

**Notice of Transmission Owners Consultation with the Members Committee
Regarding Proposed Update and Implementation of a Formula for Future Updates
Of the Schedules 7 and 8 and Attachment H-A
(December 3, 2018)**

Pursuant to Section 7.3.2 of the Consolidated Transmission Owners Agreement (CTOA), the CTOA Administrative Committee hereby initiates consultation with the PJM Members Committee with regard to a proposed update of the rates for Point-to-Point Transmission Service to the Border of PJM under Schedules 7 and 8 and the Annual Transmission Rate for Network Integration Transmission Service (“NITS”) to Non-Zone Network Load under Attachment H-A of the PJM Tariff. The PJM Transmission Owners propose to update these rates to reflect the current cost of providing this service and to establish a single formula for updating these rates annually in the future. Discussed below is the background and history of these transmission rates and the PJM Transmission Owners’ proposal for updating them.

Service to the PJM Border Under Schedules 7 and 8.

Schedule 7 of the PJM Tariff sets forth the rates, terms and conditions for Long-Term and Short-Term Firm Point-to-Point Transmission Service. Rates are established for delivery to each PJM Transmission Zone and to the Border of PJM. The proposed filing concerns only the rate for delivery to the Border of PJM (“Border Rate”), which includes transmission service through PJM to a neighboring region, such as the New York Independent System Operator. This rate is often referred to as the “through and out rate.” The rates for delivery to Zones in PJM are set by the Transmission Owner(s) in each Zone. The rates set forth in Schedule 7 vary by the length and nature of the capacity reservation: Yearly, Monthly, Weekly, Daily On-Peak and Daily Off-Peak. Each, however, is a function of the charge for yearly service (“Border Yearly Charge”) as follows:

$$\text{Monthly Charge} = \text{Yearly Charge} / 12$$

$$\text{Weekly Charge} = \text{Yearly Charge} / 52$$

$$\text{Daily On-Peak} = \text{Weekly Charge} / 5$$

$$\text{Daily Off-Peak} = \text{Weekly Charge} / 7$$

In addition to the enumerated charges set forth in Section 1, Schedule 7 provides that transmission customers are also subject to Congestion, Losses and Capacity Export charges (Section 4), charges for Other Supporting Facilities and Taxes (Section 5) and Transmission Enhancement Charges (“TECs”), *i.e.*, charges for transmission constructed pursuant to PJM’s Regional Transmission Expansion Plan (“RTEP”) assessed under Schedule 12 to the PJM Tariff (Section 7).¹ Under an agreement resolving some issues arising out of the integration of AEP, Commonwealth Edison and Dayton Power and Light into PJM, since December 1, 2004 there is

¹ Schedule 7 also lists a “Transitional Revenue Neutrality Charge” which is no longer applicable.

no charge for points of delivery to the Midcontinent Independent System Operator, Inc. (“MISO”).²

The distribution of revenue from firm Point-to-Point Transmission Service to the Border of PJM varies by Zone. Transmission Owners with formula rates either credit this revenue in determining their Zonal NITS rate or credit it directly to NITS customers and any firm Point-to-Point customers taking service to the Transmission Owner’s Zone in the form of a reduction on the customers’ PJM monthly invoices. For Transmission Owners with stated rates, revenue from firm Point-to-Point Transmission Service to the Border of PJM is taken into account when rates are updated through a filing with the Federal Energy Regulatory Commission (“FERC”).

Schedule 8 of the PJM Tariff sets forth the rates, terms and conditions for Non-Firm Point-to-Point Transmission Service. The Border Rates are the same rates as set forth in Schedule 7 with the addition of Hourly On-Peak and Off-Peak Rates as follows:

$$\text{Hourly On-Peak Charge} = \text{Yearly Charge} / 4160$$

$$\text{Hourly Off-Peak Charge} = \text{Yearly Charge} / 8760$$

Notwithstanding the listed Tariff rates, PJM charges a uniform discounted rate for non-firm service of \$0.67 per MWH.³ Under Section 27A of the PJM Tariff revenue from Non-Firm Point-to-Point Transmission Service is distributed to network and firm Point-to-Point Transmission Service customers in proportion to their Demand Charges. Like Schedule 7, Schedule 8 provides that transmission customers are also subject to Congestion, Losses and Capacity Export charges, charges for Other Supporting Facilities and Taxes, and TECs.

At the time PJM was established as an independent system operator in 1997, the Border Rate was determined by dividing the sum of all Zonal NITS revenue requirements set forth in Attachment H of the PJM Tariff by the sum of Zonal average monthly peak loads (“12-CP”).⁴ For several years after 1997, the Border Rate was updated periodically to reflect changes in a Zonal Transmission Owner’s revenue requirement or the admission of a new Transmission Owner into PJM. The Border Rate was last updated in 2004 when Commonwealth Edison joined PJM. It has not been updated to reflect changes in revenue requirements in existing Zones or the addition of new Zones since 2004. In particular, no update has occurred since the introduction of

² *Midwest Indep. Transmission Sys. Operator, Inc.*, 106 FERC ¶ 61,262 (2004) at P 6 (approving “The Going-Forward Principles and Procedures” which were attached to the Chief Administrative Law Judge's March 5, 2004 report to FERC in Docket Nos. EL02-111-004 and EL03-312-002. See *Midwest Indep. Transmission Sys. Operator, Inc.*, 106 FERC ¶ 63,024 (2004)).

³ PJM Manual 27, Section 6.1.2.

⁴ The calculation was alternatively described as a weighted average of Zonal Point-to-Point rates, which yields the same result.

Zonal formula rates in PJM in 2006. The current Border Rate is based on a Border Yearly Charge of \$18,888 per kW-year or \$18,880 per MW-year.⁵

The current Border Rate does not include TECs. Although Section 7 of Schedules 7 and 8 provide for the addition of TECs, they have not been uniformly assessed to Border Rate transactions given the uncertainty over which TECs are applicable. TECs are assessed based on PJM's assignment of cost responsibility to NITS and firm Point-to-Point transmission customers in the various Zones in accordance with the rules set out in Schedule 12 of the Tariff.⁶ While there is no specific cost responsibility assignment to firm Point-to-Point service to the border of PJM, FERC recently clarified that the TECs applicable to the Zone from which the border transaction leaves PJM should apply to such service.⁷

Service to Non-Zone Network Load Under Attachment H-A.

PJM provides NITS to loads outside of the PJM Zones under Attachment H-A. Non-Zone NITS is service to an outside load, such as a municipal or cooperative customer, utilizing PJM resources. The current Non-Zone NITS rate is \$14,714 per megawatt per year. The Non-Zone NITS rate was initially calculated as the sum of the Zonal Revenue Requirements under Attachment H of the PJM Tariff divided by the sum of the annual Zonal peak loads. As in the case of the Border Rate, this calculation was updated as new NITS rates were filed and new Transmission Owners joined PJM. It was last updated in 2004 when Duquesne joined PJM. It has not been changed since, notwithstanding changes in Zonal NITS rates and the further expansion of PJM. It also does not reflect any of the TECs for RTEP projects approved by PJM since 2004.

Proposed Changes to the Border Rate and Non-Zone NITS Rate

Acting pursuant to Section 9.1 of the PJM Tariff and Article 7 of the Consolidated Transmission Owners Agreement, the PJM Transmission Owners are proposing to establish a methodology to update the Border Rate annually to reflect changes in the PJM-wide transmission revenue requirement and peak load. The methodology would calculate the Border Yearly Charge which would be the basis for Firm and Non-Firm Point-to-Point Transmission Service for shorter periods and the NITS rate for service to Non-Zone network load under Attachment H-A. Thus, a single process would update Schedules 7 and 8 and Attachment H-A annually.

⁵ The Going-Forward Principles and Procedures froze the Border Rate at its current level through November 30, 2004. It has not been changed since the expiration of that freeze.

⁶ See PJM Tariff, Schedule 12, § (c)(4), (5).

⁷ *New Jersey Board of Public Utilities v. PJM Interconnection, L.L.C.*, 163 FERC ¶ 61,139 (2018) at P 57, n. 98.

The Border Rate would be based on the sum of the PJM Transmission Owner stated revenue requirements listed in Attachment H of the PJM Tariff and the revenue requirements determined under the formula rates of those Transmission Owners with formula rates set out in Attachment H. Transmission customers taking Point-to-Point transmission service to the border of PJM would not be liable for any additional TECs, since the Border Rate would be calculated to include all TECs in connection with RTEP projects approved by the PJM Board.

Most Transmission Owners in PJM determine their revenue requirements and NITS rate through a formula rate. However, these formula rates vary in how they treat various sources of revenue other than NITS charges. For example, in some Zones the formula rate credits TEC revenue received in connection with RTEP project costs allocated to other Zones before determining the zonal revenue requirement (thus reducing the NITS rate), while in other Zones, such revenue is credited directly to NITS customers on their PJM invoices and does not affect the calculation of the NITS rate. In order to be certain that the revenue requirement for all transmission in PJM is included in the Border Rate, where TECs charged to other Zones are credited in calculating the Zonal revenue requirement, they are added back. If this were not done, such credited TEC revenue would not be included in the PJM-wide transmission revenue requirement.⁸ Similar adjustments are made with respect to revenue from Firm Point-to-Point Transmission, NITS service to Non-Zone Network Load and other agreements (such as grandfathered transmission service agreements) providing for transmission service over PJM Transmission Facilities. However, to be added back, such revenue will have to be identified in the Transmission Owner's formula rate annual update informational filing with the FERC as a revenue credit applied in the determination of the NITS rate.⁹ Stated rate revenue requirements specified in Attachment H would not be adjusted.

The denominator or divisor of the Border Rate calculation would be the sum of the annual Zonal peak loads. This is a change from the sum of the Zonal average of twelve monthly peaks used as the denominator when the Border Rate was initially determined and updated regularly. Since 12-CP yields a lower number than the annual Zonal peak, use of the sum of the Zonal peaks will result in a lower Border Rate than use of 12-CP. The sum of the annual Zonal peaks is also the denominator used to determine the Non-Zone NITS charge when it was being

⁸ TECs assigned to Zonal customers from Transmission Owners outside of the customers' Zone are charged directly to the customers. Thus, they do not affect the calculation of the Zonal NITS rate in the customers' Zone

⁹ One PJM Transmission Owner, Virginia Electric and Power Company ("Dominion"), does not separately charge for Transmission Owner Scheduling, System Control and Dispatch Service under Schedule 1A of the PJM Tariff and includes the cost of providing such service in its NITS rate. Accordingly, its cost of providing such service is not included in the calculation of the Schedule 1A charges applicable to transmission service to the PJM border or to Non-Zone NITS customers under Section (B) of Schedule 1A. Thus, the inclusion of Dominion's Schedule 1A costs in its NITS rate used to calculate the Border Rate is offset directly by the exclusion of such costs from the Schedule 1A rate applicable to the same customers taking the same service.

updated and is the denominator used to determine the load ratio share cost allocation for Regional Projects under Schedule 12.

The method for calculating rates for shorter periods for firm service under Schedule 7 and non-firm service under Schedule 8 based on the Border Yearly Charge would not be changed, nor would PJM's standard discount for non-firm service.

Both the PJM-wide transmission revenue requirement and the sum of the annual Zonal peak loads would be determined annually as of October 31 using data from the previous twelve months. PJM will use the revenue requirements from the stated and formula rates in effect as of that date. The formula rate data will be taken from the formula rate annual update information filings, which are required by the protocols governing each of the PJM Transmission Owner formula rates. As noted above, the annual Zonal peak load sum would be the same data as used under Schedule 12 to determine load ratio share. The updated rate would take effect as of January 1 and will remain in effect until the following January 1. If there are changes in the underlying data after the October 31 cut-off date, they will be reflected in the following year's update, including, for example, the revenue requirements and zonal peak load of any new Transmission Owner joining PJM. This will provide rate stability and predictability.

PJM would post the data used to determine the Border Rate not later than December 1 of each year. The December 1 date will provide advance notice to transmission customers and others with contracts that are adjusted to reflect changes in the Border Rate. However, it is not the intent to establish any annual review period for the Border Rate. All of the information used to determine the annual updates to the Border Rate will have been subject either to a Section 205 rate proceeding at FERC or an annual update stakeholder process and associated review period under the formula rate protocols. Thus, because of the data used to calculate the Border Rate will have previously been subject to review, there would be no need for further examination. To the extent that any of the data used to determine the Border Rate is modified as a result of the formula rate stakeholder processes after October 31, the new data resulting from the formula rate true-up process (with interest as appropriate) will be reflected in the following year's update of the Border Rate.

Although Border Rate customers would not be liable for TECs, a Merchant Transmission Facility ("MTF") with Firm Transmission Withdrawal Rights or its customers will remain liable for any TECs assigned to the MTF. However, the MTF or its customers taking firm Point-to-Point Transmission Service to the MTF will receive a credit based on the TECs for which they are liable.¹⁰ The credit is designed to reduce the Border Rate by the proportion that the TECs applicable to the MTF represents of total Border Rate charges.

¹⁰ As noted above, PJM applies a standard discount to non-firm service. Accordingly, the credit would not be applied to non-firm service to an MTF.

*Transmission Owners' Notice of Members Committee Consultation
December 3, 2018*

Four documents are included with this stakeholder notice. Attachment A is the proposed PJM Tariff language to implementing the Border Rate update in Schedule 7. This document also reflects several non-substantive technical and formatting changes. Schedule 8 is not included since, other than non-substantive changes, it will simply refer back to the Border Rate determined under Schedule 7. Attachment B is a revised Attachment H-A to reflect the use of the Border Rate determined under Schedule 7. Attachment C is a proposed definition of Border Yearly Charge to be included in the definition section of the PJM Tariff. Finally, Attachment D is a calculation of the Border Yearly Charge using data in effect as of October 31, 2018. This data will be used in the initial filing with FERC of the Border Yearly Charge, with an effective date 60 days following the filing. If approved by FERC this rate will remain in effect until January 1, 2020, at which time it will be updated using data as of October 31, 2019.

Written comments on the proposed provisions may be submitted for consideration by email to: (Comments_for_Transmission_Owners@pjm.com) on or before January 7, 2019.

Attachment A

**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/}	Rate 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
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: *
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	44.799	3.733	0.8615	0.1723	0.1231
ComEd Zone ^{4/}	^{5/}				

* PPL Electric Utilities Corporation's and UGI Utilities' respective component of the total charge is posted on the PJM Internet website.

Point of Delivery	Yearly Charge	Monthly Charge	Weekly Charge	Daily On-Peak ¹ Charge	Daily Off-Peak ² Charge
AEP East Zone ^{6/}	Monthly Charge X 12	Rate Pursuant to Attachment H-14	Yearly Charge / 52	Weekly Charge / 5	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/}					
ATSI Zone	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			
EKPC Zone	Rate Pursuant to Attachment H-24	Rate Pursuant to Attachment H-24			
OVEC Zone	5.28	0.44	0.10	0.02	0.014

- 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 Attachment H-14. 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 PJM Settlement 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 as set forth in 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 Yearly Charge for Points of Delivery at the Border of PJM**

(A) The Yearly Charge for Points of Delivery at the Border of PJM ("Border Yearly Charge") shall be based on the following formula:

$$\text{BYC} = \text{SHRR}/\text{SZPL}$$

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 informational filing with the FERC;

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 October 31. The Border Yearly Charge so updated shall become effective as of January 1 of the following year and remain in effect for the remainder of the calendar year. Any change to the data used to determine the Border Yearly Charge following October 31, including the 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 calendar year, the Transmission Provider shall post on the Transmission Provider's website the inputs and calculations used to determine the Border Yearly Charge. 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 currently effective formula rate update information filing with the FERC.

(D) 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.

(E) 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.

(F) 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.

Attachment B

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.

Attachment C

Draft Definition of Border Yearly Charge

Border Yearly Charge:

“Border Yearly Charge” shall mean the yearly charge for Long-Term and Short-Term Point-to-Point Transmission Service for Points of Delivery at the Border of PJM determined in accordance with Schedule 7.

Attachment D

Schedule 7 Long-Term Firm & Short-Term Firm Point-To-Point Transmission Service Rate (October 31, 2018 Data)	
Point of Delivery	Yearly Charge (\$/MW-Yr)
Border of PJM	\$47,138

PJM Transmission Owner		PJM OATT NITS Rate Attachment	Formula Rate Filing Type	Start Of Rate Year	Transmission Revenue Requirements (\$/Year)		Revenue Credits (\$/Year)			
					Border Rate TS	NITS	Schedule 12	P2P TS	Non-Zone Load	Other Agreements For Transmission
AEC	Atlantic City Electric Company	H-1	Formula	6/1/2018	\$137,272,742	\$136,632,319	\$0	\$640,423	\$0	\$0
AEP	AEP East Operating Companies &	H-14	Formula	1/1/2018	\$800,695,595	\$758,009,365	\$42,686,230	\$0	\$0	\$0
AEP	AEP East Transmission Companies	H-20	Formula	1/1/2018	\$669,173,596	\$537,651,367	\$131,522,229	\$0	\$0	\$0
APS	Allegheny Power	H-11	Stated	N/A	\$128,000,000	\$128,000,000	\$0	\$0	\$0	\$0
ATSI	American Transmission Systems, Inc.	H-21	Formula	1/1/2018	\$682,669,914	\$659,094,666	\$19,188,582	\$4,096,023	\$0	\$290,643
BGE	Baltimore Gas and Electric Company	H-2	Formula	6/1/2018	\$231,750,040	\$230,595,535	\$0	\$1,154,505	\$0	\$0
ComEd	Commonwealth Edison Company	H-13	Formula	6/1/2018	\$700,099,226	\$700,099,226	\$0	\$0	\$0	\$0
Dayton	The Dayton Power and Light Company	H-15	Stated	N/A	\$40,100,000	\$40,100,000	\$0	\$0	\$0	\$0
DEOK	Duke Energy Ohio and Duke Energy Kentucky	H-22	Formula	6/1/2018	\$121,828,544	\$121,250,903	\$0	\$577,641	\$0	\$0
DL	Duquesne Light Company	H-17	Formula	6/1/2018	\$140,109,623	\$139,341,808	\$0	\$767,815	\$0	\$0
Dominion	Virginia Electric and Power Company	H-16	Formula	1/1/2018	\$934,440,725	\$934,438,683	\$0	\$0	\$0	\$2,042
DPL	Delmarva Power & Light Company	H-3	Formula	6/1/2018	\$159,365,894	\$158,674,066	\$0	\$691,828	\$0	\$0
EKPC	East Kentucky Power Cooperative	H-24	Formula	6/1/2018	\$83,390,910	\$83,267,903	\$0	\$0	\$0	\$123,007
JCPL	Jersey Central Power & Light Company	H-4	Stated	N/A	\$156,605,928	\$135,000,000	\$21,605,928	\$0	\$0	\$0
LS Power	Northeast Transmission Development, LLC	H-27	Formula	1/1/2018	\$0	\$0	\$0	\$0	\$0	\$0
MAIT	Mid-Atlantic Interstate Transmission, LLC	H-28	Formula	1/1/2018	\$158,713,998	\$150,858,703	\$6,458,031	\$1,397,264	\$0	\$0
ODEC	Old Dominion Electric Cooperative	H-3	Formula	6/1/2018	\$4,550,062	\$4,550,062	\$0	\$0	\$0	\$0
PATH	Potomac-Appalachian Transmission Highline, LLC	H-19	Formula	1/1/2018	\$0	\$0	\$0	\$0	\$0	\$0
PECO	PECO Energy Company	H-7	Formula	6/1/2018	\$189,593,762	\$155,439,100	\$33,303,873	\$850,789	\$0	\$0
PEPCO	Potomac Electric Power Company	H-9	Formula	6/1/2018	\$174,656,934	\$173,789,871	\$0	\$867,063	\$0	\$0
PPL	PPL Electric Utilities Corporation	H-8	Formula	6/1/2018	\$524,779,603	\$426,220,776	\$96,386,629	\$2,172,198	\$0	\$0
AE Coop	Allegheny Electric Cooperative, Inc.	H-8	Stated	N/A	\$2,584,702	\$2,584,702	\$0	\$0	\$0	\$0
PSEG	Public Service Electric and Gas Company	H-10	Formula	1/1/2018	\$1,255,469,352	\$1,248,819,352	\$0	\$6,650,000	\$0	\$0
RE	Rockland Electric Company	H-12	Stated	N/A	\$17,724,263	\$17,724,263	\$0	\$0	\$0	\$0
RMU	Rochelle Municipal Utilities	H-25	Formula	6/1/2018	\$2,332,207	\$2,332,207	\$0	\$0	\$0	\$0
SMECO	Southern Maryland Electric Cooperative, Inc.	H-9C	Stated	N/A	\$17,134,115	\$17,134,115	\$0	\$0	\$0	\$0
TrAILCo	Trans-Allegheny Interstate Line Company	H-18	Formula	6/1/2018	\$228,135,644	\$0	\$226,652,118	\$1,483,526	\$0	\$0
Transource	Transource Maryland, LLC	H-30	Formula	1/1/2018	\$1,161,652	\$1,161,652	\$0	\$0	\$0	\$0
Transource	Transource Pennsylvania, LLC	H-29	Formula	1/1/2018	\$2,369,431	\$2,369,431	\$0	\$0	\$0	\$0
Transource	Transource West Virginia, LLC	H-26	Formula	1/1/2018	\$2,692,399	\$2,692,399	\$0	\$0	\$0	\$0
UGI	UGI Utilities, Inc	H-8	Formula	6/1/2018	\$7,809,314	\$7,778,621	\$0	\$30,693	\$0	\$0
TOTAL					\$7,575,210,176	\$6,975,611,096	\$577,803,619	\$21,379,768	\$0	\$415,692

Responsible Zone		2018 NSPLs (MW)
AEC	Atlantic City Electric Company	2591.3
AEP	AEP East Zone	22739.0
APS	Allegheny Power	9342.2
ATSI	American Transmission Systems, Inc.	12824.5
BGE	Baltimore Gas & Electric Company	6626.5
ComEd	Commonwealth Edison Company	21349.4
Dayton	The Dayton Power & Light Company	3337.2
DEOK	Duke Energy Ohio, Inc. & Duke Energy Kentucky, Inc.	5194.9
DL	Duquesne Light Company	2795.1
Dominion	Virginia Electric & Power Company	21232.0
DPL	Delmarva Power & Light Company	4002.3
EKPC	East Kentucky Power Cooperative, Inc.	3430.8
JCPL	Jersey Central Power & Light Company	5976.5
ME	Metropolitan Edison Company	3027.8
OVEC	Ohio Valley Electric Cooperative	140.5
PECO	PECO Energy Company	8607.9
PENELEC	Pennsylvania Electric Company	2997.2
PEPCO	Potomac Electric Power Company	6412.0
PPL	PPL Electric Utilities Corporation	7681.3
PSEG	Public Service Electric & Gas Company	9978.3
RE	Rockland Electric Company	414.8
TOTAL Denominator		160,702