmarva Zone	1.615	0.3730	0.0750	0.0530	4.6	2.21
JCPL Zone	1.259	0.2906	0.0581	0.0414	3.6	1.73
MetEd Zone	1.259	0.2906	0.0581	0.0414	3.6	1.73
Penelec Zone	1.259	0.2906	0.0581	0.0414	3.6	1.73
PECO Zone	2.189	0.5051	0.1010	0.0722	6.3	3.01
PPL Zone: Total charge is the sum of the components	PPL: * AEC: 0.039 UGI: *	PPL: * AEC: 0.0089 UGI: *	PPL: * AEC: 0.0018 UGI: *	PPL: * AEC: 0.0013 UGI: *	PPL: * AEC: 0.11 UGI: *	PPL: * AEC: 0.05 UGI: *
Pepco Zone	1.750	0.4040	0.0810	0.0580	5.0	2.40

Point of Delivery	Monthly Charge ($/kW)	Weekly Charge ($/kW)	Daily On-Peak[1/] Charge ($/kW)	Daily Off-Peak[2/] Charge ($/kW)	Hourly On-Peak[3/] Charge ($/MWh)	Hourly Off-Peak[4/] Charge ($/MWh)
PSE&G Zone	1.975	0.4557	0.0911	0.0651	5.7	2.71
AP Zone	1.737	0.4009	0.0802	0.0573	5.0	2.39
Rockland Zone	3.546	0.8182	0.1636	0.1169	10.2	4.87
ComEd Zone[6/]	[7/]					
AEP East Zone[8/]	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	Attachment H-14 and Attachment H-20	Attachment H-14 and Attachment H-20	Attachment H-14 and Attachment H-20
Dayton Zone	1.306	0.3014	0.0603	0.0431	3.77	1.79
Duquesne Zone	1.18	0.27	0.0540	0.0386	3.38	1.61
Dominion Zone[9/]						
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	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	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	Rate Pursuant to Attachment H-24
OVEC Zone	0.43	0.10	0.02	0.014	1.24	0.58

* 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/ 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.

5/ 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.

6/ 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.

7/ The charges for the ComEd zone are posted on PJM's website. In addition to the 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.

8/ The rates for non-firm point-to-point transmission service in the AEP Zone will be charged at the monthly, weekly, daily or hourly 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.

9/ The service period charges rounded to four decimal places for the Dominion Zone are as follows:

Monthly Charge - $/kW/month = the formula rate for Network Integration Transmission Service as described in Attachment H-16 and Attachment H-16A divided by 12 divided by 1000 kW/MW;

Weekly Charge - $/kW/week = 12 times Monthly 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;

Hourly On-Peak Charge - $/MWh = Daily On-Peak Charge / 16 hours *1000 kW/ MW;

Hourly Off-Peak Charge - $/ MWh = Daily Off-Peak Charge / 24 hours *1000 kW/ MW.

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) **Hourly delivery:** The basic charge shall be that agreed upon by the Parties at the time this service is reserved and in no event shall exceed the amounts set forth above for a Point of Delivery.

The total demand charge in any day, pursuant to a reservation for Hourly delivery, shall not exceed the rate specified in section (1) above for daily service times the highest amount in kilowatts of Reserved Capacity in any hour during such day. In addition, the total demand charge in any week, pursuant to a reservation for Hourly or Daily delivery, shall not exceed the rate specified in section (1) above for weekly service times the highest amount in kilowatts of Reserved Capacity in any hour during such week.

4) **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 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.

5) **Congestion, Losses and Capacity Export:** A Transmission Customer desiring Non-Firm Point-to-Point Transmission Service may elect to pay transmission congestion charges. If the Transmission Customer so elects, it shall either (a) if the applicable Transmission Congestion Charge as calculated pursuant to Attachment K is positive, pay the higher of the applicable Transmission Congestion Charge or the applicable rate under section (1) above, or (b) if the applicable Transmission Congestion Charge as calculated pursuant to Attachment K is negative, pay or be credited the sum of the applicable Transmission Congestion Charge and the rate under section (1) above. 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 for any applicable charges, and receive any applicable credits, for such a customer pursuant to Attachment DD.

6) **Other Supporting Facilities and Taxes:** In addition to the charges 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 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.

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 of Schedule 7, 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) **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.

ATTACHMENT H-A

Annual Transmission Rates -- Non-Zone Network Load for Network Integration Transmission Service

1. The rate for Network Integration Transmission Service to Non-Zone Network Load is the Border Yearly Charge established pursuant to Schedule 7 of the PJM Tariff stated in dollars per megawatt per year.

2. The Transmission Provider shall update the rate for Network Integration Transmission Service to Non-Zone Network Load annually effective January 1 in accordance with the procedures for updating the Border Yearly Charge set forth in Schedule 7. Once updated, the rate for Network Integration Transmission Service to Non-Zone Network Load shall remain in effect for the remainder of the calendar year in accordance with Schedule 7.

3. The rate for Network Integration Transmission Service to Non-Zone Network Load determined under this Attachment H-A includes all Transmission Enhancements Charges applicable to such service, but does not does not relieve any Transmission Customer or Merchant Transmission Facility of responsibility for Transmission Enhancement Charges assigned to such Merchant Transmission Facility pursuant to Schedule 12 of the PJM Tariff.

4. Customers taking Network Integration Transmission Service to Non-Zone Network Load utilizing a Merchant Transmission Facility holding Firm Transmission Withdrawal Rights shall receive a credit determined in accordance with the formula set forth in Section (11) of Schedule 7.

5. The rate in section 1 shall be effective until modified by a filing under Section 205 of the Federal Power Act authorized by the PJM Transmission Owners Agreement-Administrative Committee in accordance with Section 8.5 of the Consolidated Transmission owners Agreement and approved by the Commission.

6. In addition to the rate set forth in section 1 of this attachment, the Network Customer purchasing Network Integration Transmission Service shall pay for transmission congestion charges, in accordance with the provisions of the Tariff, and any amounts necessary to reimburse the Transmission Owners for any amounts payable by them 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.

Exhibit D

Declaration of Jonathan Kern

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

PJM Interconnection, L.L.C.	)	**Docket No. ER19-___-000**

DECLARATION
OF
JONATHAN KERN

I. INTRODUCTION

1. My name is Jonathan Kern. I am a Senior Lead Engineer in Transmission Planning at PJM Interconnection, L.L.C. ("PJM"). My business address is 2750 Monroe Blvd, Audubon, Pennsylvania 19403.

2. As a Senior Lead Engineer in Transmission Planning, I am responsible for performing the electrical studies associated with the development of the Regional Transmission Expansion Plan, identifying transmission system additions and improvements for the PJM Region. I have been employed by PJM and worked in Transmission Planning since June 1998 after graduating from Louisiana State University with a Master's Degree in Electrical Engineering.

II. PURPOSE

3. The purpose of my Declaration is to provide information to assist the Commission's consideration of the proposed revisions to Schedule 7, Schedule 8, and Attachment H-A of the PJM Open Access Transmission Tariff ("Tariff") submitted by the PJM Transmission Owners in this docket (together, the "Proposed Revisions"). Specifically, the Proposed Revisions replace the existing stated rates for both Point-to-Point

Transmission Service to the Border of PJM ("Border Rate Service") and Network Integration Transmission Service for Non-Zone Network Load ("Non-Zone Service") with a methodology that will allow PJM to update these rates on an annual basis beginning with the calendar year 2020.

4. As part of the Proposed Revisions, the PJM Transmission Owners are proposing to revise Schedule 7 of the PJM Tariff to implement a method to calculate the "Border Yearly Charge," or "BYC," which is the basis for the kW-year charge for Border Rate Service and MW-year charge for Non-Zone Service. As set forth in the proposed revisions to Schedule 7, the BYC will be the sum of the annual transmission revenue requirements of each PJM Transmission Owner, as listed in Attachment H to the PJM Tariff (referred to as the "Sum of Attachment H Revenue Requirements" or "SHRR"), divided by the sum of all Zonal peak loads (referred to as "SZPL").

5. The Proposed Revisions also require that PJM calculate the BYC annually to ensure that the BYC accurately reflects changes in revenue requirements and Zonal peak loads going forward. Specifically, the revisions to Schedule 7 require that PJM post the updated BYC no later than December 1 of each year, along with all of the inputs necessary to calculate the BYC. The updated BYC will then go into effect on January 1 of the following year.

6. In connection with the PJM Transmission Owners' filing of the Proposed Revisions, I have prepared a set of spreadsheets which include all of the inputs necessary to calculate the BYC (the "BYC Workbook"). The BYC Workbook is included as Exhibit C to the PJM Transmission Owners' transmittal letter. The BYC Workbook is the template that PJM will use each year to update the BYC. The BYC Workbook will be posted to PJM's website as part of the annual BYC update, and will include both the inputs necessary to

calculate the BYC and references to the specific Transmission Owner rate filings from which the inputs were derived. The BYC Workbook will also include a variance report showing any changes to the BYC and underlying inputs from year to year. This will allow interested stakeholders to review the data used to calculate the BYC and understand exactly how PJM calculated the BYC for any given year.

7. In order to demonstrate how PJM will calculate the BYC, I have populated the BYC Workbook included as Exhibit C with actual inputs from each PJM Transmission Owner's rate filing that would become effective no later than January 1, 2019 and that was filed or posted to the PJM website by the Transmission Owner as of October 31, 2018. Importantly, the populated BYC Workbook is only an example of how the BYC will be calculated, and is not reflective of what the actual BYC will be for the 2020 calendar year. Once the Commission approves the Proposed Revisions, PJM will calculate the BYC for the 2020 calendar year using the revenue requirements filed or posted to the PJM website as of October 31, 2019.

8. Below I describe how I compiled the information included in the BYC Workbook, and how PJM will update the BYC annually.

III. CALCULATION OF THE BYC

9. The purpose of the BYC Workbook is to include all of the information necessary to calculate the BYC in one accessible place. As described in greater detail below, the BYC Workbook is split into eight tabs. Tabs one through four in the BYC Workbook are used to calculate the BYC for a given rate year. Tabs five through eight make up a variance report that shows the changes to the BYC from one year to the next. I discuss tabs one through four (calculation of the BYC) in this section.

10. The first tab ("Border Rate") shows the BYC for the relevant rate year, calculated by dividing the numerator in the second tab (the SHRR) by the denominator in the third tab (the SZPL). The second tab ("Numerator Calculations") includes all of the inputs necessary to calculate the SHRR, including each Transmission Owner's revenue requirement for the relevant rate year and any applicable revenue credits that are included in the revenue requirement pursuant to Schedule 7 § 11. The third tab ("Denominator Calculations") includes each Zone's annual Network Service Peak Load ("NSPL") used to calculate the SZPL. The fourth tab ("BYC Inputs") includes citations to the relevant data inputs from each Transmission Owner's rate filing that PJM uses to calculate the BYC.

11. When taken together, the tabs in the BYC Workbook allow for easy updating of the BYC on an annual basis, and also allow interested parties to review the inputs and replicate PJM's calculations. As noted above, I have populated the attached BYC Workbook with 2018 inputs as an example of how the BYC will be calculated annually. I describe each of the tabs in detail below.

a. Border Rate.

12. The first tab of the BYC Workbook is titled "Border Rate." This tab includes the final BYC for a given calendar year, calculated using the inputs from the other tabs of the BYC Workbook. Once PJM calculates the BYC, it will use this amount to calculate the per kW charge for firm and non-firm service reservations under Schedules 7 and 8 of the PJM Tariff and the per MW charge under Attachment H-A for Non-Zone Network Service.

b. Numerator Calculations

13. The second tab of the BYC Workbook is titled "Numerator Calculations," and includes all of the information used by PJM to calculate the sum of all Transmission Owner revenue requirements (SHRR), which is the numerator used to calculate the BYC for Border Rate Service and Non-Zone Service. The Numerator Calculations tab is made up of columns A-K and includes all of the inputs required to calculate the SHRR. I discuss each of the columns below.

14. Columns "A" and "B" include the short names designated by PJM and the official names of each of the Transmission Owners. Column "C" indicates the location of each Transmission Owner's Network Integration Transmission Service ("NITS") rate, which is filed as part of PJM Tariff. For example, as indicated in Column "C," the NITS Rate for Atlantic City Electric Company is found at Attachment H-1 to the PJM Tariff, while the NITS Rate for UGI Utilities, Inc. is found in Attachment H-8 to the PJM Tariff.

15. Column "D" indicates whether each Transmission Owner's NITS Rate is calculated using a formula rate or a stated rate, and includes an active link to each Transmission Owner's rate, which is accepted by the Commission and posted to the PJM website. In order to prepare this column, I reviewed each Transmission Owner's rate on file with the Commission, and then included the appropriate input for each Transmission Owner. For example, for Allegheny Power ("APS"), Column D indicates that APS's NITS Rate is "Stated," meaning that APS's revenue requirement is specifically stated in Attachment H-11 of the PJM Tariff and is not derived by the use of a set of formulas with inputs that are updated annually. Importantly, the inputs in Column "D" are hyperlinks to the location of each Transmission Owner's rate on the PJM website or in the Commission's eLibrary

database. Thus, clicking on the word "Stated" in APS' Column "D" directs you APS' Commission-approved stated revenue requirement in Attachment H-11 of the PJM Tariff.

16. Column "E" indicates the start date for each Transmission Owner's rate year applicable to the SHRR calculation. For any given year, the Border Rate is calculated based on the rates filed with the Commission or posted to the PJM website as of October 31 of the prior year and in effect no later than January 1 of the year for which the Border Rate is applicable. For example, the SHRR for Border Rate service for the 2020 calendar year will be based on each Transmission Owner's revenue requirement filed or posted to the PJM website by October 31, 2019 and effective no later than January 1, 2020.

17. Column "F" includes the "Border Rate TS," or "Border Rate for Transmission Service" which is each Transmission Owner's total revenue requirement for the purpose of calculating the BYC. As described below, the Border Rate TS includes each Transmission Owner's revenue requirement for NITS and, as applicable, revenue other than NITS charges, including (i) Transmission Enhancement Charges for Regional Transmission Expansion Plan projects that have cost responsibility assigned to other Zones, (ii) Border Rate revenue, (iii) Attachment H-A revenue, and (iv) other revenue for transmission service not paid by the Transmission Owner's NITS customers. These four sources of additional revenue are referred to collectively as "Revenue Credits" since they are credited to reduce the Transmission Owner's charge for NITS to its Zonal customers. The sum of all the inputs to Column "F" yields the total numerator used to calculate the BYC.

18. Column "G" includes each Transmission Owner's revenue requirement for NITS service, which is taken directly from each Transmission Owner's formula rate or stated

rate, as applicable. For those Transmission Owners with formula rates, the "BYC Inputs" tab includes a reference to the specific location in each Transmission Owner's formula rate filing where the NITS rate is calculated. For Transmission Owners who do not reduce their revenue requirement by the amount of any Revenue Credits, the revenue requirement in Column "G" and the Border Rate TS in Column "F" are identical.

19. Columns "H" through "K" include any Revenue Credits that PJM adds back into a Transmission Owner's NITS rate when calculating the Border Rate TS in Column "F." The inclusion of these Revenue Credits as separate inputs to the BYC calculation depends on whether a Transmission Owner's formula rate includes these Revenue Credits when calculating the NITS rate. Some Transmission Owner formula rates do not use Revenue Credits to reduce the revenue requirement in calculating NITS. Rather, PJM applies these Revenue Credits directly to NITS customers as a separate line item on their bills.

20. However, other formula rates factor in Revenue Credits as a credit when calculating the revenue requirement, such that the Transmission Owner's revenue requirement is reduced by the amount of the Revenue Credits prior to determining the NITS rate. For these formula rates, proposed Schedule 7 § 11 requires that PJM increase a Transmission Owner's revenue requirement by the amount of any Revenue Credits used to reduce the NITS charge to Zonal Network customers. Restoring these Revenue Credits ensures that there is no understatement of Transmission Owner revenue requirements when calculating the aggregate PJM transmission revenue requirement for the purposes of calculating the BYC. For example, the PPL Electric Utilities Corporation ("PPL") revenue requirement is reduced by the "Schedule 12" and "P2P TS" Revenue Credits

specified in columns "H" and "I", respectively, and, as a result, these Revenue Credit amounts are added to the NITS revenue requirement in Column "G" to calculate PPL's Border Rate TS in Column "F."

21. Similar to the references provided for the NITS rate in Column G, the "BYC Inputs" tab of the Workbook includes references to the specific lines in each Transmission Owner's formula rate filing where the various Revenue Credits are calculated. Using PPL as an example, the BYC Inputs tab indicates that the "Schedule 12" amounts in Column "H" come from "3-Revenue Credits" tab, which is one of the 11 tabs in PPL's Excel-based formula rate and is the value specified in the PJM Tariff at Attachment H-8G, Attachment 3 to Appendix A, Line 3.

c. Denominator Calculations

22. The third tab of the BYC Workbook is titled "Denominator Calculations" and includes the current effective NSPLs for each Zone used by PJM to calculate the sum of all Zonal peak loads, or SZPL. The SZPL is the sum of the official peak loads of each PJM transmission zone in PJM, which are currently used by PJM in order to calculate the NITS rate for each Zone. The Zonal peak loads are effective from November 1 of a given year through October 31 of the following year. PJM receives the Zonal peak loads from each Transmission Owner shortly after October 31 of each year. PJM will confirm and finalize each Zonal peak load by December 1 for inclusion in the Border Rate. The Zonal peak loads are also separately posted to PJM's website, under the "Network Service Peak Loads" section located at the following page: https://www.pjm.com/markets-and-operations/billing-settlements-and-credit.aspx.

23. The fourth tab of the BYC Workbook is titled "BYC Inputs." As discussed above, this tab includes specific references to the formula rate inputs used to calculate a Transmission Owner's NITS rate and any applicable Revenue Credits. Each year, PJM will review each Transmission Owner's formula rate filing to ensure that the referenced line items in each formula rate filing remain accurate, and will update the references accordingly. As noted above, the purpose of the "BYC Inputs" tab is to provide interested stakeholders with all of the information necessary to understand the specific inputs that make up the Border Rate and, if desired, replicate PJM's calculation of the BYC for any given year.

IV. BYC VARIANCE REPORT

24. As noted above, tabs five through eight comprise a variance report which shows any changes to the BYC from the BYC calculated for the prior rate year. Each of these tabs is substantially the same as its counterpart in tabs one through four, but will only show any increases or decreases to the inputs used to calculate the BYC when compared to the prior year's BYC. For example, fifth tab in the BYC Workbook is titled "Border Rate Variance Report," and shows the change in the BYC from the prior year. An increase is represented as positive number, and a decrease is represented by a negative number. For example, if the BYC increases by $500 from Rate Year 2020 to Rate Year 2021, the Variance Report in tab five of the 2021 Border Rate Update would show "$500").

25. The sixth and seventh tabs to the BYC Workbook are titled "Numerator Variance Report" and "Denominator Variance Report," respectively. Each of these tabs shows the changes to the numerator inputs and denominator inputs included in tabs two and three of the BYC Workbook and described in detail above. Importantly, the inputs within each of

these tabs will be left blank unless there is a change (positive or negative) to the specific input. For example, if Atlantic City Electric Company's revenue requirement for NITS decreases by $1,000 from 2020 to 2021, the Numerator Variance Report would show a "-$1,000" in Column G. However, if there is no change in Atlantic City Electric Company's revenue requirement, Column G would be left blank. The same is true for the Denominator Variance Report in the seventh tab.

26. The eighth tab is titled "BYC Inputs Variance Report." The purpose of this tab is to highlight any changes in the locations of the inputs that make up the Border Rate from one rate year to the next. For example, if a transmission owner updates its formula rate template and the line item for Non-Zone Load Revenue Credits changes from line 10 to line 11 of the formula rate template, the BYC Inputs Variance Report would reflect that change. Like the other variance report tabs, the BYC Inputs Variance Report tab will only show changes to the existing locations. A blank cell in the BYC Inputs Variance Report tab indicates no change to the location of the inputs from the prior rate year.

V. ANNUAL BORDER RATE UPDATE

27. Each year, PJM will calculate the BYC for the following year by populating the BYC Workbook with the inputs described above and calculating the SHRR, SZPL, and BYC using those inputs. No later than December 1 of each year, PJM will post on its website an updated version of the BYC Workbook showing all of the inputs and calculations used to determine the BYC and any changes to the BYC from the prior year. The updated BYC will go into effect on January 1 of the following year.

28. When calculating the BYC for a given rate year, PJM will use the Transmission Owner revenue requirements that have been filed with the Commission or posted to the PJM

website as of October 31 and are effective no later than January 1 of the following year. The October 31 "cut-off date" is necessary to afford PJM sufficient time to compile and verify all of the input data necessary to calculate the BYC prior to posting the updated BYC on December 1. If, after the October 31 cut-off date, a Transmission Owner files or posts a correction to its revenue requirement that was timely submitted, PJM will use its best efforts to incorporate the correction, provided there is sufficient time to meet the December 1 BYC posting date. Additionally, any other Transmission Owner-initiated changes to its revenue requirement (including true-up adjustments), changes to formula rate updates ordered by the Commission and implemented through true-up adjustments, or changes resulting from a change to the number of Transmission Owners in PJM that occur after the October 31 cut-off date will be implemented in the following year's update.

29. By way of example, when calculating the BYC for the Border Rate in effect beginning on January 1, 2020, PJM will use the revenue requirements included in formula rate annual updates filed with the Commission or posted to PJM's website as of October 31, 2019 and effective no later than January 1, 2020. For those Transmission Owners with stated rates, PJM will use the stated rate approved by the Commission as of October 31, 2019. For the denominator, PJM will use the Zonal peak loads provided to PJM that are effective from November 1, 2018 through October 31, 2019. Once PJM calculates the BYC, it will post the updated BYC and the BYC Workbook on December 1, 2019. The BYC and associated rates for Border Rate Service and Non-Zone Service will go into effect as of January 1, 2020.

V. CONCLUSION

30. This concludes my Declaration.

VERIFICATION

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge, information and belief.

Dated this 10th day of June, 2019.

Jonathan Kern

Jonathan Kern