April 24, 2019

The Honorable Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, D.C. 20426

Re: Virginia Electric and Power Company
Docket No. ER19-1661-000

Dear Secretary Bose:

Pursuant to Section 205 of the Federal Power Act (“FPA”)\(^1\) and Part 35 of the Federal Energy Regulatory Commission’s (“FERC” or “the Commission”) regulations,\(^2\) Virginia Electric and Power Company d/b/a Dominion Energy Virginia (“Dominion”) hereby submits proposed tariff revisions to the PJM Interconnection, L.L.C. Open Access Transmission Tariff (“Tariff”) to incorporate a new Attachment M-2.\(^3\)

The proposed Attachment M-2 changes the calculation of the Network Service Peak Load contribution (“NSPL”) for each Load Serving Entity (“LSE”) within the Dominion Zone. The NSPL calculation is used to determine each LSE’s load ratio share of Dominion’s Annual Transmission Revenue Requirement (“ATRR”). Specifically, Dominion proposes that Attachment M-2 will include a new twelve month coincident peak (“12-CP”) allocation feature to reduce cost shifts related to annual peak seasonal changes, and reduce the incentive for LSEs to shift costs to other transmission customers by reducing consumption at the peak hour in order to avoid Network Integration Transmission Service (“NITS”) and other charges under the PJM

\(^{1}\) 16 U.S.C. § 824d.
\(^{2}\) 18 C.F.R. Part 35.

\(^{3}\) Pursuant to Order No. 714, this filing is submitted by PJM on behalf of Dominion 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 its tariff. Thus, Dominion has requested that PJM submit this Attachment M-2 in the eTariff system as part of PJM’s electronic Intra PJM Tariff.
Tariff—a concern this Commission has specifically recognized.\textsuperscript{4} The Commission has also accepted Attachment M-2s from other PJM Transmission Owners.\textsuperscript{5}

Dominion respectfully requests that the Commission grant waiver of its notice requirements and permit an effective date of January 1, 2020 for the enclosed tariff changes.

\textbf{I. BACKGROUND}

Dominion has a formula rate for transmission service on file with the Commission, currently designated as Attachment H-16A to the PJM Tariff. Under the formula rate, the unit charge for NITS in the Dominion Zone is calculated by dividing Dominion’s ATRR by the load in the Dominion Zone at the time of the annual coincident peak (“1-CP”).\textsuperscript{6} Annual charges for each Network Customer in the Dominion Zone are assigned, pursuant to Tariff Section 34.1, according to each “Network Customer’s individual wholesale and retail customer Zone network loads (including losses) at the time of the annual peak in the zone in which the load is located.”\textsuperscript{7} As explained in the testimony of Mr. James Daniel Jackson, Jr. and Mr. Christopher C. Hewett, attached as Exhibit Nos. DEV-1 and DEV-5, Dominion collects hourly load data including losses for all Network Customers during the single highest transmission peak experienced on the Dominion Transmission System during the twelve-month period ending October 31. A customer’s demand at the time of the 1-CP becomes its NSPL obligation for the upcoming year and is reported to PJM for its use in assessing Network Service charges.\textsuperscript{8}

Because Dominion’s current 1-CP NSPL calculation uses a single-hour snapshot of customer demand, it can result in large changes in cost responsibility from year to year depending on whether the single system peak occurs in the summer or winter.\textsuperscript{9} The 1-CP

\begin{itemize}
\item[4] See, e.g., Order No. 888-A, FERC Stats. & Regs. ¶ 31,048 at 30,259-60 (1997) (“For example, if at the time of the monthly system peak the FMPA member city generates more than 40 MW (or takes short-term firm transmission service (or a combination of the two)), it may be able to lower its monthly coincident peak load for network billing purposes, and thereby reducing if not eliminating its load-ratio cost responsibility for network service. Because network and native load customers bear any residual system costs on a load-ratio basis, any cost responsibility evaded by a network customer in this manner would be borne by the remaining network customers and native load.”).
\item[7] PJM Tariff Section 34.1.
\item[8] Exhibit No. DEV-1 at 6:11-18; Exhibit No. DEV-3; Exhibit No. DEV-5 at 5:1-3.
\item[9] See Exhibit No. DEV-1 at 9:14-22, 10:11; Exhibit No. DEV-4, Table 3 (showing, for example, that Network Customer A’s load ratio share cost responsibility decreased by 38.4% from the 2016 rate year—a winter
calculation also encourages cost-shifting to other customers because, as explained below, it creates an incentive for LSEs to forecast the annual peak using PJM data and intentionally reduce their load in that hour in order to reduce or even eliminate their responsibility for Network Service charges on the curtailed load for an entire year.\(^{10}\)

Recognizing and seeking to address the incentive to cost shift inherent in the 1-CP cost allocation, on December 21, 2017, Dominion filed proposed tariff changes with the Commission in Docket No. ER18-493-000 proposing an average demand calculation that would serve as a backstop to each customer’s 1-CP calculation.\(^{11}\) FERC rejected Dominion’s proposal without prejudice, finding that Dominion relied on a hypothetical situation under which a transmission customer could reduce its load at Dominion’s coincident peak to avoid Network Service charges and thereby shift costs to other transmission customers.\(^{12}\) The Commission determined that Dominion did not provide evidence that such cost shifts have actually occurred or are likely to occur, and did not explain why its average demand proposed solution would ensure customers pay for their use of the transmission system.\(^{13}\)

II. DESCRIPTION OF PROPOSED TARIFF REVISIONS

In this filing, Dominion proposes to revise its NSPL methodology through a new Attachment M-2 to include a 12-CP allocation feature. As explained in Mr. Jackson’s testimony, Dominion proposes to collect hourly load data for all Network Customers in the Dominion Zone (including applicable losses) coincident with each of the Dominion Zone’s twelve monthly transmission system peaks during the twelve-month period ending September 30, and will calculate an average 12-CP value by dividing the sum of the twelve coincident peak load values by twelve, the number of months in the year.\(^{14}\) Dominion will then calculate a 12-CP allocation factor for each Network Customer by dividing its average 12-CP demand value by the sum of all Network Customers’ average 12-CP demand values.\(^{15}\) Dominion will determine each Network peaking year—to the 2017 rate year—a summer peaking year—but increased by 71.6% from the 2017 rate year to the 2018 winter peaking rate year).

\(^{10}\) Exhibit No. DEV-1 at 12:3-22, 13:1-3.

\(^{11}\) Transmittal Letter of Virginia Electric and Power Company d/b/a Dominion Energy Virginia 3-4 (Dec. 21, 2017), eLibrary No. 20171221-5099. Dominion proposed that if an LSE’s actual total hourly load coincident with the Dominion Zone NSPL was lower than the average demand, the average demand would be used to set the NSPL contribution for cost allocation purposes. Dominion also proposed to apply a scaling factor to reduce the billing determinants for the remaining customers in order to avoid over-recovery of its total annual transmission revenue requirement.


\(^{13}\) Id.

\(^{14}\) Exhibit No. DEV-1 at 17:2-18.

\(^{15}\) Id. at 17:18-20.
Customer’s NSPL by multiplying its 12-CP allocation factor by the Dominion Zone NSPL.\textsuperscript{16} Attachment M-2 will also include a process to adjust Network Customers’ NSPL contributions daily, in the event that eligible retail customers in jurisdictions that accommodate retail choice change Network Customers.\textsuperscript{17}

To be clear, Dominion is not proposing any change to its Attachment H-16A formula rate—the 1-CP demand remains the divisor in the formula rate, and the rate for NITS will not change as a result of this application. Rather, Dominion proposes to amend the method by which each Network Customer’s NSPL is calculated to allocate costs on a 12-CP basis, as explained above. The sum of all Network Customers’ NSPLs will equal to the 1-CP demand divisor included in the formula rate.\textsuperscript{18}

Dominion proposes the instant changes to its NSPL calculation method in order to reduce yearly volatility in transmission charges due to seasonal peak changes, as the Dominion Zone has experienced both summer and winter 1-CP peaks over the past 4 years.\textsuperscript{19} Whether the Dominion Zone 1-CP occurs in the winter or the summer can cause large changes in a Network Customer’s NSPL relative to the Dominion Zone NSPL, resulting in dramatic changes in a Network Customer’s cost responsibility.\textsuperscript{20} Table 3 of Exhibit No. DEV-4 provides an example of this type of NSPL volatility. Dominion Network Customer A’s load ratio share cost responsibility decreased 38.4% from the winter-peak 2016 rate year to the 2017 summer-peak rate year and then increased 71.6% from the 2017 rate year to the winter-peak 2018 rate year.\textsuperscript{21} The proposed 12-CP allocation feature will result in a more stable cost allocation by dampening cost shifts due to changes in the annual system peak.\textsuperscript{22} Under the new methodology, that same Dominion Network Customer A’s load ratio share cost responsibility would increase by 3.6% from the 2016 winter-peak rate year to the 2017 summer-peak rate year, and decrease 3.6% from the 2017 rate year to the 2018 winter-peak rate year.\textsuperscript{23}

In addition, Dominion’s proposed 12-CP allocation feature will discourage cost-shifting among Network Customers. Dominion offers evidence that customers have actively reduced demand of their own volition during the 1-CP and thereby shifted NITS and other charges under the PJM Tariff to other customers. The current 1-CP methodology facilitates this type of cost shifting because a Network Customer’s billing determinants are calculated using a single-hour

\textsuperscript{16} Id. at 17:20-22.
\textsuperscript{17} Id. at 18:3-19, 19:1-10.
\textsuperscript{18} Id. at 15:9-18.
\textsuperscript{19} Id. at 10:3-10.
\textsuperscript{20} Id. at 9:14-22, 10-11; Exhibit No. DEV-4.
\textsuperscript{21} See also Exhibit No. DEV-1 at 10:13-20; 11:1-6.
\textsuperscript{22} Id. at 11-12.
\textsuperscript{23} Id. at 11:12-16; Exhibit No. DEV-4.
snapshot of demand. LSEs have an incentive to forecast the annual peak using PJM available data and intentionally reduce their load in that hour in order to eliminate their responsibility for Network Service charges on the reduced load for an entire year. This reduction in load at the system peak also reduces the total 1-CP demand that acts as the divisor in the formula rate. This reduction causes a cost shift among customers, as lowering the divisor increases the resulting unit charge (in dollars per MW-year) in the formula rate.

The Commission has previously identified the risk of cost-shifting among Network Customers through load reduction during a coincident peak. In Dominion’s case, the incentive for this type of cost-shifting behavior has increased over the last ten years as NITS charges have increased to recover Dominion’s significant investments in the transmission system. As Mr. Hewett explains, a customer can forecast when the annual 1-CP will occur using the hourly seven day load forecast for the Dominion Zone provided on PJM’s website. The charts in Exhibits DEV-6 and DEV-7 show that both retail and wholesale customers actively reduced demand of their own volition during the 2018 1-CP and during the single highest peak load hour the Dominion Zone has experienced to-date during the 12 month period starting November 1, 2018 (January 31, 2019 HE 08). Since these demand reductions occurred in the winter, rather than the summer when a customer’s Peak Load Contribution charges are assessed, the demand reductions could only be to avoid Network Service charges.

Dominion’s proposed 12-CP allocation feature will reduce the incentive for Network Customers to engage in this behavior because Network Customers that curtail only during the annual peak will receive approximately 1/12 the savings in NITS and other charges that they would have received under the current 1-CP methodology. Reducing the incentive to curtail only at the system peak is appropriate because one-time yearly discretionary load reductions are unlikely to impact the need for additional transmission infrastructure on a long-term basis, and

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24 Exhibit No. DEV-1 at 12:3-22, 13:1-3; Exhibit No. DEV-5 at 6:8-15.
25 Exhibit No. DEV-1 at 12:9-10. As an illustrative example, assume Dominion’s annual revenue requirement is $100, and that there are ten customers on the system, each with an expected 10 MW of load, creating at the annual system peak a total 1-CP demand of 100 MW. The $100 revenue requirement divided by the total 100 MW 1-CP demand creates a unit charge of $1 per MW-year to be paid by all customers. However, if one customer is able to reduce its demand at the peak to 2 MW, the total 1-CP divisor is reduced to 92 MW. That lower divisor increases the unit charge to $1.09 per MW-year ($100 / 92 MW). This higher unit shifts costs to all other customers, while the offending customer would only pay for 2 MW of Network Service at $1.09. Id. at 12:11-22, 13:1-3.
26 See supra n.4.
27 Exhibit No. DEV-1 at 20:8-16.
28 Exhibit No. DEV-5 at 5:15-19.
29 Id. at 6:1-7, 6:16-22, 7:3-6.
30 Id. at 6:8-15.
31 Exhibit No. DEV-1 at 14:3-13.
therefore are unlikely to result in transmission system cost savings. Allocating transmission costs using the proposed method also ensures that all customers are more likely to pay for their use of the transmission system because customers can no longer curtail in a single hour and shift NITS and other PJM charges to other customers. If customers curtail only during the 1-CP, they will receive approximately 1/12 the amount of savings they would have received under the present methodology. Conversely, under the proposed method, incorporating the 12-CP feature, a Network Customer would have to curtail load during each peak hour in eleven additional months to obtain the savings it could by curtailing the same load during the hour of the annual peak under the present 1-CP method.

The Commission has endorsed the 12-CP allocation method. In fact, the Commission has specifically stated that:

We are reaffirming the use of a twelve monthly coincident peak (12-CP) allocation method because we believe the majority of utilities plan their systems to meet their twelve monthly peaks.

While the Commission has also made clear that it will evaluate whether an allocation method is appropriate based on the facts of each case, and whether the proposed method has been adequately supported, given the current actions of certain transmission customers, Dominion’s proposed use of a 12-CP allocation feature is not only supported but is also a just and reasonable solution to the weaknesses of the current allocation method. When considering which allocation method to use, the Commission will consider “[t]he full range of a company’s operating realities . . .” In the instant case, looking at the full range of Dominion’s operating realities clearly shows that the 1-CP allocation method has resulted in highly variable charges

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32 See id. at 13:7-21, 14:1-2 (planning considerations to address distribution level solar growth, end of life of existing facilities, maintenance, light load issues causing high voltage on the system, and specific demand customer hookups are not relieved by a customer reducing its load during a single peak hour in one year).

33 Id. at 21-22.


from year to year, and in cost-shifting among transmission customers in the Dominion Zone. The instant proposal takes into account these operating realities and is narrowly tailored to address these concerns: it significantly reduces yearly variability in cost responsibility, and also reduces the incentive for Network Customers who are relatively high users of the transmission system to curtail at the hour of the 1-CP in order to reduce or avoid a full year’s worth of transmission charges that would otherwise be assessed on each MW of usage that is curtailed.\(^{37}\)

Other PJM Transmission Owners may have addressed this concern in their respective Attachment M-2s on file in the PJM Tariff. For example, to reduce reliance on the single 1-CP hour for purposes of calculating transmission billing determinants, several transmission owners (e.g., Commonwealth Edison Company, Public Service Electric and Gas Company, Atlantic City Electric Company, and Delmarva Power & Light Company), use a “high five” hour approach\(^ {38}\) while maintaining the 1-CP demand divisor in their formula rates.\(^ {39}\) This approach bases billing determinants on what is essentially a 5-CP method. Dominion evaluated adopting a similar 5-CP approach, but determined that a 12-CP approach provided a better method to reduce cost shifting due to discretionary curtailments and addresses the full range of operating realities of its system.

To summarize, Dominion has shown that its proposed 12-CP allocation feature addresses two separate weaknesses inherent in the 1-CP allocation methodology, and is superior to the present 1-CP allocation method. First, the 12-CP allocation feature will reduce yearly volatility in transmission charges due to seasonal annual peak changes, and second, the 12-CP allocation feature will reduce the cost avoidance reward that can be achieved from a single discretionary curtailment. The proposal is also consistent with transmission planning and associated cost causation principles.\(^ {40}\) Finally, the proposal will result in no over collection in ATRR, and charges each Network Customer an NSPL that is consistent with PJM’s NSPL billing practice.\(^ {41}\) As a result, Dominion’s proposed Attachment M-2 is just and reasonable and should be accepted by the Commission without modification.

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\(^{37}\) Exhibit Nos. DEV-4, DEV-6, DEV-7.

\(^{38}\) See, e.g., Attachment M-2 of Commonwealth Edison at Section II; Attachment M-2 of PSE&G at Section A(1); Attachment M-2 of Atlantic City Electric at Section 1; Attachment M-2 of Delmarva Power & Light Company (Section 1 under “Determination of Customer Capacity Peak Load Contributions”). The Attachment M-2s are available under PJM’s “Intra-PJM Tariffs” title in eTariff.

\(^{39}\) See, e.g., PJM Tariff Attachment H-13A, Commonwealth Edison Company Formula Rate Appendix A at lines 173-175; PJM Tariff Attachment H-10A, Public Service Electric and Gas Company Formula Rate Appendix A at lines 165-167; PJM Tariff Attachment H-1A, Atlantic City Electric Company Formula Rate Appendix A at lines 173-175; PJM Tariff Attachment H-3D, Delmarva Power & Light Company Formula Rate Appendix A at lines 173-175.

\(^{40}\) Exhibit No. DEV-1 at 13:7-21, 14:1-2.

\(^{41}\) Id. at 15:7-18.
III. PROPOSED EFFECTIVE DATE, TRANSITION PERIOD, AND REQUEST FOR WAIVER

Dominion requests a January 1, 2020 effective date for this change, and proposes to make 2019 a transition period to permit each Network Customer to compare its NSPL as calculated under the current method versus the proposed method. While Network Customers’ NSPLs will continue to be calculated under the current 1-CP methodology during 2019, each Network Customer’s NSPL will also be calculated according to the proposed methodology for informational purposes and provided upon request. The transition period will provide Network Customers with sufficient time to understand the new method prior to it impacting their billing beginning January 1, 2020.

Dominion respectfully requests that the Commission waive the requirements of Section 35.3(a)(1) of its regulations and permit an effective date of January 1, 2020. Good cause exists to grant waiver and permit this requested effective date because the instant filing will put Network Customers in the Dominion Zone on notice of these proposed changes to the NSPL methodology and transition period beginning on January 1, 2019. Permitting a January 1, 2020 effective date will also provide Network Customers the opportunity to request for informational purposes the NSPLs as calculated under the new methodology during 2019.

This filing substantially complies with the requirements of Part 35 applicable to filings of this kind. To the extent necessary, Dominion respectfully requests waiver of any applicable requirement of the Commission’s regulations which is found not to be completely satisfied by this filing.

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42 Id. at 19:11-22; see also Old Dominion Elec. Coop., 158 FERC ¶ 61,045, P 35 & n.55 (2017), reh’g denied, 162 FERC ¶ 61,262, P 53 (2018) (upholding ODEC’s rate change filed September 2013 with a proposed effective date of January 1, 2014 and where the new rate was based on historic demand response activity that occurred prior to ODEC’s September 2013 filing).

43 See 35 C.F.R.§ 35.3(a)(1) (providing that all rate schedules or any part thereof must be filed with the Commission “not more than one hundred twenty days prior to . . . the date on which the filing party proposes to make any change in electric service and/or rate charge, classification, practice, rule, regulation, or contract effective”).
IV. ADDITIONAL INFORMATION

A. Correspondence

Correspondence regarding this filing should be directed to the following individuals, who should be placed on the official service list in this proceeding:

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B. Documents Submitted with this Filing

In accordance with the requirements of Order No. 714 and the Commission’s eTariff regulations, Dominion is submitting an eTariff XML filing package consisting of the following materials:

- This Transmittal Letter
- Attachment A: marked versions of proposed Attachment M-2 (Virginia Electric and Power Company) and the revised Table of Contents for the PJM Tariff, for filing in eLibrary;
- Attachment B: a clean version of the proposed Attachment M-2 (Virginia Electric Power Company) and the revised Table of Contents for the PJM Tariff, for filing in eLibrary;
- Direct Testimony and Associated Exhibits of Mr. James Daniel Jackson, Jr.; and
- Direct Testimony and Associated Exhibits of Mr. Christopher C. Hewett.

C. 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, PJM will post a copy of this filing to the FERC filings

45 18 C.F.R. §§ 35.2(e), 385.2010(f)(3).
section of its internet site, located at the following link: [http://www.pjm.com/documents/ferc-manuals/ferc-filings.aspx](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 Region46 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: [https://www.ferc.gov/docs-filing/elibrary.asp](https://www.ferc.gov/docs-filing/elibrary.asp) in accordance with the Commission’s regulations and Order No. 714.

V. CONCLUSION

WHEREFORE, Dominion respectfully requests that the Commission accept the proposed Tariff revisions attached hereto for filing, and waive its prior notice requirements to permit an effective date of January 1, 2020.

Respectfully submitted,

/s/ Amie V. Colby

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Counsel for Dominion Energy Virginia

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

Marked Attachment M-2
(Dominion)
The methodology for determining the network service peak load contribution ("NSPL") and Virginia network service peak load contribution ("VaNSPL") for each Network Customer is described in steps 1 through 5 below. Each customer’s NSPL and VaNSPL is based on an average of 12 coincident peak demands ("12-CP") allocation factor applied to the Dominion Zone annual peak. The Dominion Zone annual peak is established during the 12 months ending October 31 of the previous calendar year prior to the calendar year that it is to be used for billing. Each Network Customer’s average 12-CP allocation factor is based on an average of twelve monthly coincident peak demands established during the previous 12 months ending September 30 prior to the calendar year that this data is used for billing ("12-CP Measurement Period").

Steps 6 through 9 establish the Daily Network Service Peak Load Contributions and Daily Virginia Network Service Peak Load Contributions used for billing NITS throughout the calendar year immediately following the NSPL Measurement Period.

1) Retrieve Hourly Load Data – Collect hourly load data for all Network Customers, excluding Southeastern Power Administration ("SEPA"), provided transmission service in the Dominion Zone, including any applicable losses, coincident with each of the Dominion Zone’s 12 monthly transmission system peaks (12-CPs) during the 12-CP Measurement Period. The hourly load data collected for each of these twelve hours shall not include any adjustments for SEPA capacity and energy.

2) Calculate Each Network Customer’s Average 12-CP Demand
a) For each Network Customer excluding SEPA and not entitled to SEPA capacity and energy delivered to the Dominion Zone, total the monthly hourly loads collected in step 1 and divide by 12.
b) For each Network Customer entitled to SEPA capacity and energy delivered to the Dominion Zone, subtract the applicable SEPA capacity including losses entitlement from each of its monthly hourly loads collected in step 1 and then total the resulting differences and divide by 12.
c) For SEPA, total the SEPA capacity including losses subtracted from the hourly loads in step 2 b in each month and then total these twelve monthly amounts and divide by 12.

3) Calculate Each Network Customer’s Average 12-CP Allocation Factor – Divide each Network Customer’s Average 12-CP Demand by the total of all the Average 12-CP Demands.

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1 SEPA capacity and energy are allocated to certain Preference Customers in accordance with the Network Integration Transmission Service Agreement Among PJM Interconnection, L.C.C. And Southeastern Power Administration ("PJM & SEPA NITSA").
4) Calculate Each Network Customer’s Network Service Peak Load Contribution (NSPL) –
Multiply the Dominion Zone NSPL by each Network Customer’s Average 12-CP Allocation Factor.
The Sum of all the NSPLs shall equal the Dominion Zone NSPL which equals the 1-CP Divisor used in the Virginia Electric and Power Company Formula Rate – Appendix A, line 169.

5) Determine Each Network Customer’s Virginia Network Service Peak Load Contribution (VaNSPL) –
The VaNSPL for each Network Customer that has Dominion Zone Network Load only in Virginia shall equal the NSPL for that Network Customer. The VaNSPL for each Network Customer that does not have any Dominion Zone Network Load in Virginia shall equal zero. The VaNSPL for each Network Customer that has Dominion Zone Network Load in both the Virginia and North Carolina portions of the Dominion Zone shall include only the portion of its NSPL attributed to its Network Load in the Virginia portion of the Dominion Zone. The sum of the VaNSPLs shall equal the Virginia Portion of the Dominion Zone NSPL shown on Attachment 10 in the Virginia Electric and Power Company Formula Rate – Appendix A.

6) Calculate Daily Retail Customer Network Service Peak Load Contribution (DRNSPL) –
Each retail customer’s DRNSPL shall be determined consistent with the process described above for determining each Network Customer’s NSPL.

Note: Dominion Energy does not calculate the DRNSPL for the retail customers of wholesale LSEs like municipal electric utilities and electric cooperatives.

7) Calculate Daily Retail Customer Virginia Network Service Peak Load Contribution (DRVaNSPL) – Each retail customer’s DRVaNSPL shall be determined consistent with the process described above for determining each Network Customer’s VaNSPL.

Note: Dominion Energy does not calculate the DRVaNSPL for the retail customers of wholesale LSEs like municipal electric utilities and electric cooperatives.

8) Calculate Daily Network Service Peak Load Contribution (DNSPL) –
Each Network Customer’s Daily Network Service Peak Load Contribution for any given day of the calendar year is equal to the sum of the DRNSPLs for all the retail customers that it has the responsibility to obtain transmission service for during that day.

9) Calculate Daily Virginia Network Service Peak Load Contribution (DVaNSPL) –
Each Network Customer’s Daily Virginia Network Service Peak Load Contribution for any given day of the calendar year is equal to the sum of the DRVaNSPLs for all the retail customers that it has the responsibility to obtain transmission service for during that day.

10) Transition Period –
The Transition Period recognizes that the NSPLs and VaNSPLs used for billing in 2019 have already been established. To prevent a mid-year billing change each Network Customer’s NSPL and VaNSPL contributions that will be used for billing during the 2019 calendar year shall
continue to be those determined using the methodology in effect prior to the methodology described in this attachment. For all other following calendar years, each Network Customer’s NSPL and VaNSPL shall be determined using the process described in steps 1-5.
Attachment B

Clean Attachment M-2
ATTACHMENT M-2 (Dominion)
Dominion Energy Procedures for Determining Each Network Customer’s Dominion Zone Network Service Peak Load Contribution (NSPL) and Virginia Network Service Peak Load Contribution (VaNSPL)

Procedures Applicable to Network Load in the Dominion Zone

The methodology for determining the network service peak load contribution (“NSPL”) and Virginia network service peak load contribution (“VaNSPL”) for each Network Customer is described in steps 1 through 5 below. Each customer’s NSPL and VaNSPL is based on an average of 12 coincident peak demands (“12-CP”) allocation factor applied to the Dominion Zone annual peak. The Dominion Zone annual peak is established during the 12 months ending October 31 of the previous calendar year prior to the calendar year that it is to be used for billing. Each Network Customer’s average 12-CP allocation factor is based on an average of twelve monthly coincident peak demands established during the previous 12 months ending September 30 prior to the calendar year that this data is used for billing (“12-CP Measurement Period”). Steps 6 through 9 establish the Daily Network Service Peak Load Contributions and Daily Virginia Network Service Peak Load Contributions used for billing NITS throughout the calendar year immediately following the NSPL Measurement Period.

1) Retrieve Hourly Load Data – Collect hourly load data for all Network Customers, excluding Southeastern Power Administration (“SEPA”),\(^1\) provided transmission service in the Dominion Zone, including any applicable losses, coincident with each of the Dominion Zone’s 12 monthly transmission system peaks (12-CPs) during the 12-CP Measurement Period. The hourly load data collected for each of these twelve hours shall not include any adjustments for SEPA capacity and energy.

2) Calculate Each Network Customer’s Average 12-CP Demand
   a) For each Network Customer excluding SEPA and not entitled to SEPA capacity and energy delivered to the Dominion Zone, total the monthly hourly loads collected in step 1 and divide by 12.
   b) For each Network Customer entitled to SEPA capacity and energy delivered to the Dominion Zone, subtract the applicable SEPA capacity including losses entitlement from each of its monthly hourly loads collected in step 1 and then total the resulting differences and divide by 12.
   c) For SEPA, total the SEPA capacity including losses subtracted from the hourly loads in step 2 b in each month and then total these twelve monthly amounts and divide by 12.

3) Calculate Each Network Customer’s Average 12-CP Allocation Factor – Divide each Network Customer’s Average 12-CP Demand by the total of all the Average 12-CP Demands.

\(^1\) SEPA capacity and energy are allocated to certain Preference Customers in accordance with the Network Integration Transmission Service Agreement Among PJM Interconnection, L.L.C. And Southeastern Power Administration (“PJM & SEPA NITSA”).
4) Calculate Each Network Customer’s Network Service Peak Load Contribution (NSPL) – Multiply the Dominion Zone NSPL by each Network Customer’s Average 12-CP Allocation Factor. The Sum of all the NSPLs shall equal the Dominion Zone NSPL which equals the 1-CP Divisor used in the Virginia Electric and Power Company Formula Rate – Appendix A, line 169.

5) Determine Each Network Customer’s Virginia Network Service Peak Load Contribution (VaNSPL) – The VaNSPL for each Network Customer that has Dominion Zone Network Load only in Virginia shall equal the NSPL for that Network Customer. The VaNSPL for each Network Customer that does not have any Dominion Zone Network Load in Virginia shall equal zero. The VaNSPL for each Network Customer that has Dominion Zone Network Load in both the Virginia and North Carolina portions of the Dominion Zone shall include only the portion of its NSPL attributed to its Network Load in the Virginia portion of the Dominion Zone. The sum of the VaNSPLs shall equal the Virginia Portion of the Dominion Zone NSPL shown on Attachment 10 in the Virginia Electric and Power Company Formula Rate – Appendix A.

6) Calculate Daily Retail Customer Network Service Peak Load Contribution (DRNSPL) – Each retail customer’s DRNSPL shall be determined consistent with the process described above for determining each Network Customer’s NSPL.

Note: Dominion Energy does not calculate the DRNSPL for the retail customers of wholesale LSEs like municipal electric utilities and electric cooperatives.

7) Calculate Daily Retail Customer Virginia Network Service Peak Load Contribution (DRVaNSPL) – Each retail customer’s DRVaNSPL shall be determined consistent with the process described above for determining each Network Customer’s VaNSPL.

Note: Dominion Energy does not calculate the DRVaNSPL for the retail customers of wholesale LSEs like municipal electric utilities and electric cooperatives.

8) Calculate Daily Network Service Peak Load Contribution (DNSPL) – Each Network Customer’s Daily Network Service Peak Load Contribution for any given day of the calendar year is equal to the sum of the DRNSPLs for all the retail customers that it has the responsibility to obtain transmission service for during that day.

9) Calculate Daily Virginia Network Service Peak Load Contribution (DVaNSPL) – Each Network Customer’s Daily Virginia Network Service Peak Load Contribution for any given day of the calendar year is equal to the sum of the DRVaNSPLs for all the retail customers that it has the responsibility to obtain transmission service for during that day.

10) Transition Period – The Transition Period recognizes that the NSPLs and VaNSPLs used for billing in 2019 have already been established. To prevent a mid-year billing change each Network Customer’s NSPL and VaNSPL contributions that will be used for billing during the 2019 calendar year shall
continue to be those determined using the methodology in effect prior to the methodology described in this attachment. For all other following calendar years, each Network Customer’s NSPL and VaNSPL shall be determined using the process described in steps 1-5.
EXHIBIT NO. DEV-1

Prepared Direct Testimony of James Daniel Jackson, Jr.
UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

) Virginia Electric and Power Company ) Docket No. ER19-___-000
)

PREPARED DIRECT TESTIMONY
OF
JAMES DANIEL JACKSON, JR.

ON BEHALF OF
VIRGINIA ELECTRIC AND POWER COMPANY

April 24, 2019
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UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Virginia Electric and Power Company

SUMMARY OF PREPARED DIRECT TESTIMONY OF
JAMES DANIEL JACKSON, JR.

My testimony describes Dominion’s current Network Service Peak Load contribution ("NSPL") methodology. It then explains Dominion’s proposed changes to that methodology resulting from incorporating a 12-CP allocation feature. Finally, I explain the benefits of the new methodology for Network Customers.
UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Virginia Electric and Power Company \rightarrow Docket No. ER19-000

PREPARED DIRECT TESTIMONY OF
JAMES DANIEL JACKSON, JR.

1  I.  INTRODUCTION

2  Q.  PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

3  A.  My name is James Daniel Jackson, Jr. My business address is 701 East Cary
4    Street, Richmond, Virginia, 23219.

5  Q.  BY WHOM ARE YOU EMPLOYED AND FOR HOW LONG HAVE YOU
6    BEEN EMPLOYED?

7  A.  I am employed by Virginia Electric and Power Company, doing business as
8    Dominion Energy Virginia (“Dominion” or “the Company”), as a Regulatory
9    Consultant in the Electric Transmission Regulatory and Policy Group. I have
10   been employed by Dominion for almost 21 years.

11  Q.  ON WHOSE BEHALF ARE YOU SUBMITTING THIS TESTIMONY?

12  A.  I am testifying on behalf of Dominion.

13  Q.  PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL
14    BACKGROUND.

15  A.  I received a Bachelor of Science degree in Agriculture from the University of
16    Florida in 1978. I received a Master of Economics degree from North Carolina
17    State University in 1979. In 1980, I worked as a research assistant for North
Carolina State University. I joined Duke Energy in 1981 and held positions as Rate Analyst, Senior Rate Designer, and Project Manager of Cost Studies, Manager of Regulatory Affairs, and Manager of Rate Design. In 1998, I joined Dominion as a Regulatory and Pricing Advisor and was promoted to the position of Regulatory Consultant in 2007.

Q. PLEASE DESCRIBE YOUR CURRENT RESPONSIBILITIES AT DOMINION.

A. I am actively involved in regulatory policy issues related to Dominion electric transmission including: (1) providing regulatory support for updating and changing the Company’s Federal Energy Regulatory Commission (“FERC”) formula rate regarding transmission project costs; (2) advising on customer information requests; (3) advising on transmission rate and cost allocation proposals, as well as other FERC matters that could affect Dominion’s transmission costs; and (4) providing regulatory support in Dominion’s rate adjustment clause filings for cost recovery under § 56-585.1 A 4 of the Code of Virginia before the State Corporation Commission of Virginia (“VSCC”).

Q. HAVE YOU PREVIOUSLY SPONSORED TESTIMONY BEFORE ANY REGULATORY COMMISSION?

A. Yes. I have submitted testimony on behalf of Dominion before the VSCC and the FERC. A list of proceedings in which I have submitted prior testimony is provided as Exhibit No. DEV-2.
Q. PLEASE EXPLAIN YOUR UNDERSTANDING OF THE INSTANT PROCEEDING.

A. Dominion is initiating this proceeding to obtain FERC approval to incorporate into the PJM Interconnection, L.L.C.’s (“PJM”) Open Access Transmission Tariff (“PJM Tariff”) a methodology that changes how the current Network Service Peak Load contribution (“NSPL”) for each customer (“Network Customer”) taking Network Integration Transmission Service (“Network Service”) within the Dominion Zone is calculated. The new methodology will ensure each Network Customer pays based on the average of its twelve monthly coincident peak demands rather than its single coincident annual peak demand. As discussed later in this testimony, Dominion demonstrates that its proposal will: (i) provide greater transparency; (ii) reduce costs shifts related to annual peak season changes; (iii) lessen the incentive to shift costs to other transmission customers while allowing for some compensation for peak reductions; (iv) result in no over collection of annual transmission revenue requirement (“ATRR”); and (v) charge each Network Customer an NSPL that is consistent with PJM’s NSPL billing practice.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY AND HOW IS IT ORGANIZED?

A. The purpose of my testimony is to describe: 1) Dominion’s current NSPL Methodology; 2) the proposed changes to that methodology resulting from incorporating a 12-CP allocation feature; and 3) the expected benefits to accrue to Network Customers. I first identify where Dominion’s current NSPL
methodology is located and describe the methodology. Next, I explain the new
ATTACHMENT M-2 (Dominion) to the PJM Tariff that includes a modification
of the current NSPL methodology and describe the modification to incorporate an
average of monthly coincident peak demands in twelve months (“12 CP”)
allocation feature in the methodology. Finally, I describe how including the
proposed NSPL methodology in the PJM Tariff benefits Network Customers.

Q. ARE YOU SPONSORING ANY EXHIBITS TO YOUR TESTIMONY?

A. Yes. I am sponsoring the following exhibits:

  • Exhibit No. DEV-2: List of Prior Testimony of James Daniel Jackson, Jr.
  • Exhibit No. DEV-3: Document including Dominion’s Current NSPL
    Methodology. This exhibit is the Dominion CAPACITY PEAK LOAD
    CONTRIBUTION & TRANSMISSION NETWORK SERVICE
    OBLIGATION document that is part of the inventory of similar
documents either posted or referenced on the PJM website.
  • Exhibit No. DEV-4: Document including tables 1-6 providing NSPLs,
    load ratio shares, and year to year percentage changes in load ratio shares.

Q. WAS YOUR TESTIMONY PREPARED BY YOU OR UNDER YOUR
DIRECT SUPERVISION?

A. Yes.
II. CURRENT NSPL CONTRIBUTION METHODOLOGY

Q. PLEASE EXPLAIN WHERE DOMINION’S CURRENT NSPL CONTRIBUTION METHODOLOGY CAN BE FOUND.

A. PJM provides on its website an inventory of the procedures for calculation of Total Hourly Energy Obligation ("THEO"), Capacity Peak Load Contribution ("PLC"), and NSPL for numerous companies including Dominion. This website provides a link to the Dominion website where a document containing both the current PLC and NSPL methodology can be found.\(^1\) For ease of reference, it is included as Exhibit No. DEV-3. Additionally there is a separate document for the THEO methodology, but the Company is not proposing to revise it.

Q. PLEASE EXPLAIN THE COMPANY’S CURRENT NSPL METHODOLOGY.

A. Exhibit No. DEV-3 describes at a high level the Company’s current NSPL methodology except for the PJM and Southeastern Power Administration ("SEPA") Network Integration Transmission Service Agreement ("PJM & SEPA NITSA") on NSPLs, discussed below. The Company collects hourly load data, including applicable losses, for all Network Customer’s during the single highest transmission peak experienced on the Transmission System during the 12 month

\(^1\) Total Hourly Energy Obligation (THEO), Peak Load Contribution (PLC) and Network Service Peak Load (NSPL) parameters are calculated values used for a variety of purposes by PJM. The link to this PJM website is: [http://www.pjm.com/markets-and-operations/billing-settlements-and-credit/theo-plc-and-nspl.aspx](http://www.pjm.com/markets-and-operations/billing-settlements-and-credit/theo-plc-and-nspl.aspx). It in turn provides the following link to the Company’s website that provides information for Competitive Energy Suppliers: [https://www.dominionenergy.com/suppliers/energy-suppliers](https://www.dominionenergy.com/suppliers/energy-suppliers). Near the bottom of this webpage a link labeled Capacity Peak Load Contribution and Network Service Peak Load Manual is where the document that contains the Company’s procedures for calculating NSPL values can be found.
period ending October 31, (“1-CP, Dominion Zone NSPL”). Each Network Customer’s NSPL (its contribution to the Dominion Zone NSPL) is calculated by determining that Network Customer’s total hourly load coincident with the Dominion Zone NSPL. For billing Network Service, PJM uses the annual peak established during the previous 12 month period ending October 31. For example, the NSPLs that will be used to bill for Network Service during the January 1, 2020 – December 31, 2020 rate year would be determined based on the single hour during which the Dominion Zone annual peak occurs during the 12 month period ending October 31, 2019. NSPLs not only determine the billing determinants for Network Service in the Dominion zone but also impact other charges and credits, as discussed later in my testimony.

Q. HOW DOES THE SEPA & PJM NITSA CURRENTLY IMPACT THE NSPLs?

A. This NITSA provides that SEPA has the responsibility as a PJM Network Customer with respect to a portion of the capacity and energy needs of certain customers (“Preference Customers”). SEPA capacity and losses (“SEPA Capacity Allocations”) are allocated to each of its Preference Customers and PJM charges the Dominion rate for Network Service for the sum of these SEPA Capacity Allocations. Because Preference Customers in the Dominion Zone receive SEPA Capacity Allocations, Dominion reduces their 1-CP contributions by their SEPA Capacity Allocations. This prevents double recovery of the
Network Service charge on the SEPA Capacity Allocations and assures that all
the NSPLs sum to the Dominion Zone 1-CP.

Q. **HOW DOES THE SEPA & PJM NITSA IMPACT THE COMPANY’S**
**PROPOSED METHODOLOGY FOR DETERMINING NSPLs?**

A. The NSPL for SEPA will be determined using the 12-CP method based on the
monthly SEPA Capacity Allocations. Each Network Customer that is also a
SEPA Preference Customer will have each of its monthly coincident peaks
reduced by its monthly SEPA Capacity Allocation. This will reduce the 12-CP
allocation and NSPL for each Preference Customer and prevent double recovery.

Q. **WHAT IS THE WEAKNESS OF THE CURRENT METHODOLOGY**
**THAT YOU ARE ADDRESSING IN THIS FILING?**

A. Because the current approach uses a single one-hour snapshot of customer
demand to calculate the billing determinants for the NSPL at the hour of the
annual peak, reducing load at the 1-CP can result in large changes in cost
responsibility from year to year. Whether the single one-hour occurs in the winter
or the summer can also change cost responsibility dramatically. Moreover,
reliance on a single hour for allocating costs throughout the whole year can
promote uneconomic by-pass resulting in cost shifting. Unless there are
commensurate transmission system costs savings, a single customer can shift
costs to other customers because the load reducing customer would have not only
reduced its own load at the peak, it will have reduced the total 1-CP demand that
acts as the divisor in the formula rate. Lowering the divisor increases the
resulting unit charge (in $/MW-year) in the formula rate.

Q. WHAT OTHER CHARGES CAN A NETWORK CUSTOMER REDUCE
OR AVOID BY REDUCING LOAD AT THE 1-CP?
A. Other charges that can be reduced or avoided if a Network Customer’s load is
reduced at the 1-CP include charges for Transmission Enhancements, Reactive
Supply and Voltage Control, Black Start Service, and Generation Deactivation.
Transmission Enhancement Settlement Charges in EL05-121 and UG
Transmission Charges in EL10-49 could also be reduced or eliminated.
Additionally, there are credits for Transmission Enhancements, Incremental
Capacity Transfer Rights, Firm Point to Point Transmission Service, and Non-
Firm Point-to-Point Transmission Service that could be reduced or eliminated.
Finally, Auction Revenue Rights could also be reduced or eliminated.

Q. PLEASE EXPLAIN HOW THE CURRENT 1-CP METHOD CAN RESULT
IN RELATIVELY LARGE COST SHIFTS YEAR TO YEAR WHEN THE
DOMINION ZONE ANNUAL PEAK CHANGES FROM SEASON TO
SEASON.
A. Typically, for any given rate year, the ATRR is fixed, and the rate for NITS is
derived by dividing the ATRR by the annual peak (“Dominion Zone NSPL”). A
Network Customers pays a Network Service Charge based on its contribution to
the annual peak which results in it paying a load ratio share of the ATRR. The
load ratio share is the Network Customer’s NSPL divided by Dominion Zone
NSPL. Accordingly, large changes in Network Customers’ NSPLs relative to the Dominion Zone NSPL can result in large percentage changes in their cost allocations. Exhibit No. DEV-4 Table 1 provides the NSPLs established for the 2016 – 2019 rate years for the Network Customers listed in the first column. The NSPLs established for the 2016 rate year were based on the annual peak that occurred in the winter of 2015. The NSPLs established for the 2017 rate year were based on the annual peak that occurred in the summer of 2016. The NSPLs established for the 2018 rate year were based on the annual peak that occurred in the winter of 2017. The NSPLs established for the 2019 rate year were based on the annual peak that occurred in the winter of 2018.

Exhibit No. DEV-4 Table 2 provides the load ratio shares based on the NSPLs shown in Table 1, and Table 3 provides the year to year percentage changes in the load ratio shares shown in Table 2. The percent changes in Table 3 indicate how much the load ratio share of cost responsibility for each Network Customer changed from year to year. For example, Network Customer A’s load ratio share cost responsibility decreased by 38.4 % from the 2016 rate year (2015 Winter Peak Year) to the 2017 rate year (2016 Summer Peak Year) but increased by 71.6% from the 2017 rate year to the 2018 rate year (Winter Peak Year). The sum of absolute values of these consecutive percentage changes (“absolute value sum”) provides a measure of the stability of a cost allocation methodology during

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2 A Network Customer’s load ratio share of ATRR can change if it served one or more retail customers during the hour of the annual peak and then loses retail customers during the rate year to another Network Customer. When this happens the Network Customer that gains the retail customer(s) will increase its load ratio share and the Network Customer that loses retail customers will decrease its load ratio share.
this period when the annual peak season changed. Put simply, the lower the absolute value sum, the more stable the cost allocation. Notably, Network Customer A’s absolute value sum is 110%, and two other Network Customers have absolute value sums that are greater than 50%. Also, all but one Network Customer had an absolute values sum greater than 11%.

Q. DOES USE OF THE PROPOSED 12-CP METHODOLOGY RESULT IN A MORE STABLE ALLOCATION OF COST?

A. Yes. The NSPLs based on the proposed method are provided in Exhibit No. DEV-4 Table 4. These NSPLs are determined by using an average 12-CP allocation of the Dominion Zone NSPL, explained later in my testimony. Table 5 provides the load ratio shares based on the NSPLs in Table 4, and Table 6 provides the percentage changes of these load ratio shares. For example, Network Customer A’s load ratio share cost responsibility increased by 3.6 % from the 2016 rate year (2015 Winter Peak Year) to the 2017 rate year (2016 Summer Peak Year) but decreased by 3.6% from the 2017 rate year to the 2018 rate year (2017 Winter Peak Year). Notably, Network Customer A’s absolute values sum under the proposed method is 7% compared 110% under the current method. The three Network Customers that each have an absolute values sum of greater than 50% under the current method, each have an absolute values sum of no greater than 10% under the proposed method. In fact, each Network Customer had a lower absolute values sum under the proposed method than under the current method,
indicating that the proposed cost allocation method produced a more stable result during this period of Annual Peak Season Change.

Q. PLEASE PROVIDE AN EXAMPLE OF HOW THE 1-CP COULD PROMOTE UNECONOMIC BY-PASS THAT RESULTS IN COST SHIFTING.

A. The 1-CP promotes uneconomic by-pass because a single customer in response to a 1-CP price signal could shift costs to other customers by reducing its own load at the peak, which reduces the total 1-CP demand that acts as the divisor in the formula rate. Lowering the divisor increases the resulting unit charge (in $/MW-year) in the formula rate.

Using a very basic example, assume Dominion’s annual revenue requirement was $100, and there were ten customers on the system each with an expected 10 MW of load each at the 1-CP annual system peak, creating a total 1-CP demand of 100 MW. The $100 revenue requirement divided by the total 100 MW 1-CP demand creates a unit charge of $1.00 per MW-year to be paid by all ten customers. However, if one customer reduces its demand at the peak to, for example, 2 MW, the total 1-CP divisor is reduced to 92 MW. That lower divisor increases the unit charge to $1.087 per MW-year ($100 / 92 MW). This higher charge shifts costs to all other customers while the load reducing customer would only pay for 2 MW of transmission at $1.087 per MW-year. If the load reducing customer’s MW load reduction resulted in no transmission cost savings, then it has shifted costs to other customers while enjoying a Network Service savings of
(10 MW x $1.00) - (2MW * 1.087) or $7.826. In this example the peak reduction would require savings of at least $8 in present value to prevent uneconomic bypass and cost shifting.

Q. **IS IT REASONABLE TO ASSUME REDUCING LOAD AT THE PEAK RESULTS IN COMMENSURATE TRANSMISSION COST SAVINGS THAT OFFSET COST SHIFTS?**

A. As a general matter, reducing load during the peak can be beneficial. That is why in PJM, for example, demand response providers can be compensated for agreeing to do exactly that, if needed. However, with respect to transmission facilities in the Dominion Zone, there are no identifiable transmission cost savings that would accrue from Network Customers’ discretionary load reductions at the time of the 1-CP. The first issue is whether the discretionary reductions will be long term and permanent reductions. Discretionary reductions are driven by customers’ own economic considerations rather than actual transmission needs. On the other hand, transmission plant construction is based on long term transmission needs. Having the load reduced during a single peak hour in one year does little to mitigate the need for transmission if it reappears during another single peak hour within a few years. Growth in the 1-CP is not the only driver impacting a transmission construction plan. Transmission planning must also consider and address distribution level solar growth, end of life of existing facilities, maintenance, light load issues causing high voltage on the system, and
specific high demand customer hookups. These planning considerations are not relieved by a customer reducing its load during a single peak hour in one year.

Q. DOES USE OF THE 12-CP METHODOLOGY ADDRESS UNECONOMIC COST REDUCTIONS?

A. Yes. By incorporating the 12-CP feature into the NSPL, Network Customers will no longer be able to reduce or avoid a whole years’ worth of transmission charges for the load they reduce during a single system peak. If the customers curtail only during the 1-CP, they will receive approximately 1/12 the amount of savings they would have received under the present methodology. Conversely, under the proposed method, incorporating the 12-CP feature, a Network Customer would have to curtail load during each peak hour in eleven additional months to obtain the savings it could by curtailing the same load during the hour of the annual peak under the present 1-CP method.

III. PROPOSED NSPL CONTRIBUTION METHODOLOGY

Q. PLEASE EXPLAIN THE REVISED VERSION OF THE NSPL METHODOLOGY.

A. The revised version will be included in a new ATTACHMENT M-2 (Dominion) to the PJM Tariff and is similar to the current version except a 12-CP allocation feature is included. Each Network Customers 12-CP is determined the same as its 1-CP except that hourly load is determined for 11 additional monthly peak

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3 Upon Commission acceptance of the new ATTACHMENT M-2 (Dominion), the current NSPL contribution methodology in the Capacity Peak Load Contribution and Network Service Peak Load Manual will be removed and that manual will be called Capacity Peak Load Contribution Manual.
hours and an average of the 12-monthly coincident peak demands is calculated.

The average 12-CP MW value for each Network Customer is divided by the sum of the average 12-CP MW values of all Network Customers to derive each Network Customers allocation factor. Each Network Customer’s percentage allocation factor is then multiplied by Dominion Zone NSPL (1-CP demand) to determine its NSPL.

Q. DOES THE AVERAGE OF THE MONTHLY DOMINION ZONE PEAK DEMANDS REPLACE THE 1-CP DOMINION ZONE PEAK AS THE DIVISOR IN THE COMPANY’S ATTACHMENT H-16A FORMULA RATE INCLUDED IN THE PJM TARIFF?

A. No. The Company is not proposing any change to its Attachment H-16A FORMULA RATE in this application; therefore, the 1-CP demand remains the divisor for this rate and the rate for NITS will not change as a result of this application. Since the sum of all the Network Customers’ NSPLs under the proposed methodology will equal the 1-CP demand, the proposed NSPL methodology is consistent with the Formula Rate that uses 1-CP demand as the divisor. This ensures that the proposed NSPL methodology will not result in any over or under recovery of the ATRR.

Q. HOW DOES THE NEW METHODOLOGY ESTABLISH THE NSPLs USED TO CHARGE THE ATTACHMENT 10 UG TRANSMISSION CHARGE IN THE COMPANY’S ATTACHMENT H-16A FORMULA RATE INCLUDED IN THE PJM TARIFF?
A. I will refer to these NSPLs as VaNSPLs. Like the current VaNSPL methodology, if a Network Customer has zero Dominion Zone Network Load in Virginia, its Va NSPL will be zero. Again like the current methodology, if a Network Customer has all its Dominion Zone Network Load in Virginia, its VaNSPL will equal its NSPL. Finally, like the current methodology, if a Network Customer has Dominion Zone Network Load in both North Carolina and Virginia its Va NSPL would include only the portion of its NSPL attributable to its Virginia Network Load.

Q. DOES THE NEW NSPL METHODOLOGY CHANGE THE VIRGINIA PORTION OF THE DOMINION ZONE NSPL SHOWN ON ATTACHMENT 10 IN THE COMPANY’S ATTACHMENT H-16A FORMULA RATE INCLUDED IN THE PJM TARIFF?

A. No. The Company is not proposing any change to its Attachment H-16A FORMULA RATE in this application; accordingly no change will be made to this divisor or the Annual UG Transmission Rate as a result of this application. Since the sum of all the Network Customers’ VaNSPLs under the proposed methodology will equal the Virginia portion of the 1-CP demand, the proposed VaNSPL methodology is consistent with Attachment 10 of the Formula Rate that uses the Virginia portion of the 1-CP demand as the divisor. This ensures that the proposed VaNSPL methodology will not result in any over or under recovery of the Total Incremental Undergrounding Costs Revenue Requirement.
Q. PLEASE EXPLAIN THE NEW ATTACHMENT M-2 (DOMINION).

A. Dominion proposes to include a revised version of the NSPL Methodology ATTACHMENT M-2 (Dominion) and has included clean and redlined versions of these proposed PJM Tariff changes in this application. It provides the NSPL methodology for all Network Customers. Steps 1-4 are used to determine the NSPL for each Network Customer. Step 1 is nearly identical to the current method and provides that hourly load data is collected for each Network Customer with Network Load in the zone, including applicable losses, coincident with the each of the Dominion Zone’s 12 monthly transmission system peaks during the 12 month period ending September 30. In this step, the hourly load data collected does not include any adjustments for SEPA capacity and energy.

Step 2 provides that each Preference Customer will have SEPA capacity including losses removed from each of its monthly coincident peaks and that load will become part of SEPA’s load during each monthly coincident peak. The average 12-CP demand for each Network Customer is then calculated by dividing the total 12 hourly coincident peak loads including losses and is adjusted to remove SEPA capacity including losses, if applicable, by twelve – the number of months during the rate year. Step 3 calculates the 12-CP allocation factor for each Network Customer by dividing its average 12-CP demand by the sum of all the average 12-CP demands for all Network Customers. Step 4 calculates each Network Customer’s NSPL by multiplying its 12-CP allocation factor times the Dominion Zone NSPL. Step 5 describes how VaNSPLs are determined from NSPLs based
on the state within the Dominion Zone each Network Customer’s Network Load is located.

Q. **WHY DOES THE NEW ATTACHMENT M-2 (DOMINION) REQUIRE THE CALCULATION OF A RETAIL CUSTOMER’S DAILY NETWORK SERVICE PEAK LOAD CONTRIBUTION (DRNSPL)?**

A. Up until this point I have discussed the determination of each Network Customer’s NSPL prior to January 1 of the rate year. However, PJM accommodates retail choice whereby an eligible retail customer can change Network Customers or become their own Network Customer. Since this can occur on a daily basis throughout a calendar year, PJM calculates daily demand charges for Network Customers based on the sum of the daily NSPL contributions of the retail customers it serves during a given day. Accordingly, there has to be a process to adjust the Network Customers’ NSPL contributions daily in the event eligible retail customer changes Network Customers.\(^4\) Steps 6 and 7 accommodate this change.

Step 6 provides that each retail customer’s daily Network Service Peak Load contribution (“DRNSPL”) shall be determined consistent with the process described above for determining each Network Customer’s NSPL. Step 7 provides that each retail customer’s daily Virginia Network Service Peak Load

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\(^4\) Manual 27: Open Access Transmission Tariff Accounting Section 5: Network Integration Transmission Service Accounting Section 5.3 provides that under state required retail access programs, peak load contributions may change daily, and are expressed in tenths of a MW. These daily peak load contributions are submitted to PJM by the associated Electric Distribution Companies (EDCs) 36 hours prior to the day being billed, and may be corrected up to 12:00 PM Eastern Prevailing Time of the next business day following the Operating Day.
contribution ("DRVaNSPL") shall be determined consistent with the process
described above for determining each Network Customer’s VaNSPL.

Step 8 provides that each Network Customer’s daily Network Service Peak Load
Contribution (DNSPL) for any given day of the calendar year is equal to the sum
of the DRNSPLs for all the retail customers that it has the responsibility to obtain
transmission service for during that day. Step 9 provides that each Network
Customer’s daily Virginia Network Service Peak Load contribution
(“DVaNSPL”) for any given day of the calendar year is equal to the sum of the
daily DRVANSPLs for all the retail customers that it has the responsibility to
obtain transmission service for during that day.

Q. PLEASE EXPLAIN THE TRANSITION PERIOD PROVISION.

A. Because the NSPL’s and VaNSPL’s for 2019 have already been established under
the current method, the Company believes it would result in too abrupt of a
change to implement the new methodology for 2019. This provision provides that
2019 will be a transition period that allows each Network Customer to compare
its NSPL and VaNSPL calculated under the new NSPL method versus present
method. However, each Network Customer’s NSPL and Va NSPL for billing
during 2019 will be determined based on the present method. This should provide
Network Customers sufficient time to understand the new method prior to it
impacting their billing for Network Service and the ATTACHMENT 10 UG
IV. BENEFITS TO NETWORK CUSTOMERS THAT SERVE LOADS IN THE DOMINION ZONE

Q. HOW DOES INCLUDING THE NEW ATTACHMENT M-2 (DOMINION) BENEFIT NETWORK CUSTOMERS?

A. By including ATTACHMENT M-2 (Dominion) in the PJM Tariff, transparency will be increased because customers can easily locate the Company’s procedures for determining NSPLs and VaNSPLs.

Q. DOES THE CHANGE TO THE NSPL METHODOLOGY BENEFIT NETWORK CUSTOMERS?

A. Yes. For Network Customers that represent approximately 99% of the Network Load, it dampens costs shifts if the season in which the annual peak occurs changes, resulting in a much more stable cost allocation method. Additionally, it discourages uneconomic by-pass and cost shifting among Network Customers. The incentive for this type of cost shifting behavior has increased over the last 10 years as the rate for NITS has increased to recover the Company’s significant investments in the Transmission System. The incorporation of the 12-CP feature prevents a Network Customer from being rewarded with a whole year’s worth of transmission charges for each MW of load they only curtail at the peak. It also increases the number of curtailments required to avoid a whole years’ worth of transmission charges, making it relatively more difficult to achieve this high reward at the expense of costs shifted to others. Each MW of discretionary monthly peak curtailment under the proposed method is rewarded approximately 1/12 as much as each MW of discretionary annual peak curtailment under the
present method. Reducing the level of rate reduction reward resulting from
discretionary curtailments better aligns the certain costs imposed on non-
curtailing customers with the uncertain and possibly nonexistent savings in the
cost of transmission facilities that may result from such reductions. Put simply,
allocating transmission costs using the proposed method better ensures that all
customers pay for their use of the transmission system because it reduces the
incentive of customers to shift NITS and other PJM charges to other customers.

V. CONCLUSION

Q. DOES THIS CONCLUDE YOUR TESTIMONY AT THIS TIME?

A. Yes, it does.
VERIFICATION

Pursuant to 28 U.S.C. § 1746 (2012), I state under penalty of perjury that the foregoing testimony is true and correct to the best of my knowledge, information, and belief.

Executed this 24th day of April, 2019

\( /s/ \text{James Daniel Jackson, Jr.} \)
James Daniel Jackson, Jr.
Regulatory Consultant, Electric Transmission Regulation and Policy
Dominion Energy Virginia
EXHIBIT NO. DEV-2

Prior Testimony of
James Daniel Jackson, Jr.
## PRIOR TESTIMONY OF JAMES DANIEL JACKSON, JR.

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<th>Regulatory Authority</th>
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</thead>
<tbody>
<tr>
<td>Federal Energy Regulatory Commission (&quot;FERC&quot;)</td>
<td>ER18-493-000</td>
<td>Filing supporting a proposed new Attachment M-2 to the OATT which provides for an average demand feature proposed for use in the calculation certain transmission and other charges.</td>
</tr>
<tr>
<td>FERC</td>
<td>EL17-479-000</td>
<td>Filing for revisions to Formula rate to reflect an acquisition adjustment.</td>
</tr>
<tr>
<td>FERC</td>
<td>EL10-49-005</td>
<td>Prepared Direct and Rebuttal Testimony Supporting Dominion’s Proposed Modifications to the OATT Formula Rate to Recover the Cost of Undergrounding Certain Transmission Projects.</td>
</tr>
<tr>
<td>FERC</td>
<td>ER15-1487-000</td>
<td>Filing for Revised Treatment of Prepayments in OATT Formula Rate.</td>
</tr>
<tr>
<td>FERC</td>
<td>ER15-856-000</td>
<td>Filing to change implementation date of transmission depreciation rates from May 1, 2013 to January 1, 2012.</td>
</tr>
<tr>
<td>FERC</td>
<td>ER14-1549-000</td>
<td>Filing to implement new transmission depreciation rates effective May 1, 2013.</td>
</tr>
<tr>
<td>FERC</td>
<td>ER08-1540-000</td>
<td>Filing to implement a Deferral Recovery Charge of RTO formation, integration and participation costs.</td>
</tr>
<tr>
<td>FERC</td>
<td>ER08-1207-000</td>
<td>Filing to implement transmission rate incentives.</td>
</tr>
<tr>
<td>FERC</td>
<td>ER08-92-000</td>
<td>Filing to implement a cost-of-service formula rate.</td>
</tr>
<tr>
<td>FERC</td>
<td>ER05-6-000, et al.</td>
<td>Support of Dominion’s retention of revenues from through-and-out transmission.</td>
</tr>
<tr>
<td>FERC</td>
<td>ER04-898-000</td>
<td>Explained certain proposed revisions to Schedule 2 of Dominion’s then effective open-access transmission tariff.</td>
</tr>
<tr>
<td>FERC</td>
<td>ER03-262-000</td>
<td>Supported Rate Reciprocity Agreement for the elimination of transmission rate pancaking between Dominion and PJM Interconnection, L.L.C. (“PJM”).</td>
</tr>
<tr>
<td>FERC</td>
<td>RT01-88-006 and Contemporaneous</td>
<td>Testimony on behalf of Dominion in the August 31, 2001 submittal of the former Alliance Regional Transmission Organization (“RTO”) companies.</td>
</tr>
<tr>
<td>Regulatory Authority</td>
<td>Docket/Case Number</td>
<td>Scope of Proceeding</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>--------------------</td>
<td>-------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Virginia State Corporation Commission (&quot;VSCC&quot;)/SCC</td>
<td>ER01-2993-000</td>
<td></td>
</tr>
<tr>
<td>VSCC</td>
<td>PUR-2018-00066</td>
<td>2018 Rider T1 case to recover certain costs for transmission services and demand response programs.</td>
</tr>
<tr>
<td>VSCC</td>
<td>PUR-2017-00057</td>
<td>2017 Rider T1 case to recover certain costs for transmission services and demand response programs.</td>
</tr>
<tr>
<td>VSCC</td>
<td>PUE-2016-00046</td>
<td>2016 Rider T1 case to recover certain costs for transmission services and demand response programs.</td>
</tr>
<tr>
<td>VSCC</td>
<td>PUE-2015-00041</td>
<td>2015 Rider T1 case to recover certain costs for transmission services and demand response programs.</td>
</tr>
<tr>
<td>VSCC</td>
<td>PUE-2014-00021</td>
<td>2014 Rider T1 case to recover certain costs for transmission services and demand response programs.</td>
</tr>
<tr>
<td>VSCC</td>
<td>PUE-2013-00023</td>
<td>2013 Rider T1 case to recover certain costs for transmission services and demand response programs.</td>
</tr>
<tr>
<td>VSCC</td>
<td>PUE-2012-00052</td>
<td>2012 Rider T1 case to recover certain costs for transmission services and demand response programs.</td>
</tr>
<tr>
<td>VSCC</td>
<td>PUE-2011-00044</td>
<td>2011 Rider T case to recover certain costs for transmission services and demand response programs.</td>
</tr>
<tr>
<td>VSCC</td>
<td>PUE-2010-00096</td>
<td>2010 Rider T case to recover certain costs for transmission services and demand response programs.</td>
</tr>
<tr>
<td>VSCC</td>
<td>PUE-2009-00018</td>
<td>2009 Rider T case to recover certain costs for transmission services and demand response programs.</td>
</tr>
</tbody>
</table>
In conformity with PJM’s tariff, this document outlines the process Virginia Electric and Power Company (Dominion) uses to determine the capacity peak load contribution (PLC) and network service peak load (NSPL) for each of its end-use customers (Customer).

As the electric distribution company (EDC) in the PJM Dominion Zone, Dominion collects and reports customer load data to PJM. This data, in turn, is used by PJM to calculate the hours of the five highest daily peak loads (5CP) on the entire PJM system June 1 through September 30; PJM load management events are added back by PJM for an unrestricted value. PJM, through forecast modeling, uses this data to calculate a weather-normalized unrestricted capacity obligation (UCAP) for the load serving entities (LSE) in the Dominion Zone; the UCAP functions as a baseline to ensure a LSE’s installed capacity resources are sufficient to meet PJM’s forecasted load and reserve margins.

By examining a Customer's load during PJM's 5CP and reconciling it to Dominion’s PJM UCAP, a Customer specific PLC is calculated. Dominion updates Customer PLCs annually in January and applies it to the subsequent delivery year beginning June 1. In addition to playing an important role in determining UCAP, a Customer's PLC also establishes the amount of capacity it can register in PJM’s emergency load management programs.

A Customer’s transmission network service obligation is based on its load at the time of the Dominion Zone’s annual NSPL – the single highest transmission peak load experienced on the Dominion transmission system during the 12 month period ending October 31. Dominion, as the EDC, collects and reports Customer load data to PJM which in turn determines the transmission network service obligation for the LSEs in the Dominion Zone for the succeeding calendar year.

**Peak Load Contribution Calculation**

The methodology Dominion uses for determining a Customer’s PLC depends upon the type of metering, and thus the level of detail, it possesses for a Customer’s load during PJM’s 5CP.

- **Interval Meter** - Records the Customer’s kWhs on an interval basis for each billing cycle. The interval kWhs are used to determine hourly load values, and the hourly loads are summed to determine the Customer’s total kWhs for the billing cycle.

- **Non-Interval Demand Meter** - Records the Customer’s total kWhs for a billing cycle as well as the highest kW demand measured over a 30-minute period. However, there is no record of the amount of load on an hourly interval basis.

- **Non-Interval Monthly Meter** - Records the Customer’s total kWhs for a billing cycle. There is no record of the amount of load on an hourly interval basis.

Based upon the type of metering a Customer possesses, a Customer class load profile is established if needed. Since interval metered Customers have a historical record of their own hourly load data, they utilize their own unique individual load values. On the other hand, historical interval data is not available for non-interval metered Customers and for this reason a class load profile is developed from a random sampling of interval meters installed at Customer locations for load research purposes. These load research meters provide hourly load values that represent the average usage in that Customer class and establish its Customer class load profile.

After determining a Customer’s type of metering, Dominion goes through a five step process to determine its PLC.

1) **Retrieve Customer's Hourly Load Data** - Load data for a Customer, corresponding to PJM’s 5CP, is assembled from Dominion's data warehouse -- customer specific hourly metered data is used for interval metered Customers whereas load research data is used for non-interval metered Customers. If a Customer is new and does not possess historical metering, load research data is used until sufficient Customer data becomes available.
2) Calculate Customer's Unrestricted Load - As explained in PJM Manual 19: Load Forecasting and Analysis, any PJM load management event that occurs during one of PJM’s 5CP, and is confirmed in eLRS, is added back to a Customer's hourly load. PJM calculates the amount, if any, of load add-back and provides this data to Dominion.

PJM Manual 19: Load Forecasting and Analysis
Attachment A.1, Requirements for Production of Load Drop Estimates

<table>
<thead>
<tr>
<th>Reason for Load Drop</th>
<th>PJM-Initiated Emergency</th>
<th>Economic</th>
<th>EDC or CSP Initiated</th>
</tr>
</thead>
<tbody>
<tr>
<td>DR / ILR</td>
<td>Load Drop Estimates must be produced for any interruptions from June 1 through September 30. Load drop is capped at the nominated DR/ILR amount.</td>
<td>Load Drop Estimates must be produced for any settled interruptions from June 1 through September 30. Load drop is capped at the nominated DR/ILR amount.</td>
<td>No Load Drop Estimates required.</td>
</tr>
<tr>
<td>Emergency Energy Only</td>
<td>Load Drop Estimates must be produced for any interruptions during Emergency hours from June 1 through September 30.</td>
<td>No Load Drop Estimates required.</td>
<td>No Load Drop Estimates required.</td>
</tr>
<tr>
<td>Economic</td>
<td>No Load Drop Estimates required.</td>
<td>No Load Drop Estimates required.</td>
<td>No Load Drop Estimates required.</td>
</tr>
</tbody>
</table>

3) Apply Loss Expansion Factor - Each Customer is assigned a loss expansion factor intended to gross-up Customer loads to reflect transmission and distribution line energy losses. A Customer’s loss expansion factor is determined by its delivery service voltage level. Generally, interval metered Customers are assigned either a transmission, primary, or secondary distribution loss factor whereas non-interval metered Customers usually have a secondary distribution loss expansion factor.

4) Calculate Customer's Unreconciled PLC – An average of the Customer’s hourly unreconciled loads corresponding to PJM’s 5CP is multiplied by its loss expansion factor to arrive at its unreconciled PLC.

5) Calculate Customer's Reconciled PLC – The sum of all unreconciled Customer PLC is scaled to match PJM’s UCAP for Dominion LSE. This process creates a scaling factor that is applied to each Customer’s unreconciled PLC to come up with a finalized reconciled PLC.

Transmission Network Service Obligation
To determine the transmission network service obligation, load data is collected for the single highest transmission peak experienced on the Dominion Zone’s transmission system during the 12 month period ending October 31. Outlined below, at a high level, is the process followed to calculate the NSPL for the ensuing calendar year once the date and hour of the transmission peak is determined.

1) Retrieve Hourly Load Data – Collect hourly load data for all LSEs in the zone, including any applicable losses, coincident with the Dominion Zone’s transmission peak.

2) Calculate LSEs NSPL – The LSE’s total hourly load coincident with the Dominion Zone’s transmission peak determines its share of the NSPL.
Table 1  NSPLs based on the Current (1-CP) NSPL Method (MWs)

<table>
<thead>
<tr>
<th>Rate Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network Customer</td>
<td>2015 Winter Peak Year NSPLs</td>
<td>2016 Summer Peak Year NSPLs</td>
<td>2017 Winter Peak Year NSPLs</td>
<td>2018 Winter Peak Year NSPLs</td>
</tr>
<tr>
<td>A</td>
<td>202.4</td>
<td>112.6</td>
<td>194.4</td>
<td>214.9</td>
</tr>
<tr>
<td>B</td>
<td>383.3</td>
<td>306.4</td>
<td>335.7</td>
<td>403.7</td>
</tr>
<tr>
<td>C</td>
<td>857.2</td>
<td>1,030.7</td>
<td>837.9</td>
<td>930.8</td>
</tr>
<tr>
<td>D</td>
<td>1,680.9</td>
<td>1,065.9</td>
<td>1,568.2</td>
<td>1,787.8</td>
</tr>
<tr>
<td>E</td>
<td>102.7</td>
<td>102.7</td>
<td>102.8</td>
<td>102.7</td>
</tr>
<tr>
<td>F</td>
<td>#N/A</td>
<td>20.8</td>
<td>13.7</td>
<td>16.0</td>
</tr>
<tr>
<td>G</td>
<td>#N/A</td>
<td>#N/A</td>
<td>#N/A</td>
<td>#N/A</td>
</tr>
<tr>
<td>H</td>
<td>#N/A</td>
<td>#N/A</td>
<td>#N/A</td>
<td>#N/A</td>
</tr>
<tr>
<td>I</td>
<td>#N/A</td>
<td>#N/A</td>
<td>#N/A</td>
<td>#N/A</td>
</tr>
<tr>
<td>J</td>
<td>18,424.4</td>
<td>16,899.1</td>
<td>16,608.8</td>
<td>17,775.5</td>
</tr>
<tr>
<td>TOTAL</td>
<td>21,650.9</td>
<td>19,538.1</td>
<td>19,661.4</td>
<td>21,231.9</td>
</tr>
</tbody>
</table>

Table 2  Load Ratio Shares based on the Current NSPL Method

<table>
<thead>
<tr>
<th>Rate Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network Customer</td>
<td>2015 Winter Peak Year NSPLs</td>
<td>2016 Summer Peak Year NSPLs</td>
<td>2017 Winter Peak Year NSPLs</td>
<td>2018 Winter Peak Year NSPLs</td>
</tr>
<tr>
<td>A</td>
<td>0.93%</td>
<td>0.58%</td>
<td>0.99%</td>
<td>1.01%</td>
</tr>
<tr>
<td>B</td>
<td>1.77%</td>
<td>1.57%</td>
<td>1.71%</td>
<td>1.90%</td>
</tr>
<tr>
<td>C</td>
<td>3.96%</td>
<td>5.28%</td>
<td>4.26%</td>
<td>4.38%</td>
</tr>
<tr>
<td>D</td>
<td>7.76%</td>
<td>5.46%</td>
<td>7.98%</td>
<td>8.42%</td>
</tr>
<tr>
<td>E</td>
<td>0.47%</td>
<td>0.53%</td>
<td>0.52%</td>
<td>0.48%</td>
</tr>
<tr>
<td>F</td>
<td>#N/A</td>
<td>0.11%</td>
<td>0.07%</td>
<td>0.08%</td>
</tr>
<tr>
<td>G</td>
<td>#N/A</td>
<td>#N/A</td>
<td>#N/A</td>
<td>#N/A</td>
</tr>
<tr>
<td>H</td>
<td>#N/A</td>
<td>#N/A</td>
<td>#N/A</td>
<td>#N/A</td>
</tr>
<tr>
<td>I</td>
<td>#N/A</td>
<td>#N/A</td>
<td>#N/A</td>
<td>#N/A</td>
</tr>
<tr>
<td>J</td>
<td>85.10%</td>
<td>86.49%</td>
<td>84.47%</td>
<td>83.72%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

Table 3  Percentage Changes in Load Ratio Shares based on the Current NSPL Method

<table>
<thead>
<tr>
<th>Change in Season that Annual Peak Occurred</th>
<th>Winter to Summer</th>
<th>Summer to Winter</th>
<th>2016 to 2017 Absolute % Change + 2017 to 2018 Absolute % Change</th>
<th>No Change in Seasons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate Year to Rate Year</td>
<td>2016 to 2017</td>
<td>2017 to 2018</td>
<td>ABS(B) + ABS(C)</td>
<td>2018 to 2019</td>
</tr>
<tr>
<td>A</td>
<td>-38.4%</td>
<td>71.6%</td>
<td>110%</td>
<td>D</td>
</tr>
<tr>
<td>B</td>
<td>-11.4%</td>
<td>8.9%</td>
<td>20%</td>
<td>E</td>
</tr>
<tr>
<td>C</td>
<td>33.2%</td>
<td>-19.2%</td>
<td>52%</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>-29.7%</td>
<td>46.2%</td>
<td>76%</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>10.8%</td>
<td>-0.5%</td>
<td>11%</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>#N/A</td>
<td>-34.5%</td>
<td>#N/A</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>#N/A</td>
<td>#N/A</td>
<td>#N/A</td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>#N/A</td>
<td>#N/A</td>
<td>#N/A</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>#N/A</td>
<td>#N/A</td>
<td>#N/A</td>
<td></td>
</tr>
<tr>
<td>J</td>
<td>1.6%</td>
<td>-2.3%</td>
<td>4%</td>
<td></td>
</tr>
</tbody>
</table>

N/A entered to if no 1-CP data for that year.
### Table 4: NSPLs based on the Proposed (1-CP with Average 12-CP Allocation) Method (MWs)

<table>
<thead>
<tr>
<th>Rate Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Network Customer</strong></td>
<td><strong>2015 Winter Peak Year NSPLs</strong></td>
<td><strong>2016 Summer Peak Year NSPLs</strong></td>
<td><strong>2017 Winter Peak Year NSPLs</strong></td>
<td><strong>2018 Winter Peak Year NSPLs</strong></td>
</tr>
<tr>
<td>A</td>
<td>153.6</td>
<td>143.6</td>
<td>139.4</td>
<td>147.2</td>
</tr>
<tr>
<td>B</td>
<td>344.4</td>
<td>302.0</td>
<td>290.9</td>
<td>321.7</td>
</tr>
<tr>
<td>C</td>
<td>968.8</td>
<td>929.2</td>
<td>969.5</td>
<td>1,120.0</td>
</tr>
<tr>
<td>D</td>
<td>1,344.0</td>
<td>1,252.0</td>
<td>1,207.7</td>
<td>1,313.3</td>
</tr>
<tr>
<td>E</td>
<td>132.3</td>
<td>125.4</td>
<td>120.6</td>
<td>128.0</td>
</tr>
<tr>
<td>F</td>
<td>#N/A</td>
<td>22.8</td>
<td>20.2</td>
<td>22.0</td>
</tr>
<tr>
<td>G</td>
<td>#N/A</td>
<td>#N/A</td>
<td>#N/A</td>
<td>#N/A</td>
</tr>
<tr>
<td>H</td>
<td>#N/A</td>
<td>#N/A</td>
<td>#N/A</td>
<td>#N/A</td>
</tr>
<tr>
<td>I</td>
<td>#N/A</td>
<td>#N/A</td>
<td>#N/A</td>
<td>#N/A</td>
</tr>
<tr>
<td>J</td>
<td>18,691.5</td>
<td>16,763.1</td>
<td>16,913.2</td>
<td>18,146.5</td>
</tr>
<tr>
<td>TOTAL</td>
<td>21,650.9</td>
<td>19,538.1</td>
<td>19,661.4</td>
<td>21,231.9</td>
</tr>
</tbody>
</table>

### Table 5: Load Ratio Shares based on the Proposed Method

<table>
<thead>
<tr>
<th>Rate Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Network Customer</strong></td>
<td><strong>2015 Winter Peak Year NSPLs</strong></td>
<td><strong>2016 Summer Peak Year NSPLs</strong></td>
<td><strong>2017 Winter Peak Year NSPLs</strong></td>
<td><strong>2018 Winter Peak Year NSPLs</strong></td>
</tr>
<tr>
<td>A</td>
<td>0.71%</td>
<td>0.74%</td>
<td>0.71%</td>
<td>0.69%</td>
</tr>
<tr>
<td>B</td>
<td>1.59%</td>
<td>1.55%</td>
<td>1.48%</td>
<td>1.52%</td>
</tr>
<tr>
<td>C</td>
<td>4.47%</td>
<td>4.76%</td>
<td>4.93%</td>
<td>5.28%</td>
</tr>
<tr>
<td>D</td>
<td>6.21%</td>
<td>6.41%</td>
<td>6.14%</td>
<td>6.27%</td>
</tr>
<tr>
<td>E</td>
<td>0.61%</td>
<td>0.64%</td>
<td>0.61%</td>
<td>0.60%</td>
</tr>
<tr>
<td>F</td>
<td>#N/A</td>
<td>0.12%</td>
<td>0.10%</td>
<td>0.10%</td>
</tr>
<tr>
<td>G</td>
<td>#N/A</td>
<td>#N/A</td>
<td>#N/A</td>
<td>#N/A</td>
</tr>
<tr>
<td>H</td>
<td>#N/A</td>
<td>#N/A</td>
<td>#N/A</td>
<td>#N/A</td>
</tr>
<tr>
<td>I</td>
<td>#N/A</td>
<td>#N/A</td>
<td>#N/A</td>
<td>#N/A</td>
</tr>
<tr>
<td>J</td>
<td>86.33%</td>
<td>85.80%</td>
<td>86.02%</td>
<td>85.47%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>99.93%</td>
<td>100.00%</td>
<td>100.00%</td>
<td>99.93%</td>
</tr>
</tbody>
</table>

### Table 6: Percentage Changes in Load Ratio Shares based on the Proposed NSPL Method

<table>
<thead>
<tr>
<th>Change in Season that Annual Peak Occurred</th>
<th>Winter to Summer</th>
<th>Summer to Winter</th>
<th>2016 to 2017 Absolute % Change + 2017 to 2018 Absolute % Change</th>
<th>No Change in Seasons</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rate Year to Rate Year</strong></td>
<td><strong>2016 to 2017</strong></td>
<td><strong>2017 to 2018</strong></td>
<td><strong>ABS(B) + ABS(C)</strong></td>
<td><strong>2018 to 2019</strong></td>
</tr>
<tr>
<td>A</td>
<td>3.6%</td>
<td>-3.6%</td>
<td>7%</td>
<td>-2.2%</td>
</tr>
<tr>
<td>B</td>
<td>-2.8%</td>
<td>-4.3%</td>
<td>7%</td>
<td>2.4%</td>
</tr>
<tr>
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N/A entered if average 12 CP data is for only partial year.
EXHIBIT NO. DEV-5

Prepared Direct Testimony of
Christopher C. Hewett
UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Virginia Electric and Power Company
Docket No. ER19-___-000

PREPARED DIRECT TESTIMONY
OF
CHRISTOPHER C. HEWETT

ON BEHALF OF
VIRGINIA ELECTRIC AND POWER COMPANY

April 24, 2019
<table>
<thead>
<tr>
<th>Exhibit No.</th>
<th>Description</th>
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<tbody>
<tr>
<td>DEV-6</td>
<td>Charts – Customers Curtailing Load during the 2018 Dominion Zone Peak</td>
</tr>
<tr>
<td>DEV-7</td>
<td>Charts – Customers Curtailing Load during the 2019 To-Date Dominion Zone Peak</td>
</tr>
</tbody>
</table>
My testimony explains how a customer’s Network Service Peak Load obligation is determined based on its demand at the time of the single highest peak load hour for the Dominion Zone. I also provide examples of customers curtailing their Network Service Peak Load and thereby avoiding Network Service charges assessed by PJM.
UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Virginia Electric and Power Company )
) Docket No. ER19-___-000
)

PREPARED DIRECT TESTIMONY OF
CHRISTOPHER C. HEWETT

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Christopher C. Hewett. My business address is 701 East Cary Street, Richmond, Virginia, 23219.

Q. BY WHOM ARE YOU EMPLOYED AND FOR HOW LONG HAVE YOU BEEN EMPLOYED?

A. I am employed by Virginia Electric and Power Company, doing business as Dominion Energy Virginia (“Dominion” or “the Company”), as the Supervisor of PJM Interconnection, L.L.C.’s (“PJM”) Energy Settlement. I have been employed by Dominion for ten years.

Q. ON WHOSE BEHALF ARE YOU SUBMITTING THIS TESTIMONY?

A. I am testifying on behalf of Dominion.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.

A. I graduated from the College of William and Mary in 1998 with a Bachelor of Arts degree in Government. Prior to working at Dominion, I held analyst roles in both the public and private sector. In 2009 I joined Dominion as a Senior
Business Analyst and was promoted to my current position of Supervisor PJM Energy Settlement in 2013.

Q. PLEASE DESCRIBE YOUR CURRENT RESPONSIBILITIES AT DOMINION.

A. I manage the energy settlement process for the Dominion Zone at PJM. This involves submitting to PJM both the initial hourly energy usage of the customers in the Zone, as well as, reconciling their final energy usage. In addition, I report to PJM the Peak Load Contribution (“PLC”) and the Network Service Peak Load (“NSPL”) obligations allocated to these customers.

Q. HAVE YOU PREVIOUSLY SPONSORED TESTIMONY BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION (“FERC”)?

A. No.

Q. PLEASE EXPLAIN YOUR UNDERSTANDING OF THE INSTANT PROCEEDING.

A. Dominion is initiating this proceeding to obtain FERC approval to incorporate into the PJM Open Access Transmission Tariff (“PJM Tariff”) a methodology that changes how the current NSPL contribution for each customer (“Network Customer”) taking Network Integration Transmission Service (“Network Service”) within the Dominion Zone is calculated. The new methodology will ensure Network Customers pay based on their usage coincident with each of the 12 hours that the monthly Dominion Zone Peaks occur rather than just when the single highest peak hour occurs.
Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY AND HOW IS IT ORGANIZED?

A. The purpose of my testimony is to provide examples of customers curtailing their NSPL and thereby avoiding Network Service charges assessed by PJM. First, I will describe how the Company allocates a customer’s NSPL obligation. I will then show examples of how customers reduced their demand during the 2018 and 2019 Dominion Zone peak which reduced their NSPL obligation.

Q. ARE YOU SPONSORING ANY EXHIBITS TO YOUR TESTIMONY?

A. Yes. I am sponsoring the following exhibits:

- Exhibit No. DEV-5: Document including Charts – Examples of Customers Curtailing Load during the 2018 Dominion Zone Peak.
- Exhibit No. DEV-6: Document including Charts – Examples of Customers Curtailing Load during the 2019 To-Date Dominion Zone Peak.

Q. WAS YOUR TESTIMONY PREPARED BY YOU OR UNDER YOUR DIRECT SUPERVISION?

A. Yes.

II. NETWORK SERVICE PEAK LOAD OBLIGATION

Q. HOW DOES THE COMPANY CURRENTLY ALLOCATE A CUSTOMER’S NSPL OBLIGATION?

A. The Company collects hourly load data, including applicable losses, for all customers coincident with the single highest peak load hour for the Dominion
Zone during the 12 month period ending October 31 (“1-CP”). A customer’s demand at the time of the 1-CP becomes its NSPL obligation for the upcoming year and is reported to PJM for its use in assessing Network Service charges.

Q. **HOW WOULD A CUSTOMER’S NSPL OBLIGATION BE AFFECTED IF IT REDUCED DEMAND DURING THE 1-CP?**

A. A customer’s demand at the time of the 1-CP sets its NSPL obligation. If a customer reduces load during this single hour, it will reduce its NSPL and thereby reduce the Network Service charges assessed by PJM.

Q. **ARE THERE CONCERNS WITH UTILIZING A 1-CP NSPL ALLOCATION METHODOLOGY?**

A. Yes. A single one-hour snapshot of a customer’s demand during the 1-CP may not reflect its load during the rest of the year. In addition, by reducing demand during just this one hour, a customer can reduce or avoid its transmission costs, which are then shifted to other Network Service customers.

Q. **HOW WOULD A CUSTOMER FORECAST WHEN THE 1-CP FOR THE DOMINION ZONE WILL OCCUR?**

A. On the publicly accessible portion of its website, PJM provides an hourly seven day load forecast for the Dominion Zone. Based on this information, a customer could predict when the 1-CP might occur and reduce its demand.
Q. DID CUSTOMERS REDUCE DEMAND DURING THE 2018 AND 2019 1-CP AND AVOID NETWORK SERVICE CHARGES?

A. Yes. There are customers at both the retail and wholesale level actively reducing demand during the 1-CP to avoid Network Service charges. The charts provided in Exhibit DEV-5 and Exhibit No. DEV-6 provide evidence of customers reducing their demand during the 2018 and 2019 1-CP and thus decreasing their NSPL obligation and Network Service charges.

Q. WHY WOULD A CUSTOMER REDUCE DEMAND DURING THE 2018 1-CP?

A. A customer’s NSPL obligation is based on demand at the time of the single highest peak load hour for the Dominion Zone during the 12 month period ending October 31, whereas the PLC contribution is based on demand at the time of PJM’s five concurrent summer peaks. Since the 2018 1-CP occurred during the winter, a demand reduction undertaken during this time period avoids Network Service charges.

Q. DID CUSTOMERS REDUCE DEMAND DURING THE 2019 TO-DATE 1-CP?

A. Yes. The charts provided in Exhibit DEV-6 show customers reducing their demand during the single highest peak load hour the Dominion Zone has experienced to-date during the 12 month period starting November 1, 2018. If this hour becomes the 2019 1-CP (January 31, 2019 HE 08) because it was the single highest peak load hour for the Dominion Zone, it would become the
customer’s 2020 NSPL obligation used by PJM in assessing Network Service charges.

Q. **COULD RETAIL CHOICE IMPACT A CUSTOMER’S DECISION TO REDUCE DEMAND DURING THE 1-CP?**

A. Yes, under Virginia retail choice rules, an eligible customer of the Company may select a competitive service provider (“CSP”). When a customer opts for a CSP it is no longer served under the Company’s state regulated generation and transmission rates, but instead takes service from a CSP that operates as its load serving entity (“LSE”) in PJM’s wholesale markets and the CSP purchases PJM transmission service to serve the customer. Through this relationship a customer is assessed a portion of the LSE’s PJM Network Service charges based on its demand during the 1-CP. For this reason, customers could seek to reduce their demand at the Company’s 1-CP to reduce or even avoid network service charges. This can become even more evident when a CSP serves a single customer which would allow for a direct correlation of PJM charges. In this situation, a customer can act as its own LSE and potentially reduce its NSPL to zero and avoid Network Service charges.

**III. CONCLUSION**

Q. **DOES THIS CONCLUDE YOUR TESTIMONY AT THIS TIME?**

A. Yes, it does.
VERIFICATION

Pursuant to 28 U.S.C. § 1746 (2012), I state under penalty of perjury that the foregoing testimony is true and correct to the best of my knowledge, information, and belief.

Executed this 24th day of April, 2019

/s/ Christopher C. Hewett
Christopher C. Hewett
Supervisor, PJM Energy Settlement
Dominion Energy Virginia
EXHIBIT NO. DEV-6

Charts—Customers Curtailing Load During The 2018 Dominion Zone Peak
Customer 3 - DOM Zone 2018 Peak Day Profile

DOM Zone 1-CP
01/07/2018 HE08

Percent of Hourly Load

Percent of Hourly Load

Customer 3 Profile
DOM Zone Profile
Customer Curtailed
Week of the DOM Zone 2018 1-CP (01/07/2018 HE08)
EXHIBIT NO. DEV-7

Charts—Customers Curtailing Load During The 2019 To-Date Dominion Zone Peak
Customer 1 - Week of January 27, 2019 Profile

Customer Curtained
Day of the DOM Zone 2019 To-Date 1-CP
(01/31/2019 HE08)
Customer 2 - Week of January 27, 2019 Profile

Customer Curtained
Day of the DOM Zone 2019 To-Date 1-CP
(01/31/2019 HE08)