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PUBLIC VERSION

September 21, 2015

BY HAND DELIVERY

Joel H. Peck, Clerk
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Richmond, Virginia 23219

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Application of Virginia Electric and Power Company For approval of special rates, terms and conditions pursuant to § 56-235.2 of the Code of Virginia and for expedited consideration
Case No. PUE-2015-00103

Dear Mr. Peck:

Enclosed for filing in the above-captioned proceeding are an unbound original and one (1) copy of the PUBLIC version of the *Application of Virginia Electric and Power Company For approval of special rates, terms and conditions pursuant to § 56-235.2 of the Code of Virginia and for expedited consideration* ("Application"). A confidential and extraordinarily version of the Application is also being filed under seal under separate cover.

Thank you for your attention to this matter.

Very truly yours,

Kristian M. Dahl

Enclosures

cc: William H. Chambliss, Esq. (w/o enclosures)
Lisa S. Booth, Esq. (w/o enclosures)

COMMONWEALTH OF VIRGINIA

STATE CORPORATION COMMISSION

APPLICATION OF	)	
	)	
VIRGINIA ELECTRIC AND POWER COMPANY	)	Case No. PUE-2015-00103
	)	
For approval of special rates, terms and	)	
conditions pursuant to § 56-235.2	)	
of the Code of Virginia	)	
and for expedited consideration	)	

VIRGINIA ELECTRIC AND POWER COMPANY'S APPLICATION FOR APPROVAL OF SPECIAL RATES, TERMS AND CONDITIONS PURSUANT TO VIRGINIA CODE § 56-235.2 AND FOR EXPEDITED CONSIDERATION

Virginia Electric and Power Company ("Dominion Virginia Power" or the "Company"), by counsel, pursuant to § 56-235.2 of the Code of Virginia ("Va. Code") and Rule 310 of the State Corporation Commission of Virginia (the "Commission") Rules for Filing an Application to Provide Electric and Gas Service Under a Special Rate, Contract or Incentive 20 VAC 5-310-10 ("Rule 310"), respectfully requests Commission approval of a Special Rate and Contract for Electric Service (the "Special Rate Contract") entered into September 18, 2015 by and between the Company and Vadata, Inc. ("Vadata" or the "Customer"). The responses to each numbered guideline in the "Guidelines for Special Rates, Contracts or Incentives" required by Rule 310 are attached hereto as Attachment A. In addition to the Special Rate Contract, Dominion Virginia Power is presenting for the Commission's consideration a stand-alone Energy Management Services Agreement also entered into September 18, 2015 by and between the Company and the Customer for the provision of certain incidental non-tariff electric market management services (the "EMSA"). This application is also supported by the pre-filed direct testimony of Company Witnesses Gregory J. Morgan and Michael S. Hupp, Jr (collectively, with Attachment A, the pre-filed testimonies and schedules, the "Application"). In support of its Application, Dominion Virginia Power respectfully shows the following:

1. Dominion Virginia Power is a public service corporation organized under the laws of the Commonwealth of Virginia furnishing electric service to the public within its certificated service territory. The Company also supplies electric service to nonjurisdictional customers in Virginia and to the public in portions of North Carolina. Dominion Virginia Power's electric system, consisting of facilities for generation, transmission and distribution of electric energy, as well as associated facilities, is interconnected with the electric systems of neighboring utilities and is part of the interconnected network of electric systems serving the continental United States. By reason of its operation in Virginia and North Carolina and its interconnections with other electric utilities, the Company engages in interstate commerce.

2. The Company's name and post office address is:

Virginia Electric and Power Company
120 Tredegar Street
Richmond, Virginia 23219

3. The addresses and telephone numbers of the attorneys for the Company are:

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4. Vadata is a high load-factor, Virginia jurisdictional customer of Dominion Virginia Power. Vadata is a subsidiary of Amazon.com, Inc. and an affiliate of Amazon Web Services ("AWS"). It owns and operates several cloud computing data centers in Virginia, a large percentage of which are located within the Company's service territory, and is one of the Company's largest non-governmental customers. A letter on behalf of Vadata, Amazon.com, Inc. and AWS supporting the Special Rate Contract is attached hereto as Attachment B.

BACKGROUND

5. AWS, and by extension Vadata, has made a long-term corporate commitment to ultimately achieve 100% renewable energy usage for its global infrastructure footprint, with a short-term goal of increasing its renewable energy usage to at least 40% by the end of 2016. Vadata and the Company collaborated to address and accommodate both Vadata's expanding operations in Virginia and its renewable energy goals and requirements. Vadata's objective of integrating more renewable energy into its portfolio and desire to manage costs like a wholesale market participant led to the proposed market-based rate ("MBR") included in the Special Rate Contract that is the subject of this this Application.

SPECIAL RATE CONTRACT

6. The Special Rate Contract is comprised of: (i) a base contract proposed for an initial term extending through December 31, 2020, continuing thereafter by automatic one-year renewals, unless otherwise terminated with notice, and (ii) two companion MBR schedules, designated proposed Rate Schedule SCR - GS-3 and Rate Schedule SCR - GS-4 (collectively, the "SCR Rate Schedules") for the Company's provision of electric service to the Customer's qualifying current (and likely future) accounts existing on Rate Schedules GS-3 and GS-4. To

qualify for transfer to the SCR Rate Schedules, Vadata's accounts must be eligible for Rate Schedule GS-3 or Rate Schedule GS-4, have peak demand of 5 MW or more, and meet the additional criteria set forth in the Special Rate Contract, with Vadata electing to make any such transfer(s) on an individual account basis. A key component in the SCR Rate Schedules is the inclusion of the MBR, which contains higher variable and lower fixed charges than are currently in Rate Schedule GS-3 and Rate Schedule GS-4.

7. The intended purpose of the Special Rate Contract is to provide the Customer with a newly designed and optional MBR that is structured to reflect pricing in the PJM Interconnection, L.L.C. ("PJM") wholesale market for its qualifying load accounts. Such an option would assist Vadata, and its corporate affiliates, in financially integrating renewable energy into its energy portfolio to meet its corporate renewable energy commitment.

8. The Special Rate Contract will protect the public interest. As a critical network access point, Virginia plays a key role in supporting today's global internet traffic. Virginia hosts prominent commercial internet exchange points and has been one of the most active data center markets in the country. According to the Virginia Economic Development Partnership ("VEDP"), 70% of the world's internet traffic passes through the Metropolitan Area Exchange East, located in Ashburn, Virginia. Approximately 650 data processing, hosting and related establishments are located in Virginia, employing approximately 10,500 people. VEDP also notes that in the past 10 years, over 7,500 new jobs and investment of over $7 billion have been announced in Virginia's data center industry.[1] Competition with neighboring states to attract and retain these important and growing companies is increasing every year. Having an offering like

[1] VEDP's report also notably addresses that Virginia's data center industry is not limited to the Metropolitan Area Exchange East, and includes "dark fiber" linkage and expansion in the Richmond Metro area, Harrisonburg, Southern Virginia (Mid-Atlantic Broadband Cooperative) and the Quantico Corporate Center. VEDP's full profile for the data center industry in Virginia can be found at: http://www.yesvirginia.org/KeyIndustries/DataCenters

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the Special Rate Contract and SCR Rate Schedules signals to the high tech industry, a large and continuously growing component of the Commonwealth's economy, either currently situated in or potentially relocating to the Commonwealth, that Virginia is an attractive place to locate and do business. Positive economic benefits that may result from a growing data center industry include job creation and growth to local and state tax revenue increases. Additionally, Vadata has indicated that the proposed SCR Rate Schedules, if approved by the Commission, will assist in its efforts to integrate more renewable energy resources into its energy mix. While these investments are customer-driven decisions, the possibility exists that by providing this Customer with additional rate options that more closely link the financial aspects of its wholesale power purchase agreement ("PPA") renewable energy transactions to its retail load billing, the Customer may engage in more direct investment in such renewable resources than would otherwise occur. Any environmental benefits would positively affect and therefore protect the public interest.

9. The MBR in the Special Rate Contract will not unreasonably prejudice or disadvantage any customer or class of customers. The Company anticipates offering a new experimental market-based rate pursuant to Va. Code § 56-234 B (experimental rates) to be proposed as Experimental Rate Schedule MBR- GS-3 and Experimental Rate Schedule MBR GS-4 in a separate Commission case to be filed in the near future. If approved by the Commission, this experimental market-based rate would serve as an elective option for certain of the Company's other high load-factor commercial and industrial customers.

10. The proposed Special Rate Contract will not jeopardize the continuation of reliable utility service. An election to move an account from Rate Schedule GS-3 to Rate Schedule SCR - GS-3, for example, will not impact how the Company's load will be bid or

otherwise offered into the PJM market. The Company will continue to procure energy and capacity requirements to service its load as it has in the past. The only distinction will be that a Customer account electing Rate Schedule SCR - GS-3 will be charged a rate that reflects PJM wholesale market pricing.

11. Today, and absent approval of the Special Rate Contract, the Customer's accounts would be served under the Company's rates applicable to its GS-3 or GS-4 customers, depending on size and delivery voltage, with the exception of those accounts that would have opted for tariff rates under Schedule 10. These large general service Rate Schedules GS-3 and GS-4 are not reflective of the PJM market and have a fundamentally different pricing structure – *i.e.*, higher fixed and lower variable charges – than what the Company is proposing. In the Customer's view those standard Rate Schedules GS-3 and GS-4 rates are not satisfactory given the Customer's corporate goals to integrate renewable power, while maintaining predictability of its net "all-in-cost," as discussed in Company Witness Morgan's testimony. Likewise, Rider EDR, the Company's economic development rider, is not helpful to the Customer. Even though there is a discount to the demand charge, it is the same basic rate structure as Rate Schedules GS-3 and GS-4 and it does not provide the correlation with market prices desired by the Customer. The Company and the Customer discussed Rate Schedule RG as an option, however, the Customer declined to pursue this option due to its business and potential future growth. Rate Schedule RG is a small program, with load levels capped far below the size of the Customer. Additionally, its pricing mechanism is not tied to a market-based price like the SCR Rate Schedules. These two factors – capped load size and non-market-based pricing – eliminated Rate Schedule RG as an option.

12. Other than the administrative costs of negotiating the Special Rate Contract and

EMSA, and preparing for this proceeding, the Company does not expect to incur any significant direct costs to implement this special rate or the EMSA. As Vadata is currently a jurisdictional customer, the Company expects to initially manage the Special Rate Contract with existing resources now in place, such as the human resources that would be used to prepare any bills or reports to the Commission. Over time, depending on the Customer's growth and the number of Customer accounts moved to the SCR Rate Schedules, the Company may need to add resources, such as billing and account management support. If the Customer continues to grow, just as a matter of serving load, there could be costs related to that growth but the Company would need to manage and plan for this irrespective of the Special Rate Contract or EMSA.

13. When compared to the Customer's accounts remaining on the applicable standard tariff rates, the MBR offered with the Special Rate Contract through the SCR Rate Schedules will change revenues, but will not change the Company's actual fuel expenses or its allocation factors upon which rider rate schedules are established. The Company plans to implement the SCR Rate Schedules as companion tariffs to Company Rate Schedules GS-3 and GS-4. With this design, the Customer's load accounts will remain in the same rate class, and the Company will compute a traditional bill under Rate Schedule GS-3 or GS-4, as well as the companion bill under the Special Rate Contract. The companion bill will be set equal to the difference between generation service under the MBR tariff versus the traditional tariff. This value, deemed the "net market-based rate charge," will be billed in addition to the traditional bill, and the Company will record the difference as a base rate revenue variance. With this design, the tariff revenues collected from the Customer would continue to fund all Commission-approved generation rate adjustment clauses and average fuel charges.

14. The SCR Rate Schedules will likely result in altered levels of base rate revenue

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with the MBR, as compared to the Company's traditional rate schedules. The amount of such revenue differences, however, will depend on the amount of load that actually migrates from Rate Schedule GS-3 or GS-4 to the applicable SCR Rate Schedule and, ultimately, on fuel and market prices. Extraordinarily Sensitive Schedule 4 attached to Company Witness Morgan's pre-filed direct testimony contains the results of a study demonstrating the potential impacts and the differences between the standard tariff rate (Rate Schedule GS-3) and the MBR tariff rate (Rate Schedule SCR - GS-3) had this Customer migrated certain accounts during the period from 2011 to 2014.

15. As to base rates, the Company, pursuant to Va. Code § 56.581.1:1, is in a rate freeze period or transitional rate period ("TRP") through December 31, 2019. Taken together, through the combination of continued unaltered funding of riders and fuel, during a period of frozen base rates, the Special Rate Contract will have no impact on other Virginia jurisdictional customers during the TRP. The fifth year of the proposed Special Rate Contract will fall outside of the TRP, and any impacts in the context of base rates – be they in the plus or minus column – would be captured and incorporated into the Earnings Test in the Company's 2022 statutory biennial review proceeding (*i.e.*, the test period beginning January 1, 2020 and ending December 31, 2021). Likewise, any extensions of the Special Rate Contract would encompass a time period after the expiration of the TRP, and there may be impacts to base revenues (again either plus or minus). At that point in time such impacts would likely be better understood given the experience gained over the prior five years administering the Special Rate Contract and the MBR therein.

ENERGY MANAGEMENT SERVICES AGREEMENT

16. Related to its wholesale PPA activity, Vadata has requested that the Company be

able to provide certain incidental non-tariff electric market management services, including wholesale energy scheduling and settlement services and other wholesale energy management services, relating to its wholesale activities in the PJM market, if so requested by Vadata ("Incidental Services"). The EMSA is offered to the Customer as a separate agreement for the provision of the Incidental Services. The EMSA will allow the Customer, at its option, to interact with one entity (the Company) to manage both Vadata's wholesale transaction activities in PJM and its retail electric service and billing under the Special Rate Contract. The Company expects to be able to initially manage the services provided under the EMSA with existing energy desk personnel, and anticipates treating any revenues derived from the Incidental Services under the EMSA as base rate revenue. Additional energy desk resources may become necessary over time, depending on the extent of the Customer's wholesale activities and associated need for the Incidental Services.

17. The Incidental Services provided under the EMSA involve wholesale activities that do not fall within the Commission's jurisdiction. While the EMSA will operate only in the event and to the extent that Vadata moves one or more accounts to the applicable SCR Rate Schedule, the EMSA has no direct relationship to the Company's retail service. However, the Company's energy desk personnel will be involved in meeting the Company's contractual obligations under the EMSA, and the revenues derived from the Incidental Services would be treated as base rate revenue. Because of its role in complementing the Special Rate Contract and the possible employee and revenue implications noted herein, the EMSA is being provided for the Commission's consideration and for any necessary approvals relating to such employee and revenue implications. Public and confidential versions of the EMSA are attached to Company Witness Hupp's testimony for the Commission's consideration.

REQUEST FOR EXPEDITED TREATMENT

18. Dominion Virginia Power respectfully requests expedited consideration of this Application. The Customer has entered into wholesale PPAs to buy the output of new renewable generating resources that commence delivery in early 2016 for resale into PJM. Because of the Customer's need to begin integrating this renewable energy in early 2016 and the Special Rate Contract's role in assisting the Customer in financially integrating its wholesale activities, the Company is requesting Commission approval of the Special Rate Contract by February 29, 2016.

REQUEST FOR CONFIDENTIAL TREATMENT AND ADDITIONAL PROTECTIVE TREATMENT FOR EXTRAORDINARILY SENSITIVE INFORMATION

19. The Company's Application contains, at points so designated therein, confidential and extraordinarily sensitive information, with the non-public version of the Application being made under seal. Specifically, the confidential and extraordinarily sensitive Customer and Company information is located in Attachment A of the Application, certain schedules attached to Company Witness Morgan's testimony and a schedule attached to Company Witness Hupp's testimony. As a result, and in compliance with Rule 170 of the Commission's Rules of Practice and Procedure, 5 VAC 5-20-170 ("Rule 170") and Rule 310, this filing is accompanied by a Motion for Entry of a Protective Order and Additional Protective Treatment for Extraordinarily Sensitive Information, including a form of Proposed Protective Order and Agreements to Adhere, filed contemporaneously with this Application. Pursuant to Rule 170, the unredacted filings containing the confidential and extraordinarily sensitive information are immediately available to the Commission Staff for internal use at the Commission, and one additional copy of a redacted version of the Application has been provided as well.

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WHEREFORE, Dominion Virginia Power respectfully requests that the Commission: (1) grant expedited consideration of this Application; (2) approve the Special Rate Contract pursuant to Va. Code § 56-235.2; and (3) grant the Company such further relief as may be necessary or appropriate.

Respectfully submitted,

VIRGINIA ELECTRIC AND POWER COMPANY

By: ______________________
Counsel

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Counsel for Virginia Electric and Power Company

September 21, 2015

Virginia Electric and Power Company
Compliance with
CHAPTER 310
Guidelines for Filing an Application to Provide Electric and Gas Service under a Special Rate, Contract or Incentive

20 VAC 5-310-10. Guidelines for Special Rates, Contracts or Incentives.

1. **Explain in detail the intended purpose of the special rate, contract, or incentive and why current tariffs of the utility are insufficient. Explain how the proposed special rate, contract, or incentive (i) will protect the public interest, (ii) will not unreasonably prejudice or disadvantage any customer or class of customers, and (iii) will not jeopardize the continuation of reliable utility service.**

<u>Purpose of the Special Rate Contract</u>
Pursuant to § 56-235.2 of the Code of Virginia ("Va. Code"), Virginia Electric and Power Company ("Dominion Virginia Power" or the "Company") proposes to provide a market-based rate ("MBR") in the Special Rate and Contract for Electric Service ("Special Rate Contract"), comprised of a base contract and two companion rate schedules, designated proposed Rate Schedule SCR - GS-3 and Rate Schedule SCR - GS-4 (collectively, the "SCR Rate Schedules"). Vadata, Inc. ("Vadata" or the "Customer") has explained that an MBR is desirable to create a more direct financial correlation between its wholesale transactions in the PJM Interconnection, L.L.C. ("PJM") market and its retail load billing.

The Customer will be able to choose this newly designed and optional MBR, which is structured to reflect pricing in the PJM wholesale market, for some or all of its qualifying load accounts. Such an option would assist Vadata, and its corporate affiliates, in financially integrating renewable energy into its energy portfolio, which the Customer has explained is important in order for it to meet a corporate commitment to achieve at least 40% renewable energy usage for its global infrastructure footprint by the end of 2016.

In addition to the Special Rate Contract, and as set forth in the Company's application, Dominion Virginia Power is presenting for the Commission's consideration a stand-alone Energy Management Services Agreement between the Company and the Customer for the provision of certain incidental non-tariff electric market management services (the "EMSA").

<u>Public Interest</u>
As a critical network access point, Virginia plays a key role in supporting today's global internet traffic. Virginia hosts prominent commercial internet exchange points and has been one of the most active data center markets in the country. According to the Virginia Economic Development Partnership ("VEDP"), 70% of the world's internet traffic passes through the Metropolitan Area Exchange

East, located in Ashburn, Virginia. Approximately 650 data processing, hosting and related establishments are located in Virginia, employing approximately 10,500 people. VEDP also notes that in the past 10 years, over 7,500 new jobs and investment of over $7 billion have been announced in Virginia's data center industry.[1]

Competition with neighboring states to attract and retain these important and growing companies is increasing every year, as is the pressure on the Commonwealth to maintain its leadership role in communications networks, global internet backbone infrastructure and as a critical network access and exchange point. Having an offering like the Special Rate Contract and SCR Rate Schedules signals to the high tech industry, a large and continuously growing component of the Commonwealth's economy, either currently situated in or potentially relocating to the Commonwealth, that Virginia is an attractive place to locate and do business. Positive economic benefits that may result from a growing data center industry include job creation and growth to local and state tax revenue increases. Indeed, Vadata, its affiliate, Amazon Web Services ("AWS"), and their parent, Amazon.com Inc. ("Amazon"), have collectively invested billions of dollars in data center and fulfillment center operations in Virginia and employ over 6,500 full-time employees and several thousand more seasonal employees and contractors in Virginia.

Additionally, Vadata has indicated that the proposed SCR Rate Schedules, if approved by the Commission, will assist in its efforts to integrate more renewable energy resources into its energy mix. While these investments are customer-driven decisions, the possibility exists that by providing this Customer with additional rate options that more closely link the financial aspects of its wholesale power purchase agreement ("PPA") renewable energy transactions to its retail load billing, the Customer may engage in more direct investment in such renewable resources than would otherwise occur. Any environmental benefits would positively affect and therefore protect the public interest.

<u>Continuation Reliable Utility Service</u>

The proposed Special Rate Contract will not jeopardize the continuation of reliable utility service. An election to move an account from Rate Schedule GS-3 to Rate Schedule SCR - GS-3, for example, will not impact how the Company's load will be bid or otherwise offered into the PJM market. The Company will continue to procure energy and capacity requirements to service its load as it has in the past. The only distinction will be that a Customer account electing Rate Schedule SCR - GS-3 will be charged a rate that reflects PJM wholesale market pricing.

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[1] VEDP's report also notably addresses that Virginia's data center industry is not limited to the Metropolitan Area Exchange East, and includes "dark fiber" linkage and expansion in the Richmond Metro area, Harrisonburg, Southern Virginia (Mid-Atlantic Broadband Cooperative) and the Quantico Corporate Center. VEDP's full profile for the data center industry in Virginia can be found at: http://www.yesvirginia.org/KeyIndustries/DataCenters

No Unreasonable Prejudice or Disadvantage
The MBR in the Special Rate Contract will not unreasonably prejudice or disadvantage any customer or class of customers. See response to Guideline 6.

In addition, the Company anticipates offering a new experimental market-based rate pursuant to Va. Code § 56-234 B (experimental rates) to be proposed as Experimental Rate Schedule MBR - GS-3 and Experimental Rate Schedule MBR - GS-4 in a separate Commission case to be filed in the near future. If approved by the Commission, this experimental market-based rate would serve as an elective option for certain of the Company's other high load-factor commercial and industrial customers.

2. **Provide a copy of the proposed special rate, contract, or incentive. The applicant shall clearly mark any part of the application or supporting information which it deems should not be subject to public disclosure as "confidential information." Unredacted copies of documents containing information so marked shall be withheld from public disclosure by the clerk of the commission for commission and staff review unless disclosure is ordered by the commission. Copies of documents redacted to exclude confidential information shall be filed and placed in the public file. By commission order or agreement with the applicant, other participants may be provided unredacted copies of documents containing confidential information but shall not disclose confidential information to any person unless permitted to do so by the commission order. The burden for proving the need to maintain confidential treatment will remain with the party seeking it. No commission order shall be issued under this subdivision without notice to the applicant and the owner of such confidential information and an opportunity for them to address the commission with respect to its confidentiality.**

Attached to Company Witness Gregory J. Morgan's pre-filed direct testimony is:

- a copy of the proposed Special Rate Contract, including the base contract, Customer-specific account information, the SCR Rate Schedules, and a sample bill, as Schedule 1 in a public version, and Confidential and Extraordinarily Sensitive Schedule 2 in a confidential and extraordinarily sensitive version;
- a hypothetical application of the MBR as Schedule 3 in a public version; and
- the results of a study using data from 2011-2014 to examine the differences between the standard tariff (Rate Schedule GS-3) and the MBR (Rate Schedule SCR - GS-3) had the Customer migrated certain eligible accounts to the SCR Rate Schedules during that period, as Extraordinarily Sensitive Schedule 4.

Attached to Company Witness Michael S. Hupp, Jr.'s pre-filed direct testimony is a copy of the EMSA, as Schedule 1 in a public version, and Confidential Schedule 2 in a confidential version.

Attached to the application is a response to Guideline 3 provided on Attachment A, in a public and an extraordinarily sensitive version.

The application, Special Rate Contract, EMSA, as well as the supporting testimony and schedules (collectively, the "Application"), contain confidential and extraordinarily sensitive information, that is subject to the Motion for Protective Order and Additional Protective Treatment for Extraordinarily Sensitive Information filed coincident with the Application. Redacted copies of each document are provided to the Commission for general review by the public.

3. **Describe the characteristics of the customers to whom the proposed special rate, contract, or incentive would apply and, if applicable, identify the tariff under which each such customer would otherwise have taken service. Such characteristics should include, but not be limited to, load factor, load diversity, energy use, and peak demand, and may include energy conservation alternatives.**

Characteristics of the Customer

Vadata, one of the Company's largest non-governmental customers, is a subsidiary of Amazon, and an affiliate of AWS. It owns and operates several cloud computing data centers in Virginia, a large percentage of which are located within the Company's service territory. AWS, launched in 2006, offers a robust, fully-featured technology infrastructure cloud platform comprised of a broad set of computing, storage, database, analytics, application, and deployment services from data center locations in the United States, Australia, Brazil, China, Germany, Ireland, Japan, and Singapore. More than a million customers, including fast-growing startups, large enterprises, and government agencies across 190 countries, rely on AWS services to innovate quickly, lower IT costs and scale applications globally.

Load Characteristics of the Customer

[BEGIN EXTRAORDINARILY SENSITIVE]

[redacted]

[redacted]

[redacted][END EXTRAORDINARILY SENSITIVE]

On February 20, 2015 at 8:00 a.m., Dominion Virginia Power established an all-time peak demand of 21,651 MW. At the time of the system peak, the Customer's [BEGIN EXTRAORDINARILY SENSITIVE][redacted][END EXTRAORDINARILY SENSITIVE]

Applicable Tariffs

Today, and absent approval of the Special Rate Contract, the Customer's accounts would be served under the Company's rates applicable to its GS-3 or GS-4 customers, depending on size and delivery voltage, with the exception of those accounts that would have opted for tariff rates under Schedule 10. These large general service Rate Schedules GS-3 and GS-4 are not reflective of the PJM market and have a fundamentally different pricing structure – *i.e.*, higher fixed and lower variable charges – than what the Company is proposing. In the Customer's view, those standard Rate Schedules GS-3 and GS-4 rates are not satisfactory given the Customer's corporate goals to integrate renewable power, while maintaining predictability of its net "all-in cost."

Likewise, Rider EDR, the Company's economic development rider, is not helpful to the Customer. Even though there is a discount to the demand charge, it is the same basic rate structure as Rate Schedules GS-3 and GS-4 and it does not provide the correlation with market prices desired by the Customer.

The Company and the Customer discussed Rate Schedule RG as an option, however, the Customer declined to pursue this option due to its business and potential future growth. Rate Schedule RG is a small program, with load levels capped far below the size of the Customer. Additionally, its pricing mechanism is not tied to a market-based price like the SCR Rate Schedules. These two factors – capped load size and non-market-based pricing – eliminated Rate Schedule RG as an option.

4. **Provide in detail the estimated direct costs incurred to implement the special rate, contract, or incentive.**

Other than the administrative costs of negotiating the Special Rate Contract and EMSA, and preparing for this proceeding, the Company does not expect to incur any significant direct costs to implement this special rate and the EMSA. As Vadata is currently a jurisdictional customer, the Company expects to initially manage the Special Rate Contract with existing resources now in place, such as the human resources that would be used to prepare any bills or reports to the Commission. Over time, depending on the Customer's growth and the number of Customer accounts moved to the SCR Rate Schedules, the Company may need to add resources, such as billing and account management support. Likewise, the Company expects to be able to initially manage the services provided under the EMSA with existing energy desk personnel. Additional energy desk resources may become necessary over time, depending on the extent of the Customer's wholesale activities and associated need for the services provided under the EMSA. If the Customer continues to grow, just as a matter of serving load, there could be costs related to that growth but the Company would need to manage and plan for this irrespective of the Special Rate Contract or EMSA.

5. **Describe in detail the estimated effect that service provided under the proposed special rate, contract, or incentive will have on total company revenues, total company expenses, and, if appropriate, on the return on rate base for the customer class in which the participating customer resides.**

The SCR Rate Schedules will likely result in altered levels of base rate revenue with the MBR, as compared to the Company's traditional rate schedules. The amount of such differences, however, will depend on the amount of load that actually migrates from Rate Schedule GS-3 or GS-4 to the applicable SCR Rate Schedule and, ultimately, on fuel and market prices. Extraordinarily Sensitive Schedule 4 attached to Company Witness Morgan's pre-filed direct testimony contains the results of a study demonstrating the potential impacts and the differences between the standard tariff rate (Rate Schedule GS-3) and the MBR tariff rate (Rate Schedule SCR - GS-3) had this Customer migrated certain accounts during the period from 2011 to 2014.

As set forth in the Company's application, the Company anticipates treating any additional revenues derived from the Incidental Services, under the EMSA as base rate revenue.

See response to Guideline 6.

6. **Describe in detail the rate impact of the proposal on the company's other customers and explain how the company will ensure that other customers will be protected from bearing any increased rates as a result of the proposed special rate, contract, or incentive. Explain how the utility will allocate or use any resulting benefits.**

Distribution service charges and transmission service charges are unchanged in the SCR Rate Schedules and will continue to be billed to the Customer consistent with its current rate schedules, as applicable, *i.e.*, Rate Schedule GS-3 or GS-4, depending on the account.

When compared to the Customer's accounts remaining on the applicable standard tariff rates, the MBR offered with the Special Rate Contract through the SCR Rate Schedules will change revenues, but will not change the Company's actual fuel expenses or its allocation factors upon which rider rate schedules are established. The Company plans to implement the SCR Rate Schedules as companion tariffs to Company Rate Schedules GS-3 and GS-4. With this design, the Customer's load accounts will remain in the same rate class, and the Company will compute a traditional bill under Rate Schedule GS-3 or GS-4 as well as the companion bill under the Special Rate Contract. The companion bill will be set equal to the difference between generation service under the MBR tariff versus the traditional tariff. This value, deemed the "net market-based rate charge," will be billed in addition to the traditional bill, and the Company will record the difference as a base rate revenue variance. With this design, the tariff revenues collected from the Customer would continue to fund all Commission-approved generation rate adjustment clauses and average fuel charges.

As to base rates, the Company, pursuant to Va. Code § 56.581.1:1, is in a rate freeze period or transitional rate period ("TRP") through December 31, 2019. Taken together, through the combination of continued unaltered funding of riders and fuel, during a period of frozen base rates, the Special Rate Contract will have no impact on other Virginia jurisdictional customers during the TRP.

The fifth year of the proposed Special Rate Contract will fall outside of the TRP, and any impacts in the context of base rates – be they in the plus or minus column – would be captured and incorporated into the Earnings Test in the Company's 2022 statutory biennial review proceeding (*i.e.*, the test period beginning January 1, 2020 and ending December 31, 2021). Likewise, any extensions of the Special Rate Contract would encompass a time period after the expiration of the TRP, and there may be impacts to base revenues (again either plus or minus). At that point in time such impacts, if any, would likely be better understood given the experience gained over the prior five years administering the Special Rate Contract.

7. **Utilities may seek an exemption from the analysis required in subdivisions 5 and 6 of this section for customers with total loads aggregating no more than 5 MW. Any such request shall provide an alternative analysis to support the findings required by § 56-235.2 C and D of the Code of Virginia.**

Not applicable. No such exemption is sought in connection with the Company's Application.

amazon

September 21, 2015

The Honorable Mark C. Christie
Chairman, State Corporation Commission
Commonwealth of Virginia
1300 East Main Street
Richmond, VA 23219

RE: Virginia Electric and Power Company's Application for Approval of Special Rate and Contract for Electric Service with Vadata, Inc.

Dear Mr. Chairman:

On behalf of Vadata, Inc. ("Vadata"), Amazon Web Services ("AWS"), and Amazon.com, Inc. ("Amazon"), I am writing to you and to the full State Corporation Commission of Virginia (the "Commission") to express our whole-hearted support for, and request that you approve, Dominion Virginia Power's ("Dominion") Special Rate and Contract for Electric Service with Vadata (the "Special Rate Contract").

Vadata needs and supports your approval of the Special Rate Contract because it will facilitate our renewable energy goal and will promote continued development and growth in the Commonwealth of Virginia of its investment in our data center business. In our opinion, the Commission's approval of the Special Rate Contract will help ensure that the Commonwealth remains an attractive state for Vadata's environmentally conscious business to operate and grow.

Vadata, an affiliate of AWS, is a privately held Delaware corporation under Amazon.com, Inc. Launched in 2006, AWS offers a robust, fully featured technology infrastructure platform in the cloud comprised of a broad set of compute, storage, database, analytics, application, and deployment services from datacenter locations in the U.S., Australia, Brazil, China, Germany, Ireland, Japan, and Singapore. More than a million customers, including fast-growing startups, large enterprises, and government agencies across 190 countries, rely on AWS services to innovate quickly, lower IT costs and scale applications globally.

Vadata owns and operates several cloud computing data centers in the Commonwealth, the majority of which are located within Dominion's service territory. Vadata is one of Dominion's largest non-governmental customer. AWS's, and by extension Vadata's, business model is to provide a highly reliable, scalable, low-cost infrastructure platform in the cloud, with a focus on being agile, open, flexible, low-cost and secure. One of the key benefits of cloud computing is the opportunity to replace up-front capital infrastructure expenses with low variable costs that scale with businesses of all sizes. Utilizing the cloud, businesses no longer need to plan for and procure servers and other IT infrastructure weeks or months in advance. Instead, they can instantly spin up hundreds or thousands of servers and deliver results faster.

Both AWS and Vadata are committed to running their businesses in the most environmentally friendly way possible. In addition to the environmental benefits inherently associated with running applications in the cloud, AWS has a long-term commitment to achieve 100% renewable energy usage for its global infrastructure footprint. In the short-term, AWS has a goal of increasing its renewable energy usage to at least 40% by the end of 2016.

To meet these commitments, we have entered into contracts with merchant developers for the development and output of new renewable generating resources. We have begun the process of joining the PJM ISO as a market participant and intend to supply the output of these power resources into the PJM wholesale market to receive the market-based revenues and charges appropriate to such generation. We also have informed Dominion of our preference for "one-stop shopping" with regard to the PJM scheduling and settlement activities associated with these projects. This service would allow us to interact with a single entity (Dominion) who can assist in managing both our affiliate's wholesale renewable generation PJM activities and Vadata's retail load service and billing.

The ultimate parent company of Vadata and AWS is Amazon.com, Inc., a Fortune 500 company based in Seattle. Amazon opened on the World Wide Web in July 1995 and today offers Earth's Biggest Selection. Amazon seeks to be Earth's most customer-centric company, where customers can find and discover anything they might want to buy online, and endeavors to offer its customers the lowest possible prices.

Again, on behalf of Amazon, AWS, and Vadata, I urge the Commission to approve this Special Rate Contract. Thank you for considering our support and request for approval.

Sincerely,

Jerry Hunter
Vice President, Infrastructure

WITNESS DIRECT TESTIMONY SUMMARY

Witness: Gregory J. Morgan

Title: Director of Customer Rates

Summary:

My direct testimony describes the Company's proposal for approval of the Special Rate and Contract for Electric Service comprised of a base contract and two companion rate schedules, designated proposed Rate Schedule SCR - GS-3 and Rate Schedule SCR - GS-4 ("SCR Rate Schedules"), for the Company's provision of electric service to Vadata, Inc. ("Vadata" or "Customer") pursuant to § 56-235.2 of the Code of Virginia (collectively, the "Special Rate Contract").

A key provision of the proposed Special Rate Contract would allow Vadata to choose a newly designed and optional market-based rate ("MBR") structured to reflect pricing in the PJM Interconnection, L.L.C. ("PJM") wholesale market for some or all of its qualifying load accounts. The optional MBR would allow Vadata to financially correlate its wholesale PJM electric market participation with billing for its retail load accounts. Such an option would assist Vadata, and its corporate affiliates, in financially integrating renewable energy into its energy portfolio, which the Customer has explained is important to meet a corporate commitment to achieve at least 40% renewable energy usage for its global footprint by the end of 2016. Related to this commitment, the Customer has entered into wholesale renewable energy purchase agreements that commence delivery in early 2016, and will need the correlating MBR. For this reason the Company is requesting approval of the Special Rate Contract by February 29, 2016.

Other key terms of the Special Rate Contract include:

- An initial term of five years, with automatic renewals, on a year-to-year basis, unless either the Company or Vadata terminates by providing written notice at least one year prior to the end of the then-current term.
- The Company will be the exclusive provider of electric service for all of the Customer's data center accounts in the Company's service territory, except as otherwise provided in the Special Rate Contract.
- The SCR Rate Schedules will be available to any Vadata accounts which are eligible for the applicable of Rate Schedule GS-3 or GS-4, establish a peak demand of 5 MW or more, and meet the additional criteria set forth in the Special Rate Contract.
- The SCR Rate Schedules contain a three-year minimum term to prevent short-term, economically-motivated, switching between tariffs, which could occur absent such a provision.
- The SCR Rate Schedules contain a margin charge intended to cover any differences between the MBR and the actual marginal PJM costs to serve the Customer, and provide some contribution toward the Company's administrative and fixed costs.

I am also sponsoring the responses to Nos. 3, 5 and 6 of the Guidelines, required by 20 VAC 5-310-10, contained in Attachment A of the Company's application ("Guideline Responses"), and I am co-sponsoring Guideline Responses 1, 2 and 4 with Company Witness Michael S. Hupp, Jr.

**DIRECT TESTIMONY
OF
GREGORY J. MORGAN
ON BEHALF OF
VIRGINIA ELECTRIC AND POWER COMPANY
BEFORE THE
STATE CORPORATION COMMISSION OF VIRGINIA
CASE NO. PUE-2015-00103**

INTRODUCTION

Q. Please state your name, business address, and position of employment.

A. My name is Gregory J. Morgan, and my business address is One James River Plaza, 701 East Cary Street, Richmond, Virginia 23219. I am Director of Customer Rates for Virginia Electric and Power Company ("Dominion Virginia Power" or the "Company"). A statement of my background and experience is attached as Appendix A.

Q. What are your responsibilities as Director of Customer Rates?

A. In that role, I lead the team that is responsible for planning, organizing and managing the Company's rate-related activities, including the preparation and support of rate filings with the Commission and the implementation of rates. I also have responsibility for customer load research, cost allocation and cost of service studies as required in supporting our rate activities. Additionally I am responsible for the development and administration of contracts with non-jurisdictional or special contract customers and for responding to customer requests concerning rates.

Q. What is the purpose of your testimony in connection with this Application?

A. I am presenting testimony in support of the application ("Application") that Dominion Virginia Power has filed with the State Corporation Commission of

Virginia ("Commission") for approval of the Special Rate and Contract for Electric Service comprised of a base contract (the "Base Contract") and two companion rate schedules, designated proposed Rate Schedule SCR - GS-3 and Rate Schedule SCR - GS-4 (collectively, the "SCR Rate Schedules") for the Company's provision of electric service to Vadata, Inc. ("Vadata" or "Customer") pursuant to § 56-235.2 of the Code of Virginia ("Va. Code" or "Code") (collectively, the "Special Rate Contract").

In addition to the Special Rate Contract, the Customer has requested that the Company be able to provide certain incidental non-tariff electric market management services, including wholesale energy scheduling and settlement services and other wholesale energy management services, relating to the PJM Interconnection, L.L.C. ("PJM") market, if so requested by Vadata, that are typically described in the electric power industry as "energy desk" functions ("Incidental Services"). The basic terms of these Incidental Services are addressed in an Energy Management Services Agreement between the Company and Customer ("EMSA"). The Company is not proposing the EMSA as part of the Special Rate Contract, but as a stand-alone agreement for the provision of the Incidental Services. As set forth in the Company's Application, the EMSA is being provided for the Commission's consideration.

My direct testimony will explain the key terms of the proposed Special Rate Contract between Dominion Virginia Power and the Customer as well as the basis for special rates, terms and conditions in this instance. My testimony will outline the operating provisions of the Base Contract and address the purpose of the companion SCR Rate Schedules. I will also describe the design components of the market-based rate ("MBR") embedded within the Special Rate Contract.

Company Witness Michael S. Hupp, Jr., Director of Power Generation Regulated Operations, describes the energy desk functions relating to PJM, and addresses the technical elements of the Special Rate Contract that relate to PJM markets and operations. Mr. Hupp will also discuss the EMSA and the Incidental Services to be provided thereunder.

Q. Are you sponsoring any exhibits in connection with your pre-filed direct testimony?

A. Yes. I am sponsoring Company Exhibit No. ____, GJM, consisting of Schedules 1 and 3; Confidential and Extraordinarily Sensitive Schedule 2; and Extraordinarily Sensitive Schedule 4, which were prepared under my supervision and direction, and are accurate and complete to the best of my knowledge.

Schedule 1 contains the public version of the Special Rate Contract, while Confidential and Extraordinarily Sensitive Schedule 2 contains the confidential and extraordinarily sensitive version of the Special Rate Contract, both of which contain public Rate Schedule SCR - GS-3, applicable to Customer accounts where the companion rate schedule is Rate Schedule GS-3, Large General Service – Secondary Voltage ("Rate Schedule GS-3"), and public Rate Schedule SCR - GS-4, applicable to Customer accounts where the companion rate schedule is Rate Schedule GS-4, Large General Service – Primary Voltage ("Rate Schedule GS-4"). Confidential and Extraordinarily Sensitive Schedule 2 includes a sample bill showing the impact on the Customer's applicable standard tariff rate billing if the Customer moves some accounts to the applicable companion Rate Schedule SCR (the "Sample Bill").

Schedule 3 shows a hypothetical application of the market-based rate.

Extraordinarily Sensitive Schedule 4 presents the results of a study performed using data from a four-year period to examine the differences between the Customer's standard tariff rate and the MBR had the Customer moved certain accounts to the applicable companion Rate Schedule SCR during that time frame.

Q. Are you sponsoring any of the responses to the Guidelines, required by 20 VAC 5-310-10, contained in Attachment A of the Company's application ("Guideline Responses")?

A. Yes. I am sponsoring Guideline Responses 3, 5 and 6. I am co-sponsoring Guideline Responses 1, 2 and 4 with Company Witness Hupp.

I. THE PROPOSED SPECIAL RATE CONTRACT

Q. Please summarize the Special Rate Contract.

A. The Special Rate Contract provides that Dominion Virginia Power will be the exclusive provider of electric service to all Vadata retail accounts for its data centers located within the Company's service territory during the term of the Special Rate Contract, except as otherwise provided in the Special Rate Contract. Notably the Customer will be able to choose a newly designed and optional MBR, which is structured to reflect pricing in the PJM wholesale market, for some or all of its qualifying load accounts. Such an option would assist Vadata, and its corporate affiliates, in financially integrating renewable energy into its energy portfolio, which the Customer has explained is important in order for it to meet a corporate commitment, as explained in Guideline Response 1.

Q. **What is Vadata?**

A. Vadata owns and operates several cloud computing data centers in Virginia, a large percentage of which are located within the Company's service territory. Vadata is one of the Company's largest non-governmental customers.

Amazon Web Services ("AWS"), and by extension its affiliate Vadata, have made corporate commitments to run their data centers and services in the most environmentally responsible way possible. AWS has a long-term commitment to achieve 100% renewable energy usage for its global infrastructure footprint. In the short-term, AWS has a goal of increasing its renewable energy usage to at least 40% by the end of 2016.

Q. **Why is the Company seeking approval of the Special Rate Contract?**

A. Va. Code § 56-235.2 codifies the Commonwealth's recognition of the need for flexibility in rates, and in particular that certain instances of economic development and unique customer needs may necessitate more flexibility in the rates, terms and conditions of utility service than might exist otherwise under traditional ratemaking. For example, this flexibility has allowed the Company to provide rate structures to meet the individual needs and recognize unique operational characteristics of customers' manufacturing facilities in the past.

In this instance, through the Code provision for special rates, the Company can provide the MBR that the Customer has explained is desirable to create a more direct financial correlation between its wholesale transactions in the PJM market and its retail load billing.

Q. Please explain the basic structure of the Special Rate Contract.

A. The Special Rate Contract consists of two components. First is the Base Contract that contains the general contractual terms of the Special Rate Contract. The initial term of the Base Contract is five years, with automatic renewals, on a year-to-year basis, unless either the Company or Vadata terminates by providing written notice at least one year prior to the end of the then-current term.

The second component is the proposed MBR companion schedules related to the two rate classes applicable to the Customer – designated Rate Schedule SCR - GS-3 and Rate Schedule SCR - GS-4. The MBR detailed in the SCR Rate Schedules is designed to be representative of the Company's PJM wholesale market costs to serve this Customer, plus an administrative margin.

I would like to note here that the Company anticipates offering a new experimental market-based rate to be proposed in a separate Commission case to be filed in the near future as Experimental Rate Schedule MBR - GS-3 and Experimental Rate Schedule MBR - GS-4 (collectively, the "Experimental MBR"). If approved by the Commission, the Experimental MBR would serve as an elective option for certain of the Company's other high load-factor commercial and industrial customers.

Q. Briefly, can you discuss the differences between the Special Rate Contract and the anticipated Experimental MBR offering?

A. As to the actual rates – a market-based rate for high load-factor customers – offered in both, the SCR Rate Schedules and the Experimental MBR will be the same. In this proceeding, the Special Rate Contract is being filed pursuant to Va. Code § 56-235.2 (special rates) and the Commission's *Guidelines for Filing an Application to Provide Electric and Gas Service under a Special Rate, Contract, or Incentive* (20 VAC 5-310-10). The Experimental MBR will be proposed under Va. Code § 56-234 B (experimental rates) and offered as an experimental and more general offering to other qualifying high load-factor customers with a proposed participation cap for the total load served thereunder.

By contrast, the Special Rate Contract does not contain a load cap for qualifying Vadata accounts, which would allow the Customer to migrate numerous accounts and any future accounts without interfering with or otherwise being disrupted by the cap applicable to the proposed Experimental MBR. Based on the Customer's request for the MBR, descriptions of its specific corporate renewable energy commitments and the extent of its Virginia operations and future plans, a Special Rate Contract without a capped participation is necessary to accommodate both its immediate needs and its longer term plans.

II. THE CUSTOMER'S NEEDS AND WHAT THE SPECIAL RATE CONTRACT DOES FOR THE CUSTOMER

Q. What are the Customer's needs in connection with the Special Rate Contract?

A. While I cannot speak for the Customer, I can relay that the Customer repeatedly told the Company that its and AWS's corporate commitment to substantially increase renewable supply is driven most immediately by its goal to achieve at least 40% renewable energy usage for its global infrastructure footprint by the end of 2016, and to ultimately reach 100% in the future. AWS has reiterated that commitment in several recent public announcements. To accomplish this, AWS has announced that it has entered into wholesale power purchase agreements ("PPAs") to buy the output of new renewable generating resources that commence delivery in early 2016. That early 2016 need to begin integrating the energy from those PPAs into its footprint and the Special Rate Contract's role in financially accommodating its commitments is why the Company is requesting Commission approval of the Special Rate Contract by February 29, 2016.

The Customer's affiliate is in the process of joining PJM as a market participant and intends to resell the energy output of these PPAs into PJM and receive the associated PJM market-based revenues and charges. The Customer seeks to financially correlate its wholesale PJM market participation with the retail electric service and billing for its accounts; hence the desire for a PJM market-based retail rate. Moreover, the Customer has a preference for "one-stop shopping" – meaning, the Customer wants the Company to provide it with the following: retail electric service priced in the Special Rate Contract to resemble purchases from PJM and management of the Customer's wholesale PJM activities through the provision of Incidental Services, billed separately, under the EMSA.

Q. How will an MBR help the Customer and its affiliates integrate additional renewable energy?

A. As I noted, the Customer has entered into renewable PPAs that it intends to inject onto the grid through the PJM wholesale market, and has specifically requested that the Company create a rate schedule for its retail data center accounts that has design features similar to that of the PJM wholesale market. By placing its qualifying load accounts on such a rate schedule, the Customer could achieve a better financial correlation between the revenues it receives for its wholesale transactions in PJM and the charges it pays the Company for its retail load. This more direct financial correlation could achieve a more predictable net "all-in cost" for the Customer, when considering both its wholesale market activity and its retail load costs. An example and description of this is provided in my Schedule 3.

III. THE SPECIAL RATE CONTRACT TERMS AND DESIGN

Q. Please describe the design components of the MBR in the Special Rate Contract.

A. The design components of the MBR include a generation capacity charge, generation energy charge, PJM ancillary service charge, and PJM administrative fee charge. The technical aspects and general design of these components are described in Company Witness Hupp's testimony and, in greater detail, in the SCR Rate Schedules. The SCR Rate Schedules also contain a margin charge. The margin charge is intended to cover any differences between the Company's designed MBR in the SCR Rate Schedules and the actual marginal PJM costs to serve the Customer, and provide some contribution toward the Company's administrative and fixed costs.

Q. Can you provide an example of the billing under the Special Rate Contract?

A. Yes. As addressed in Guideline Response 6, the SCR Rate Schedules have been designed as companion tariffs to the applicable of Rate Schedules GS-3 and GS-4. This companion rate design enables the Company to continue to fund the Virginia jurisdictional fuel clause, transmission rider, generation riders, and demand-side management riders to ensure that no impacts to other Virginia jurisdictional customers occur during the transitional rate period. Additionally, with this companion rate design, the Customer's billing statement will look much as it does today with the exception of a new line item ("Net Schedule SCR - GS-3 Charge" or "Net Schedule SCR - GS-4 Charge"), which is the computed variance between the MBR charges and the applicable of the traditional Rate Schedule GS-3 or GS-4 charges for generation. An example of this bill for Rate Schedule SCR - GS-3, in conjunction with Rate Schedule GS-3, is attached to the Special Rate Contract as Extraordinarily Sensitive Attachment C.

Q. Will the Special Rate Contract, including the SCR Rate Schedules, be available to all of the Customer's accounts with the Company?

A. The SCR Rate Schedules will be available to any Vadata accounts which meet certain qualifying criteria, including eligibility for the applicable of Rate Schedule GS-3 or GS-4, establishing a peak demand of 5 MW or more, and the additional criteria set forth in the Special Rate Contract. The Customer will be able to choose which qualifying accounts move to the companion SCR Rate Schedules (Rate Schedule SCR - GS-3 or SCR - GS-4, as applicable), and which would stay on standard Rate Schedule GS-3 or GS-4 rates, as applicable to such individual accounts. The Company, in turn, will be the exclusive provider of electric service for all of the Customer's data center accounts in the Company's service territory, except as otherwise provided in the Special Rate Contract.

Q. Do the SCR Rate Schedules contain a "minimum term"?

A. Yes. There will be a three-year minimum term, as detailed in Paragraph XIX of the proposed SCR Rate Schedules. Because wholesale prices reflected in the MBR can vary significantly from the standard tariff rate, the minimum term is required to prevent short-term, economically-motivated, switching between tariffs, which could occur absent such a provision.

Q. Describe the estimated effect that service provided under the proposed Special Rate Contract will have on total Company revenues, expenses, and, if appropriate, on the return on rate base for the Customer class in which the Customer resides.

A. Extraordinarily Sensitive Schedule 4 contains the results of a study performed to demonstrate the potential impacts and show the differences between the standard tariff rate and Special Rate Contract approach, had the Customer migrated certain accounts to the SCR Rate Schedules during the period from 2011 to 2014. The results demonstrate the annual unpredictability of the MBR, showing two years of higher revenues and two years of lower revenues with the MBR as compared to the standard tariff. Across the four-year period, however, overall revenues varied within the range shown on Extraordinarily Sensitive Schedule 4.

Q. Given the variability of the market prices, is there anything that can be done to stabilize the potential impacts of the MBR?

A. Yes, there is. The Customer can certainly utilize its wholesale PPAs to stabilize its net all-in cost, as I demonstrated in my Schedule 3. In addition, the Customer could supplement its renewable wholesale PPAs with other instruments, including risk management devices such as swaps, to reduce the variability of its net all-in cost. Because PJM is a liquid and transparent market, the Customer can choose from a number of products and suppliers to provide the best financial outcomes for its needs.

From the Company's perspective, we can also enter into risk management transactions to reduce the variability of energy revenues received under the SCR Rate Schedules. At this point, the Company has not determined whether it will seek to "hedge" this rate. We will make those determinations at a later date as we gain actual experience with the rate itself and have clarity on the volumes and variability involved. From a regulatory accounting perspective, the Company proposes that the results of any such hedges entered into for this MBR, whether they are placed directly with the Customer or with unaffiliated third parties, will be accounted for in the same manner as the SCR Rate Schedule revenue variance, that is as a base rate revenue item.

Q. Does this conclude your direct testimony?

A. Yes, it does.

BACKGROUND AND QUALIFICATIONS OF GREGORY J. MORGAN

Gregory J. Morgan is a 1982 graduate of Virginia Tech with a Bachelor's degree in Mechanical Engineering. In 1988, he received a Master's degree in Business Administration from the University of Richmond.

Mr. Morgan joined Virginia Electric and Power Company in 1982 and has more than 30 years of experience including in the areas of power generation, generation system planning, wholesale market operations, financial services, and regulatory affairs. Since 1997, he has held director level positions in wholesale market operations, financial services, and customer rates.

In 2013, Mr. Morgan assumed his current position as Director – Customer Rates with the Regulatory Affairs division. His responsibilities include customer load research, cost allocation and cost of service studies, customer rate design and rate filings. Additionally, he is responsible for development and administration of electric service contracts with non-jurisdictional and special contract customers.

Mr. Morgan has previously presented testimony before the State Corporation Commission of Virginia, and the North Carolina Utilities Commission.

CONFIDENTIAL IN ITS ENTIRETY

INFORMATION WITHHELD

ATTACHMENT A

EXTRAORDINARILY SENSITIVE IN ITS ENTIRETY

INFORMATION WITHHELD

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ATTACHMENT B

SCHEDULE SCR - GS-3
LARGE GENERAL SERVICE
SECONDARY VOLTAGE

I. APPLICABILITY AND AVAILABILITY

A. This Schedule is applicable only to the entity that is a party to the Agreement (of which this Schedule is a part), which was executed by and between the entity and the Company, entered into as of September 18, 2015, and approved by the Commission in Case No. PUE-2015-00____. Such entity has multiple Accounts for Electric Service with the Company. Each of entity's such Accounts, receiving Electric Service under this Schedule, shall be considered a "Customer" only for the purposes of this Schedule and its companion Rate Schedule GS-3, Large General Service – Secondary Voltage.

In addition, this Schedule is applicable only to such Customer (i) who qualifies as a non-residential secondary voltage Customer (as defined in Paragraph XVI.); and (ii) who elects and who – as of the date of service for Customer under this Schedule – is receiving Electricity Supply Service and Electric Delivery Service from the Company under Schedule GS-3 at the Customer's service location; and (iii) whose peak measured demand has reached or exceeded 5,000 kW during at least three (3) billing months within the current and previous 11 billing months at the Customer's service location; and (iv) who has taken service from the Company for at least 12 consecutive billing months at the Customer's service location; and (v) whose Monthly Load Factor at the Customer's service location averages at least 85% for the current and previous 11 billing months, where such Monthly Load Factor is calculated in accordance with Paragraph XII., below.

B. This Schedule is available only after all of the following criteria are met:

1. The Company has installed metering equipment that it deems to be necessary to measure properly the Customer's demands and energy usage at the Customer's service location; and

2. If applicable, the Customer has installed and provided the Company with access to mutually agreed upon communication technology necessary for the Company to communicate with its metering equipment; and

3. The Customer has submitted to the Company a notarized *Officer Certification Affidavit for Rate Schedule SCR– GS-3* ("Affidavit") which acknowledges that the Customer's representative who signs such Affidavit is a duly authorized officer and understands the terms and conditions under which the Customer will be billed in accordance with this Schedule.

The Company may require up to sixty (60) days after all of the criteria in Paragraph I.B., above, are met to provide service to the Customer under this Schedule.

C. Should either the Company or the Customer provide the other party with written notice to terminate the Agreement, in accordance with Section 2.2 of the Agreement of which this Schedule is a part, this Schedule shall be closed to additional Customers simultaneously with the date of such termination notice.

(Continued)

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SCHEDULE SCR - GS-3
LARGE GENERAL SERVICE
SECONDARY VOLTAGE

(Continued)

II. 30-DAY RATE

A. Distribution Service Charges

1. Basic Customer Charge
Basic Customer Charge $119.80 per billing month.

2. Plus Distribution Demand Charge
All kW of Distribution Demand @ $2.120 per kW

3. Plus rkVA Demand Charge @ $0.15 per rkVA

4. Plus Distribution kWh Charges

a. Distribution kWh Charge for All Customers
All kWh @ 0.007¢ per kWh

b. Plus Distribution kWh Charge for Non-exempt or Non-opt-out Customers
All kWh @ 0.000¢ per kWh

5. Plus each Distribution kilowatthour used is subject to all applicable riders, included in the Exhibit of Applicable Riders.

B. Market-based Rate Charges

1. Generation Demand Charge
All kW of Generation Demand @ Generation Demand Billing Rate per kW

2. Plus Generation Energy Charge
All kWh @ Day-Ahead LMP per kWh

3. Plus PJM Ancillary Service Charges

Any reference to "PJM" in this Schedule means the PJM Interconnection, LLC (Pennsylvania-New Jersey-Maryland Interconnection, LLC), or any successor, that is the regional transmission organization and is part of the Eastern Interconnection grid that operates an electric transmission system.

(Continued)

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SCHEDULE SCR - GS-3
LARGE GENERAL SERVICE
SECONDARY VOLTAGE

(Continued)

II. 30-DAY RATE (Continued)

a. PJM Ancillary Service Charges for the current billing month, for which the Customer shall be charged, shall include all PJM ancillary service charges assigned to Customer's total monthly kWh energy consumption, which is grossed up for kWh losses (in accordance with the Schedule GS-3 Customer Class and consistent with the level at which the PJM ancillary service charges have losses applied), and where such PJM ancillary service charges are not already included in Company's Schedule GS-3 Transmission kW Demand Charge and the Company's Rider T1 charge applicable to Schedule GS-3. Currently, PJM Ancillary Service Charges include – but may not be limited now or in the future to – Day-Ahead and Balancing Operating Reserves, Day-Ahead Scheduling Reserves, Reactive Service and Reactive Supply & Voltage Control, Black Start and Regulation & Frequency Response, Synchronized Reserves, and Synchronous Condensing Charges. In the event of any future change in PJM's process for determining ancillary service charges, including any modification as to which ancillary services are included, this ancillary service charge shall represent the similar or like charges for ancillary service determined by PJM.

b. For PJM Ancillary Service Charges, the Company will determine for the current billing month a monthly rate in $/kWh by taking such total monthly Dominion LSE ("DOMLSE") charges divided by total monthly DOMLSE kWh energy consumption (the "PJM Ancillary Service Charges Factor"). The Company will bill the PJM Ancillary Service Charges to the Customer based on the Customer's actual total monthly kWh energy consumption for the current billing month multiplied by the PJM Ancillary Service Charges Factor. The DOMLSE charges and total monthly DOMLSE kWh energy consumption represent those associated with the aggregation of the total jurisdiction and non-jurisdictional customers served by the Company in the Commonwealth of Virginia and the State of North Carolina.

(Continued)

SCHEDULE SCR - GS-3
LARGE GENERAL SERVICE
SECONDARY VOLTAGE

(Continued)

II. 30-DAY RATE (Continued)

4. Plus PJM Administrative Fees

a. PJM Administrative Fees for the current billing month shall include all PJM administrative fees assigned to Customer's total monthly kWh energy consumption, which is grossed up for kWh losses (in accordance with the Schedule GS-3 Customer Class and consistent with the level at which the PJM ancillary service charges have losses applied), and where such PJM administrative fees are not already included in the Company's Schedule GS-3 Transmission Demand Charge and the Company's Rider T1 charge applicable to Schedule GS-3. In the event of any future change in PJM's process for determining administrative fees, including any modification as to what is being represented in the administrative fees, this administrative fees charge shall represent the similar or like charges for administrative fees determined by the PJM.

b. For PJM Administrative Fees, the Company will determine for the current billing month a monthly rate in $/kWh by taking such total monthly Dominion LSE ("DOMLSE") administration fee divided by total monthly DOMLSE kWh energy consumption (the "PJM Administrative Fees Factor"). The Company will bill PJM Administrative Fees to the Customer based on the Customer's actual total monthly kWh energy consumption for the current billing month multiplied by the PJM Administrative Fees Factor. The DOMLSE charges and total monthly DOMLSE kWh energy consumption represent those associated with the aggregation of the total jurisdiction and non-jurisdictional customers served by the Company in the Commonwealth of Virginia and the State of North Carolina.

c. In the event that PJM assigns any new costs to the loads of the Company, which are not considered to be PJM Ancillary Services or PJM Administrative Fees, in the future for the Customer's total monthly kWh energy consumption, grossed up for kWh losses, during the longer of the term of the Agreement of which this Schedule is a part or this Schedule's Term of Contract, pursuant to Paragraph XIX., below, the Company and the Customer mutually agree that the Company shall bill and the Customer shall pay to the Company such new PJM costs. The Company shall include any and all such new PJM costs in with the PJM Administrative Fees as described in this Paragraph II.B.4., above.

SCHEDULE SCR - GS-3
LARGE GENERAL SERVICE
SECONDARY VOLTAGE

(Continued)

II. 30-DAY RATE (Continued)

5. Plus Margin

a. The Customer shall pay to the Company a Margin for each kWh of Customer's total monthly energy consumption during the current billing month.

b. Such Margin for the current billing month shall be based on the Customer's Monthly Load Factor, which the Company will calculate in accordance with Paragraph XII., below. The Customer's Monthly Load Factor at the Customer's service location shall be multiplied by the applicable Margin rate shown below:

Customer's Monthly Load Factor	**Margin Rate per kWh**
>= 85%	$0.00115
< 85%	[$0.00115 + ((85 – Monthly Load Factor) * $0.00005)]

c. The Company shall disregard any Test Demand, as determined in Paragraph XIII., in calculating the Customer's Monthly Load Factor. In place of the Test Demand, the Company shall use the highest Non-Test Demand in the current billing month to determine the Customer's Monthly Load Factor.

C. Electricity Supply (ES) Service Charges

1. Transmission Demand Charge
All On-Peak ES kW @ $ 2.277 per kW

2. Plus each kW of On-Peak Electricity Supply Demand, determined pursuant to Paragraph X., below, is subject to all applicable transmission riders, included in the Exhibit of Applicable Riders.

(Continued)

SCHEDULE SCR - GS-3
LARGE GENERAL SERVICE
SECONDARY VOLTAGE

(Continued)

II. 30-DAY RATE (Continued)

D. As this Schedule is a companion schedule to Schedule GS-3, the Total Charges billed to the Customer by the Company for services under this Schedule shall be equal to the Total Schedule GS-3 Charges plus the Net Market-based Rate Charges, as described more fully below.

Where:

1. Total Schedule GS-3 Charges shall be equal to the higher of the following:

   a. The sum of the following:

      i. Schedule GS-3 Distribution Service Charges (see Paragraph II.A. of Schedule GS-3), which include all applicable riders; plus

      ii. Schedule GS-3 Electricity Supply Service Charges (see Paragraph II.B. of Schedule GS-3), which include all applicable riders; or

   b. The minimum charge, which shall be as may be contracted for in the Agreement for the Provision of Electric Service (of which this Schedule is a part), executed by and between the Company and the Customer.

2. Total Schedule SCR - GS-3 Charges shall be equal to the higher of the following:

   a. The sum of the following:

      i. Distribution Service Charges, which include all applicable riders, in Paragraph II.A. of this Schedule; plus

      ii. Market-based Rate Charges in Paragraph II.B. of this Schedule; plus

      iii. Electricity Supply Service Charges, which include all applicable transmission riders, in Paragraph II.C. of this Schedule; or

   b. The minimum charge, which shall be as may be contracted for in the Agreement for the Provision of Electric Service (of which this Schedule is a part), executed by and between the Company and the Customer.

3. Net Market-based Rate Charges shall be equal to the Total Schedule SCR - GS-3 Charges minus the Total Schedule GS-3 Charges.

(Continued)

SCHEDULE SCR - GS-3
LARGE GENERAL SERVICE
SECONDARY VOLTAGE

(Continued)

III. DETERMINATION OF DISTRIBUTION DEMAND

A. The Distribution Demand shall be billed only where the normal service delivery voltage is less than 69 kV.

B. The Distribution Demand billed under Paragraph II.A.2 shall be such as may be contracted for but not less than the highest of:

1. The highest average kW measured at the location during any 30-minute interval of the current and previous 11 billing months.

2. 500 kW.

C. When the Customer's power factor at the Customer's service location is less than 85 percent, a minimum distribution demand of not less than 85 percent of the Customer's maximum kVA demand may be established.

IV. DETERMINATION OF rkVA DEMAND

The rkVA of demand billed shall be the highest average rkVA measured at the Customer's service location in any 30-minute interval during the current billing month.

V. EXEMPTION AND OPT-OUT PROVISIONS FOR DISTRIBUTION KWH CHARGE

The Distribution kWh Charge in Paragraph II.A.4.b., above, shall not apply to Customers who are either exempt from or opt-out of such charge pursuant to Virginia Code § 56-585.1 A 5 c.

VI. DETERMINATION OF GENERATION DEMAND

A. The Generation Demand billed in Paragraph II.B.1., above, shall be the higher of the following, which also shall be subject to adjustment for losses and reserves, as provided for in Paragraph VI.B., below:

1. The Customer's highest average 30-minute kW of demand measured by the Company during the current billing month ("Maximum kW of Demand"); or

(Continued)

SCHEDULE SCR - GS-3
LARGE GENERAL SERVICE
SECONDARY VOLTAGE

(Continued)

VI. DETERMINATION OF GENERATION DEMAND (Continued)

2. The Customer's contribution to PJM's peak load (currently the average of the five (5) coincident peaks ("5CPs") of the prior Summer) shall be determined in accordance with PJM's rules for the PJM Delivery Year ("Delivery Year") prior to the current Delivery Year. In the event of any future change in PJM's process for determining the Customer's contribution to PJM peak load, the Customer's contribution to PJM's peak load shall represent the similar or like method used by PJM for determining Customer's contribution to PJM's peak load.

B. Such kW of demand determined in Paragraph VI.A., above, shall be grossed up for losses and reserves, which are applicable to the Customer's service location. Such losses and reserves shall be calculated by the Company and updated annually.

C. The adjustment for losses in Paragraph VI.B., above, to the kW of demand determined in Paragraph VI.A., above, shall represent the Company's average distribution and transmission system loss adjustment factor for providing capacity to serve the Customer's load.

D. The adjustment for reserves in Paragraph VI.B., above, to the kW of demand determined in Paragraph VI.C., above, shall represent the Company's required reserves based upon the volumes procured and/or assigned to the Company's load by PJM, as defined by the underlying PJM structure for acquiring capacity for load in PJM. In the event of any future change in PJM's process for determining the Company's reserve requirement for load, the required reserves shall represent the similar or like method used by PJM for determining the Company's required reserves for acquiring capacity for load in PJM.

E. The resulting kW of demand, determined in accordance with Paragraph VI. of this Schedule, shall be the Generation Demand.

VII. DETERMINATION OF GENERATION DEMAND BILLING RATE

The Generation Demand Billing Rate for the current billing month shall be equal to the PJM Final Zonal Net Load Price in $/MW-Day multiplied by the number of days in the current billing month and shall represent the price reflective of the cost to procure capacity in the PJM market to serve the Customer's Generation Demand at the Customer's service location. In the event of any future change in PJM's process for determining the price reflecting the cost to procure capacity for load in the PJM market to serve the Customer's Generation Demand, the Generation Demand Billing Rate shall represent the similar or like method used by PJM for determining the Generation Demand Billing Rate.

(Continued)

SCHEDULE SCR - GS-3
LARGE GENERAL SERVICE
SECONDARY VOLTAGE

(Continued)

VIII. DETERMINATION OF GENERATION ENERGY

The Generation Energy billed in Paragraph II.B.2, above, shall be the Customer's total monthly kWh energy consumption for the current billing month grossed up for the appropriate distribution losses for a Schedule GS-3 customer.

IX. DETERMINATION OF DAY-AHEAD LMP

The Day-ahead LMP used to bill the Customer's Generation Energy in Paragraph II.B.2, above, shall mean the respective hourly PJM Day-Ahead Locational Marginal Price ("LMP") for the applicable PJM load zone, or any successor thereto, which includes the Customer's service location. In the event of any future change in PJM's process for determining the price reflecting the cost to procure energy in the PJM market to serve the Customer's Generation Energy, the Day-ahead LMP shall represent the similar or like method used by PJM for determining the Day-ahead LMP.

X. DETERMINATION OF ON-PEAK ELECTRICITY SUPPLY DEMAND

The kW of demand billed under Paragraph II.C.1.a. and Paragraph II.C.1.b., above, shall be the highest of:

A. The highest average kW measured in any 30-minute interval of the current billing month during on-peak hours.

B. Seventy-five percent of the highest kW of demand at the Customer's service location as determined under Paragraph X.A., above, during the billing months of June through September of the preceding 11 billing months.

C. 100 kW.

XI. DETERMINATION OF ON-PEAK AND OFF-PEAK HOURS

The following on-peak and off-peak hours are applicable to the billing of the Electricity Supply Service Charges in Paragraph II.C., above.

A. On-peak hours are as follows:

1. For the period of June 1 through September 30, 10 a.m. to 10 p.m., Mondays through Fridays.

2. For the period of October 1 through May 31, 7 a.m. to 10 p.m., Mondays through Fridays.

B. All hours not specified in Paragraph XI.A. are off-peak.

(Continued)

SCHEDULE SCR - GS-3
LARGE GENERAL SERVICE
SECONDARY VOLTAGE

(Continued)

XII. DETERMINATION OF MONTHLY LOAD FACTOR

The Company shall calculate the Customer's Monthly Load Factor for the current billing month at the Customer's service location, using the following formula:

Monthly Load Factor = Total kWh ÷ (24 * Maximum kW of Demand * Days)

Where:

Total kWh = Customer's actual monthly total kWh energy consumption for the current billing month;

24 = 24 hours per day;

Maximum kW of Demand = the demand determined for the current billing month in accordance with Paragraph VI.A.1., above;

Days = the number of days in the current billing month.

XIII. DETERMINATION OF TEST DEMAND AND NON-TEST DEMAND

A. Periodically, the Customer may have to conduct equipment testing at the Customer's service location. Customer's equipment testing that may result in the establishment of an abnormally high average 30-minute peak measured demand ("Peak Demand") during one or more billing months at the Customer's service location. The Company will disregard the Peak Demand for the purposes of calculating the Customer's Monthly Load Factor and the Customer's Margin, in accordance with Paragraph II.B.5., above, for the current billing month when *all* of the following criteria are met:

1. Customer conducted the equipment testing at the Customer's service location; and

2. The Customer's notification to the Company and conduct of the equipment testing were in accordance with the provisions of the *Customer's Equipment Testing Agreement;* and

3. The Customer's Peak Demand was established during the date(s) and time(s) identified by the Customer on the "Official Test Schedule," which was submitted to the Company pursuant to the *Customer's Equipment Testing Agreement;* and

(Continued)

SCHEDULE SCR - GS-3
LARGE GENERAL SERVICE
SECONDARY VOLTAGE

(Continued)

XIII. DETERMINATION OF TEST DEMAND AND NON-TEST DEMAND (Continued)

4. The Company approved the Customer's Peak Demand to be a Test Demand, using the provisions of the *Customer's Equipment Testing Agreement.*

The Company shall disregard any Test Demand for the Customer only from the calculation of the Customer's Monthly Load Factor for the purposes of the calculating the Customer's Margin during the current billing month.

B. Using the Company's meter data records, the Company will determine the Customer's highest average 30-minute measured peak demand outside of the dates and times listed on the "Official Test Schedule" as the Customer's Non-Test Demand for the current billing month at the Customer's service location. The Company shall use the Customer's Non-Test Demand to calculate the Customer's Monthly Load Factor for the purposes of calculating the Customer's Margin, in accordance with Paragraph II.B.5., above.

XIV. METER READING AND BILLING AND PAYMENT

A. If applicable, the Customer has installed and provided the Company with access to mutually agreed upon communication technology necessary for the Company to communicate with its metering equipment. Such communication technology shall be provided to the Company's metering equipment at the Customer's own expense.

B. When the actual number of days between meter readings is more or less than 30 days, the Basic Customer Charge, the Distribution Demand Charge, the rkVA Demand Charge, the Generation Demand Charge, the Transmission Demand Charge, and the minimum charge of the 30-day rate will each be multiplied by the actual number of days in the billing period and divided by 30. Billing and payment shall be made concurrent with billing under Schedule GS-3.

XV. STANDBY, MAINTENANCE OR PARALLEL OPERATION SERVICE

A Customer requiring standby, maintenance or parallel operation service may elect service under this Schedule provided the Customer contracts for the maximum kW which the Company is to supply. Standby, maintenance or parallel operation service is subject to the following provisions:

(Continued)

SCHEDULE SCR - GS-3
LARGE GENERAL SERVICE
SECONDARY VOLTAGE

(Continued)

XV. STANDBY, MAINTENANCE OR PARALLEL OPERATION SERVICE (Continued)

A. Suitable relays and protective apparatus shall be furnished, installed, and maintained at the Customer's expense in accordance with specifications furnished by the Company. The relays and protective equipment shall be subject, at all reasonable times, to inspection by the Company's authorized representative.

B. In case the Distribution Demand determined under Paragraph III. exceeds the contract demand, the contract demand shall be increased by such excess demand.

C. The demand billed under Paragraph II.A.2 shall be the contract demand.

XVI. DEFINITION OF TRANSMISSION, PRIMARY AND SECONDARY VOLTAGE CUSTOMER

A. A transmission voltage Customer is any Customer whose delivery voltage is 69 kV or above and is the voltage that is generally available in the area.

B. A primary voltage Customer is any Customer (a) served from a circuit of 69 kV or more where the delivery voltage is 4,000 volts or more, (b) served from a circuit of less than 69 kV where Company-owned transformation is not required at the Customer's site, (c) where Company-owned transformation has become necessary at the Customer's site because the Company has changed the voltage of the circuit from that originally supplied, or (d) at a location served prior to October 27, 1992 where the Customer's connection to the Company's facilities is made at 2,000 volts or more.

C. A secondary voltage Customer is any Customer not defined in Paragraph XVI.A. or Paragraph XVI.B. as a transmission or primary voltage Customer.

XVII. CUSTOMER AUTHORIZATION

The Customer authorizes the Company to allow its Energy Supply personnel to have full access to the Customer's Account-specific load, pricing, and any other necessary Customer Account-specific information for the duration of the Agreement. Such authorization will allow the Company's Energy Supply personnel to support certain Company-specific activities resulting from the Agreement.

XVIII. PERIODIC REVISION OF RATES

The rates contained in this Schedule and in all the applicable riders for this Schedule are subject to change from time-to-time by order of the Commission. The rates for the currently-effective Rate Schedules and all the applicable riders are available on the Company's Internet website.

(Continued)

SCHEDULE SCR - GS-3
LARGE GENERAL SERVICE
SECONDARY VOLTAGE

(Continued)

XIX. TERM OF CONTRACT

A. The term of contract for the purchase of Electric Service under this Schedule shall be as mutually agreed upon, but for not less than three (3) years. Any of Customer's Accounts transitioned to this Schedule shall remain on this Schedule for a minimum of three (3) years, continuing thereafter for additional one-year terms unless either the Company or the Customer provides the other Party with written notice of termination at least sixty (60) days prior to the end of the then-current term.

B. Notwithstanding the provisions of Paragraph XIX.A., above, should the Company or the Customer provide the other Party with written notice to terminate the Agreement, in accordance with Section 2.2 of the Agreement (of which this Schedule is a part), this Schedule shall terminate in accordance with the following:

1. This Schedule shall terminate three (3) years after this Schedule's effective start date for the Customer's Account;

2. For Customer's Accounts, which have satisfied the minimum three (3)-year term in accordance with Paragraph XIX.A., above, this Schedule shall terminate at the end of the then-current one (1)-year term.

3. After termination, this Schedule shall no longer be available at the Customer's service location.

SCHEDULE SCR - GS-4
LARGE GENERAL SERVICE
PRIMARY VOLTAGE

I. APPLICABILITY AND AVAILABILITY

A. This Schedule is applicable only to the entity that is a party to the Agreement (of which this Schedule is a part), which was executed by and between the entity and the Company, entered into as of September 18, 2015, and approved by the Commission in Case No. PUE-2015-00____. Such entity has multiple Accounts for Electric Service with the Company. Each of entity's such Accounts, receiving Electric Service under this Schedule, shall be considered a "Customer" only for the purposes of this Schedule and its companion Rate Schedule GS-4, Large General Service – Primary Voltage.

In addition, this Schedule is applicable only to such Customer (i) who qualifies as a non-residential transmission or primary voltage Customer (as defined in Paragraph XVI.); and (ii) who elects and who – as of the date of service for Customer under this Schedule – is receiving Electricity Supply Service and Electric Delivery Service from the Company under Schedule GS-4 at the Customer's service location; and (iii) whose peak measured demand has reached or exceeded 5,000 kW during at least three (3) billing months within the current and previous 11 billing months at the Customer's service location; and (iv) who has taken service from the Company for at least 12 consecutive billing months at the Customer's service location; and (v) whose Monthly Load Factor at the Customer's service location averages at least 85% for the current and previous 11 billing months, where such Monthly Load Factor is calculated in accordance with Paragraph XII., below.

B. This Schedule is available only after all of the following criteria are met:

1. The Company has installed metering equipment that it deems to be necessary to measure properly the Customer's demands and energy usage at the Customer's service location; and

2. If applicable, the Customer has installed and provided the Company with access to mutually agreed upon communication technology necessary for the Company to communicate with its metering equipment; and

3. The Customer has submitted to the Company a notarized *Officer Certification Affidavit for Rate Schedule SCR– GS-4* ("Affidavit") which acknowledges that the Customer's representative who signs such Affidavit is a duly authorized officer and understands the terms and conditions under which the Customer will be billed in accordance with this Schedule.

The Company may require up to sixty (60) days after all of the criteria in Paragraph I.B., above, are met to provide service to the Customer under this Schedule.

C. Should either the Company or the Customer provide the other party with written notice to terminate the Agreement, in accordance with Section 2.2 of the Agreement of which this Schedule is a part, this Schedule shall be closed to additional Customers simultaneously with the date of such termination notice.

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SCHEDULE SCR - GS-4
LARGE GENERAL SERVICE
PRIMARY VOLTAGE

(Continued)

II. 30-DAY RATE

A. Distribution Service Charges

1. Basic Customer Charge
Basic Customer Charge $127.60 per billing month.

2. Plus Distribution Demand Charge

First 5000 kW of Distribution Demand	@	$1.000 per kW
Additional kW of Distribution Demand	@	$0.755 per kW

3. Plus rkVA Demand Charge @ $0.15 per rkVA

4. Plus Distribution kWh Charges

a. Distribution kWh Charge for All Customers
All kWh @ 0.006¢ per kWh

b. Plus Distribution kWh Charge for Non-exempt or Non-opt-out Customers
All kWh @ 0.000¢ per kWh

5. Plus each Distribution kilowatthour used is subject to all applicable riders, included in the Exhibit of Applicable Riders.

B. Market-based Rate Charges

1. Generation Demand Charge
All kW of Generation Demand @ Generation Demand Billing Rate per kW

2. Plus Generation Energy Charge
All kWh @ Day-Ahead LMP per kWh

3. Plus PJM Ancillary Service Charges

Any reference to "PJM" in this Schedule means the PJM Interconnection, LLC (Pennsylvania-New Jersey-Maryland Interconnection, LLC), or any successor, that is the regional transmission organization and is part of the Eastern Interconnection grid that operates an electric transmission system.

(Continued)

SCHEDULE SCR - GS-4
LARGE GENERAL SERVICE
PRIMARY VOLTAGE

(Continued)

II. 30-DAY RATE (Continued)

a. PJM Ancillary Service Charges for the current billing month, for which the Customer shall be charged, shall include all PJM ancillary service charges assigned to Customer's total monthly kWh energy consumption, which is grossed up for kWh losses (in accordance with the Schedule GS-4 Customer Class and consistent with the level at which the PJM ancillary service charges have losses applied), and where such PJM ancillary service charges are not already included in Company's Schedule GS-4 Transmission kW Demand Charge and the Company's Rider T1 charge applicable to Schedule GS-4. Currently, PJM Ancillary Service Charges include – but may not be limited now or in the future to – Day-Ahead and Balancing Operating Reserves, Day-Ahead Scheduling Reserves, Reactive Service and Reactive Supply & Voltage Control, Black Start and Regulation & Frequency Response, Synchronized Reserves, and Synchronous Condensing Charges. In the event of any future change in PJM's process for determining ancillary service charges, including any modification as to which ancillary services are included, this ancillary service charge shall represent the similar or like charges for ancillary service determined by PJM.

b. For PJM Ancillary Service Charges, the Company will determine for the current billing month a monthly rate in $/kWh by taking such total monthly Dominion LSE ("DOMLSE") charges divided by total monthly DOMLSE kWh energy consumption (the "PJM Ancillary Service Charges Factor"). The Company will bill the PJM Ancillary Service Charges to the Customer based on the Customer's actual total monthly kWh energy consumption for the current billing month multiplied by the PJM Ancillary Service Charges Factor. The DOMLSE charges and total monthly DOMLSE kWh energy consumption represent those associated with the aggregation of the total jurisdiction and non-jurisdictional customers served by the Company in the Commonwealth of Virginia and the State of North Carolina.

SCHEDULE SCR - GS-4
LARGE GENERAL SERVICE
PRIMARY VOLTAGE

(Continued)

II. 30-DAY RATE (Continued)

4. Plus PJM Administrative Fees

a. PJM Administrative Fees for the current billing month shall include all PJM administrative fees assigned to Customer's total monthly kWh energy consumption, which is grossed up for kWh losses (in accordance with the Schedule GS-4 Customer Class and consistent with the level at which the PJM ancillary service charges have losses applied), and where such PJM administrative fees are not already included in the Company's Schedule GS-4 Transmission Demand Charge and the Company's Rider T1 charge applicable to Schedule GS-4. In the event of any future change in PJM's process for determining administrative fees, including any modification as to what is being represented in the administrative fees, this administrative fees charge shall represent the similar or like charges for administrative fees determined by the PJM.

b. For PJM Administrative Fees, the Company will determine for the current billing month a monthly rate in $/kWh by taking such total monthly Dominion LSE ("DOMLSE") administration fee divided by total monthly DOMLSE kWh energy consumption (the "PJM Administrative Fees Factor"). The Company will bill PJM Administrative Fees to the Customer based on the Customer's actual total monthly kWh energy consumption for the current billing month multiplied by the PJM Administrative Fees Factor. The DOMLSE charges and total monthly DOMLSE kWh energy consumption represent those associated with the aggregation of the total jurisdiction and non-jurisdictional customers served by the Company in the Commonwealth of Virginia and the State of North Carolina.

c. In the event that PJM assigns any new costs to the loads of the Company, which are not considered to be PJM Ancillary Services or PJM Administrative Fees, in the future for the Customer's total monthly kWh energy consumption, grossed up for kWh losses, during the longer of the term of the Agreement of which this Schedule is a part or this Schedule's Term of Contract, pursuant to Paragraph XIX., below, the Company and the Customer mutually agree that the Company shall bill and the Customer shall pay to the Company such new PJM costs. The Company shall include any and all such new PJM costs in with the PJM Administrative Fees as described in this Paragraph II.B.4., above.

(Continued)

SCHEDULE SCR - GS-4
LARGE GENERAL SERVICE
PRIMARY VOLTAGE

(Continued)

II. 30-DAY RATE (Continued)

5. Plus Margin

a. The Customer shall pay to the Company a Margin for each kWh of Customer's total monthly energy consumption during the current billing month.

b. Such Margin for the current billing month shall be based on the Customer's Monthly Load Factor, which the Company will calculate in accordance with Paragraph XII., below. The Customer's Monthly Load Factor at the Customer's service location shall be multiplied by the applicable Margin rate shown below:

Customer's Monthly Load Factor	**Margin Rate per kWh**
>= 85%	$0.00115
< 85%	[$0.00115 + ((85 – Monthly Load Factor) * $0.00005)]

c. The Company shall disregard any Test Demand, as determined in Paragraph XIII., in calculating the Customer's Monthly Load Factor. In place of the Test Demand, the Company shall use the highest Non-Test Demand in the current billing month to determine the Customer's Monthly Load Factor.

C. Electricity Supply (ES) Service Charges

1. Transmission Demand Charge

a. All On-peak Electricity Supply Demand for Primary Service Voltage @ $ 2.371 per kW

b. All On-peak Electricity Supply Demand for Transmission Service Voltage @ $ 2.310 per kW

2. Plus each kW of On-Peak Electricity Supply Demand, determined pursuant to Paragraph X., below, is subject to all applicable transmission riders, included in the Exhibit of Applicable Riders.

(Continued)

SCHEDULE SCR - GS-4
LARGE GENERAL SERVICE
PRIMARY VOLTAGE

(Continued)

II. 30-DAY RATE (Continued)

D. As this Schedule is a companion schedule to Schedule GS-4, the Total Charges billed to the Customer by the Company for services under this Schedule shall be equal to the Total Schedule GS-4 Charges plus the Net Market-based Rate Charges, as described more fully below.

Where:

1. Total Schedule GS-4 Charges shall be equal to the higher of the following:

   a. The sum of the following:

      i. Schedule GS-4 Distribution Service Charges (see Paragraph II.A. of Schedule GS-4), which include all applicable riders; plus

      ii. Schedule GS-4 Electricity Supply Service Charges (see Paragraph II.B. of Schedule GS-4), which include all applicable riders; or

   b. The minimum charge, which shall be as may be contracted for in the Agreement for the Provision of Electric Service (of which this Schedule is a part), executed by and between the Company and the Customer.

2. Total Schedule SCR - GS-4 Charges shall be equal to the higher of the following:

   a. The sum of the following:

      i. Distribution Service Charges, which include all applicable riders, in Paragraph II.A. of this Schedule; plus

      ii. Market-based Rate Charges in Paragraph II.B. of this Schedule; plus

      iii. Electricity Supply Service Charges, which include all applicable transmission riders, in Paragraph II.C. of this Schedule; or

   b. The minimum charge, which shall be as may be contracted for in the Agreement for the Provision of Electric Service (of which this Schedule is a part), executed by and between the Company and the Customer.

3. Net Market-based Rate Charges shall be equal to the Total Schedule SCR - GS-4 Charges minus the Total Schedule GS-4 Charges.

(Continued)

SCHEDULE SCR - GS-4
LARGE GENERAL SERVICE
PRIMARY VOLTAGE

(Continued)

III. DETERMINATION OF DISTRIBUTION DEMAND

A. The Distribution Demand shall be billed only where the normal service delivery voltage is less than 69 kV.

B. The Distribution Demand billed under Paragraph II.A.2 shall be such as may be contracted for but not less than the highest of:

1. The highest average kW measured at the location during any 30-minute interval of the current and previous 11 billing months.

2. 500 kW.

C. When the Customer's power factor at the Customer's service location is less than 85 percent, a minimum distribution demand of not less than 85 percent of the Customer's maximum kVA demand may be established.

IV. DETERMINATION OF rkVA DEMAND

The rkVA of demand billed shall be the highest average rkVA measured at the Customer's service location in any 30-minute interval during the current billing month.

V. EXEMPTION AND OPT-OUT PROVISIONS FOR DISTRIBUTION KWH CHARGE

The Distribution kWh Charge in Paragraph II.A.4.b., above, shall not apply to Customers who are either exempt from or opt-out of such charge pursuant to Virginia Code § 56-585.1 A 5 c.

VI. DETERMINATION OF GENERATION DEMAND

A. The Generation Demand billed in Paragraph II.B.1., above, shall be the higher of the following, which also shall be subject to adjustment for losses and reserves, as provided for in Paragraph VI.B., below:

1. The Customer's highest average 30-minute kW of demand measured by the Company during the current billing month ("Maximum kW of Demand"); or

(Continued)

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SCHEDULE SCR - GS-4
LARGE GENERAL SERVICE
PRIMARY VOLTAGE

(Continued)

VI. DETERMINATION OF GENERATION DEMAND (Continued)

2. The Customer's contribution to PJM's peak load (currently the average of the five (5) coincident peaks ("5CPs") of the prior Summer) shall be determined in accordance with PJM's rules for the PJM Delivery Year ("Delivery Year") prior to the current Delivery Year. In the event of any future change in PJM's process for determining the Customer's contribution to PJM peak load, the Customer's contribution to PJM's peak load shall represent the similar or like method used by PJM for determining Customer's contribution to PJM's peak load.

B. Such kW of demand determined in Paragraph VI.A., above, shall be grossed up for losses and reserves, which are applicable to the Customer's service location. Such losses and reserves shall be calculated by the Company and updated annually.

C. The adjustment for losses in Paragraph VI.B., above, to the kW of demand determined in Paragraph VI.A., above, shall represent the Company's average distribution and transmission system loss adjustment factor for providing capacity to serve the Customer's load.

D. The adjustment for reserves in Paragraph VI.B., above, to the kW of demand determined in Paragraph VI.C., above, shall represent the Company's required reserves based upon the volumes procured and/or assigned to the Company's load by PJM, as defined by the underlying PJM structure for acquiring capacity for load in PJM. In the event of any future change in PJM's process for determining the Company's reserve requirement for load, the required reserves shall represent the similar or like method used by PJM for determining the Company's required reserves for acquiring capacity for load in PJM.

E. The resulting kW of demand, determined in accordance with Paragraph VI. of this Schedule, shall be the Generation Demand.

VII. DETERMINATION OF GENERATION DEMAND BILLING RATE

The Generation Demand Billing Rate for the current billing month shall be equal to the PJM Final Zonal Net Load Price in $/MW-Day multiplied by the number of days in the current billing month and shall represent the price reflective of the cost to procure capacity in the PJM market to serve the Customer's Generation Demand at the Customer's service location. In the event of any future change in PJM's process for determining the price reflecting the cost to procure capacity for load in the PJM market to serve the Customer's Generation Demand, the Generation Demand Billing Rate shall represent the similar or like method used by PJM for determining the Generation Demand Billing Rate.

(Continued)

SCHEDULE SCR - GS-4
LARGE GENERAL SERVICE
PRIMARY VOLTAGE

(Continued)

VIII. DETERMINATION OF GENERATION ENERGY

The Generation Energy billed in Paragraph II.B.2, above, shall be the Customer's total monthly kWh energy consumption for the current billing month grossed up for the appropriate distribution losses for a Schedule GS-4 customer.

IX. DETERMINATION OF DAY-AHEAD LMP

The Day-ahead LMP used to bill the Customer's Generation Energy in Paragraph II.B.2, above, shall mean the respective hourly PJM Day-Ahead Locational Marginal Price ("LMP") for the applicable PJM load zone, or any successor thereto, which includes the Customer's service location. In the event of any future change in PJM's process for determining the price reflecting the cost to procure energy in the PJM market to serve the Customer's Generation Energy, the Day-ahead LMP shall represent the similar or like method used by PJM for determining the Day-ahead LMP.

X. DETERMINATION OF ON-PEAK ELECTRICITY SUPPLY DEMAND

The kW of demand billed under Paragraph II.C.1.a. and Paragraph II.C.1.b., above, shall be the highest of:

A. The highest average kW measured in any 30-minute interval of the current billing month during on-peak hours.

B. Seventy-five percent of the highest kW of demand at the Customer's service location as determined under Paragraph X.A., above, during the billing months of June through September of the preceding 11 billing months.

C. 100 kW.

XI. DETERMINATION OF ON-PEAK AND OFF-PEAK HOURS

The following on-peak and off-peak hours are applicable to the billing of the Electricity Supply Service Charges in Paragraph II.C., above.

A. On-peak hours are as follows:

1. For the period of June 1 through September 30, 10 a.m. to 10 p.m., Mondays through Fridays.

2. For the period of October 1 through May 31, 7 a.m. to 10 p.m., Mondays through Fridays.

B. All hours not specified in Paragraph XI.A. are off-peak.

(Continued)

SCHEDULE SCR - GS-4
LARGE GENERAL SERVICE
PRIMARY VOLTAGE

(Continued)

XII. DETERMINATION OF MONTHLY LOAD FACTOR

The Company shall calculate the Customer's Monthly Load Factor for the current billing month at the Customer's service location, using the following formula:

Monthly Load Factor = Total kWh ÷ (24 * Maximum kW of Demand * Days)

Where:

Total kWh = Customer's actual monthly total kWh energy consumption for the current billing month;

24 = 24 hours per day;

Maximum kW of Demand = the demand determined for the current billing month in accordance with Paragraph VI.A.1., above;

Days = the number of days in the current billing month.

XIII. DETERMINATION OF TEST DEMAND AND NON-TEST DEMAND

A. Periodically, the Customer may have to conduct equipment testing at the Customer's service location. Customer's equipment testing that may result in the establishment of an abnormally high average 30-minute peak measured demand ("Peak Demand") during one or more billing months at the Customer's service location. The Company will disregard the Peak Demand for the purposes of calculating the Customer's Monthly Load Factor and the Customer's Margin, in accordance with Paragraph II.B.5., above, for the current billing month when *all* of the following criteria are met:

1. Customer conducted the equipment testing at the Customer's service location; and

2. The Customer's notification to the Company and conduct of the equipment testing were in accordance with the provisions of the *Customer's Equipment Testing Agreement;* and

3. The Customer's Peak Demand was established during the date(s) and time(s) identified by the Customer on the "Official Test Schedule," which was submitted to the Company pursuant to the *Customer's Equipment Testing Agreement;* and

SCHEDULE SCR - GS-4
LARGE GENERAL SERVICE
PRIMARY VOLTAGE

(Continued)

XIII. DETERMINATION OF TEST DEMAND AND NON-TEST DEMAND (Continued)

4. The Company approved the Customer's Peak Demand to be a Test Demand, using the provisions of the *Customer's Equipment Testing Agreement*.

The Company shall disregard any Test Demand for the Customer only from the calculation of the Customer's Monthly Load Factor for the purposes of the calculating the Customer's Margin during the current billing month.

B. Using the Company's meter data records, the Company will determine the Customer's highest average 30-minute measured peak demand outside of the dates and times listed on the "Official Test Schedule" as the Customer's Non-Test Demand for the current billing month at the Customer's service location. The Company shall use the Customer's Non-Test Demand to calculate the Customer's Monthly Load Factor for the purposes of calculating the Customer's Margin, in accordance with Paragraph II.B.5., above.

XIV. METER READING AND BILLING AND PAYMENT

A. If applicable, the Customer has installed and provided the Company with access to mutually agreed upon communication technology necessary for the Company to communicate with its metering equipment. Such communication technology shall be provided to the Company's metering equipment at the Customer's own expense.

B. When the actual number of days between meter readings is more or less than 30 days, the Basic Customer Charge, the Distribution Demand Charge, the rkVA Demand Charge, the Generation Demand Charge, the Transmission Demand Charge, and the minimum charge of the 30-day rate will each be multiplied by the actual number of days in the billing period and divided by 30. Billing and payment shall be made concurrent with billing under Schedule GS-4.

XV. STANDBY, MAINTENANCE OR PARALLEL OPERATION SERVICE

A Customer requiring standby, maintenance or parallel operation service may elect service under this Schedule provided the Customer contracts for the maximum kW which the Company is to supply. Standby, maintenance or parallel operation service is subject to the following provisions:

(Continued)

15 6 9 3 0 1 7 5

SCHEDULE SCR - GS-4
LARGE GENERAL SERVICE
PRIMARY VOLTAGE

(Continued)

XV. STANDBY, MAINTENANCE OR PARALLEL OPERATION SERVICE (Continued)

A. Suitable relays and protective apparatus shall be furnished, installed, and maintained at the Customer's expense in accordance with specifications furnished by the Company. The relays and protective equipment shall be subject, at all reasonable times, to inspection by the Company's authorized representative.

B. In case the Distribution Demand determined under Paragraph III. exceeds the contract demand, the contract demand shall be increased by such excess demand.

C. The demand billed under Paragraph II.A.2 shall be the contract demand.

XVI. DEFINITION OF TRANSMISSION, PRIMARY AND SECONDARY VOLTAGE CUSTOMER

A. A transmission voltage Customer is any Customer whose delivery voltage is 69 kV or above and is the voltage that is generally available in the area.

B. A primary voltage Customer is any Customer (a) served from a circuit of 69 kV or more where the delivery voltage is 4,000 volts or more, (b) served from a circuit of less than 69 kV where Company-owned transformation is not required at the Customer's site, (c) where Company-owned transformation has become necessary at the Customer's site because the Company has changed the voltage of the circuit from that originally supplied, or (d) at a location served prior to October 27, 1992 where the Customer's connection to the Company's facilities is made at 2,000 volts or more.

C. A secondary voltage Customer is any Customer not defined in Paragraph XVI.A. or Paragraph XVI.B. as a transmission or primary voltage Customer.

XVII. CUSTOMER AUTHORIZATION

The Customer authorizes the Company to allow its Energy Supply personnel to have full access to the Customer's Account-specific load, pricing, and any other necessary Customer Account-specific information for the duration of the Agreement. Such authorization will allow the Company's Energy Supply personnel to support certain Company-specific activities resulting from the Agreement.

XVIII. PERIODIC REVISION OF RATES

The rates contained in this Schedule and in all the applicable riders for this Schedule are subject to change from time-to-time by order of the Commission. The rates for the currently-effective Rate Schedules and all the applicable riders are available on the Company's Internet website.

(Continued)

SCHEDULE SCR - GS-4
LARGE GENERAL SERVICE
PRIMARY VOLTAGE

(Continued)

XIX. TERM OF CONTRACT

A. The term of contract for the purchase of Electric Service under this Schedule shall be as mutually agreed upon, but for not less than three (3) years. Any of Customer's Accounts transitioned to this Schedule shall remain on this Schedule for a minimum of three (3) years, continuing thereafter for additional one-year terms unless either the Company or the Customer provides the other Party with written notice of termination at least sixty (60) days prior to the end of the then-current term.

B. Notwithstanding the provisions of Paragraph XIX.A., above, should the Company or the Customer provide the other Party with written notice to terminate the Agreement, in accordance with Section 2.2 of the Agreement (of which this Schedule is a part), this Schedule shall terminate in accordance with the following:

1. This Schedule shall terminate three (3) years after this Schedule's effective start date for the Customer's Account;

2. For Customer's Accounts, which have satisfied the minimum three (3)-year term in accordance with Paragraph XIX.A., above, this Schedule shall terminate at the end of the then-current one (1)-year term.

3. After termination, this Schedule shall no longer be available at the Customer's service location.

ATTACHMENT C

EXTRAORDINARILY SENSITIVE IN ITS ENTIRETY

INFORMATION WITHHELD

Table 1 below illustrates the relationship of retail billing and wholesale PPA transactions in two scenarios: Case 1 for Rate Schedule GS-3 and Case 2 for Rate Schedule SCR - GS-3. In Case 1, Rate Schedule GS-3 includes largely fixed retail billing. If the Customer purchases 1 megawatt-hour ("MWh") of renewable energy through a wholesale PPA at a fixed price of $60/MWh and resells this same 1 MWh of renewable energy into PJM at a low locational marginal price ("LMP") of $30/MWh, the Customer experiences a net loss of $30/MWh resulting from the wholesale PPA transactions. The Customer's all-in cost (i.e., the sum of the retail bill on Rate Schedule GS-3 and the net gain/loss on the wholesale renewable transactions) is $80/MWh, which is the sum of the $30/MWh net loss plus the $50/MWh for the Customer's retail bill on Rate Schedule GS-3. Alternatively, if the Customer resells the 1 MWh of renewable energy into PJM at a high LMP of $75/MWh, the Customer experiences a net gain of $15/MWh on the wholesale PPA transactions. The Customer's all-in cost is $35/MWh, which is the credit/offset of the $15/MWh net gain against the $50/MWh amount for the Customer's retail bill on Rate Schedule GS-3. As this example shows, the Customer's all-in cost varies inversely to the LMP under Rate Schedule GS-3 billing.

In contrast, the results for Case 2, show that the Customer's load billing rate, under Rate Schedule SCR - GS-3, varies in direct relationship with the LMP received when reselling the 1 MWh of renewable energy from the Customer's wholesale PPA with a fixed price of $60/MWh into PJM, again assuming a low LMP of $30/MWh and a high LMP of $75/MWh. The retail bill under Rate Schedule SCR - GS-3 varies from $39/MWh (at a low LMP) to $84/MWh (at a high LMP). As a result, the Customer's all-in cost becomes "fixed" at $69/MWh. The example shows how, by pricing the retail load reflective of the PJM wholesale market price, the Customer can achieve a more predictable net "all-in cost."

Table 1

	Case 1: Rate Schedule GS-3		
Column	(A)	(B)	(C)
Row	Type of Charge	Low LMP (per MWh)	High LMP (per MWh)
	Customer Generation:		
1	• PPA Fixed Price	$60	$60
2	• PJM Market Price	$30	$75
3	• Net Loss/(Gain): (Row 1 – Row 2)	$30	($15)
4	Retail Bill on Rate Schedule GS-3	$50	$50
5	All-in Cost: (Row 3 + Row 4)	$80	$35
	Case 2: Rate Schedule SCR - GS-3		
	Customer Generation:		
6	• PPA Fixed Price	$60	$60
7	• PJM Market Price	$30	$75
8	• Net Loss/(Gain): (Row 6 – Row 7)	$30	($15)
9	Retail Bill on Rate Schedule SCR - GS-3	$39	$84
10	All-in Cost: (Row 8 + Row 9)	$69	$69

Notes: For illustrative purposes only, all values are hypothetical.
Assumes no price difference between generation and load, in practice there are differences due to location and time.
Assumes GS-3 fuel rate is independent of LMP, in practice they correlate over time but fuel is fixed in yearly increments.
Rate approximations are for generation components only, excludes T&D charges.

PUBLIC VERSION - EXTRAORDINARILY SENSITIVE ("ES")
INFORMATION REDACTED

Comparison of Revenue
Rate Schedule SCR - GS-3 versus Rate Schedule GS-3

To perform this study, we used several accounts with a peak demand of approximately [BEGIN ES][redacted][END ES] of the Customer's total demand across all accounts for that year. [BEGIN ES][redacted] [END ES] so we only studied accounts that had reached at least 5 MW in size, the minimum qualifying peak demand under the SCR Rate Schedules, by the beginning of each respective calendar year. As demonstrated, the MBR was lower than traditional rates in two of the four years tested, with an average difference of [BEGIN ES][redacted][END ES], and a variability ranging from [BEGIN ES][redacted][END ES] in 2012 to [BEGIN ES][redacted][END ES] in 2014. In total dollar terms, the variability in annual base rate revenue ranged from [BEGIN ES][redacted][END ES] (although it should be noted that [BEGIN ES][redacted][END ES], which occurred between those years).

[BEGIN ES]

[redacted]

[END ES]

The Company's total annualized base distribution and generation revenue (as computed in the recently filed 2015 biennial review application) was $3.2B for the Virginia jurisdiction, including approximately $309M of revenue from the GS-3 class from which these accounts were billed. Accordingly, our study indicates that for calendar year 2014, if the Customer migrated these accounts to Rate Schedule SCR - GS-3, a [BEGIN ES][redacted][END ES] in GS-3 class revenues, and a [BEGIN ES][redacted] [END ES] in Virginia jurisdictional base revenues would have occurred.

Witness Direct Testimony Summary

Witness: Michael S. Hupp, Jr.

Title: Director of Power Generation Regulated Operations

Summary:

My direct testimony discusses the technical elements of the Special Rate and Contract for Electric Service, comprised of a base contract and two companion rate schedules, designated proposed Rate Schedule SCR - GS-3 and Rate Schedule SCR - GS-4 ("SCR Rate Schedules"), for the Company's provision of electric service to Vadata, Inc. ("Vadata" or "Customer") (collectively, the "Special Rate Contract").

I describe the Company's energy desk functions relating to PJM Interconnection, L.L.C. ("PJM"), and discuss the technical elements of the Special Rate Contract that relate to PJM market and operations. Together with a margin charge, which is a $/MWh charge tied to the Customer's monthly load factor, the principal components of the SCR Rate Schedules that reflect interactions in the PJM markets are the: Generation Capacity Charge; Generation Energy Charge; PJM Ancillary Service Charge; and PJM Administrative Charge.

Finally, I address the incidental non-tariff electric market management services ("Incidental Services") relating to the Customer's wholesale activities in the PJM market that may be provided by the Company to Vadata under the Energy Management Services Agreement ("EMSA"). The Customer's affiliate is in the process of joining PJM as a market participant to engage in wholesale transactions and receive the associated PJM market-based revenues and charges. As the Customer financially integrates renewable energy and/or economic energy into its portfolio through these wholesale transactions, the separate EMSA would allow the Company to provide the Customer and/or the Customer's designated wholesale power marketer with the Incidental Services, which include: (i) wholesale energy scheduling and settlement services, (ii) other wholesale energy management services, and (iii) demand response management services. The Company will charge a scheduling and settlement fee for all energy volumes scheduled and settled with PJM for the Customer's wholesale power purchase agreements and block purchase contracts administered by the Company on the Customer's behalf through the Customer's PJM account. For other elective services that the Customer requests under the EMSA, such as the demand response management services, the Company will charge additional fees at rates mutually agreed to by the parties at or prior to the execution of such transactions.

I am also co-sponsoring the responses to Nos. 1, 2 and 4 of the Guidelines, required by 20 VAC 5-310-10, contained in Attachment A of the Company's application with Company Witness Gregory J. Morgan.

DIRECT TESTIMONY
OF
MICHAEL S. HUPP, JR.
ON BEHALF OF
VIRGINIA ELECTRIC AND POWER COMPANY
BEFORE THE
STATE CORPORATION COMMISSION OF VIRGINIA
CASE NO. PUE-2015-00103

Q. Please state your name, business address, and position of employment.

A. My name is Michael S. Hupp, Jr., and I am Director of Power Generation Regulated Operations in the Dominion Generation business segment of Virginia Electric and Power Company ("Dominion Virginia Power" or the "Company"). My business address is 5000 Dominion Boulevard, Glen Allen, Virginia 23060. A statement of my background and qualifications is attached as Appendix A.

Q. Please describe your areas of responsibility with the Company.

A. In my current position, I am responsible for overseeing the Energy Supply group which is responsible for a variety of commercial activities in support of serving the wholesale forward and daily load requirements of the Company. This includes the offering of Company-controlled generation assets into PJM Interconnection, L.L.C. ("PJM"), the forward and daily net purchase of required energy and capacity from PJM, the administration of non-utility generator contracts, and the administration of wholesale contracts in support of commercial operations for the Company.

Q. Please describe your testimony and the issues that you will address.

A. I am presenting testimony in support of the application ("Application") that Dominion Virginia Power has filed with the State Corporation Commission of Virginia ("Commission") for approval of the Special Rate and Contract for Electric Service comprised of a base contract and two companion market-based rate ("MBR") schedules, designated proposed Rate Schedule SCR - GS-3 and Rate Schedule SCR - GS-4 (collectively, the "SCR Rate Schedules"), for the Company's provision of electric service to Vadata, Inc. ("Vadata" or "Customer") pursuant to § 56-235.2 of the Code of Virginia (collectively, the "Special Rate Contract"). Company Witness Gregory J. Morgan describes the purpose, structure and terms of the Special Rate Contract generally, including the design of the MBR.

In addition to the Special Rate Contract, the Customer has requested that the Company be able to provide certain incidental non-tariff electric market management services, including wholesale energy scheduling and settlement services and other wholesale energy management services, relating to the PJM market, if so requested by Vadata, that are typically described in the electric power industry as "energy desk" functions ("Incidental Services"). The basic terms of these Incidental Services are addressed in an Energy Management Services Agreement between the Company and the Customer ("EMSA"). The Company is not proposing the EMSA as part of the Special Rate Contract, but as a stand-alone agreement for the provision of the Incidental Services. As set forth in the Company's application, the EMSA is being provided for the Commission's consideration.

My direct testimony describes the Company's energy desk functions relating to PJM, discusses the technical elements of the Special Rate Contract that relate to PJM markets and operations, and explains the Incidental Services to be provided under the EMSA.

Q. Are you sponsoring any exhibits in connection with your pre-filed direct testimony?

A. Yes. Company Exhibit No. ___, MSH, consisting of Schedule 1 and Confidential Schedule 2, was prepared under my supervision and direction, and is accurate and complete to the best of my knowledge. Schedule 1 contains the public version of the EMSA and Confidential Schedule 2 contains the confidential version of the EMSA.

Q. Are you sponsoring any of the responses to the Guidelines, required by 20 VAC 5-310-10, contained in Attachment A of the Company's application ("Guideline Responses")?

A. Yes. I am co-sponsoring Guideline Responses 1, 2 and 4 with Company Witness Morgan.

Q. Please provide an overview of the Company's energy desk functions.

A. The Company's Energy Supply group has a well-developed knowledge of the PJM market and operations resulting from working directly with the PJM market rules for energy, capacity and other PJM products. These energy desk personnel have vast operational experience in the PJM markets and have developed this specialized expertise over many years. They are responsible for a variety of PJM market function activities including: offering generation resources into the daily energy market, preparing and entering schedules for energy transactions, and arranging after-market settlement actions. The energy desk personnel develop comprehensive offer strategies in PJM markets, which requires a thorough knowledge of the market rules and offer requirements for both generation resources and demand resources.

The scheduling of energy transactions must be managed and carried out in accordance with PJM system requirements. As a result, the Company's energy desk is responsible for understanding and complying with all imposed system requirements and market rules. The energy desk also reviews PJM credits and charges for all the cleared generation and scheduled transactions, and resolves any discrepancies with PJM settlement personnel.

The energy desk manages the Company's capacity portfolio, including the development of capacity resource offer strategies to optimize the value of those capacity resources in relation to the load procurement requirement. Optimizing the capacity portfolio requires the energy desk personnel to negotiate and execute bilateral capacity sales and purchase transactions to minimize costs to service the capacity load obligation.

The Customer is interested in our specialized expertise and experience with the PJM market, rules and operations for the administration and management of its third-party wholesale power purchase agreements ("PPAs") in PJM.

I. TECHNICAL ELEMENTS OF THE SPECIAL RATE CONTRACT

Q. How will the SCR Rate Schedules work and what are their principal components?

A. Company Witness Morgan testifies that the Special Rate Contract, if approved by the Commission, will allow the Customer to migrate qualifying accounts to the applicable SCR Rate Schedule, which contains the MBR as a proxy for load service costs in the PJM wholesale market. My testimony addresses only the technical elements of those rate schedules that reflect interactions in the PJM markets and with PJM operations.

The principal components of the SCR Rate Schedules that reflect interactions in the PJM markets are:

Generation Capacity Charge – the Customer's estimated peak load will be applied to the PJM cleared capacity price for the applicable delivery zone to determine the Customer's capacity cost under the SCR Rate Schedules;

Generation Energy Charge – the Customer's hourly energy consumption will be matched to and multiplied against the respective hourly Day Ahead locational marginal price ("LMP") for the Customer's load account(s) on the SCR Rate Schedules. In the current market environment, the Day Ahead LMP would be the Dominion Zone LMP as published by PJM; and

PJM Ancillary Service Charge and PJM Administrative Charge – the Customer will also be responsible for a load weighted share of the Company's PJM ancillary service costs and administrative fees which will be determined by calculating the Dominion Load Serving Entity ("DOM LSE") total net charges in relation to total DOM LSE load which was served and applying that rate to the Customer volume for the same period.

These charges, together with a margin charge, which is a $/MWh charge tied to the Customer's monthly load factor, are more fully described in the SCR Rate Schedules.

II. THE ENERGY MANAGEMENT SERVICES AGREEMENT

Q. What is the EMSA, and what are its key terms?

A. As described in more detail by Company Witness Morgan, the Customer has announced that it has entered into wholesale PPAs to purchase renewable energy, and may execute other physical purchase contracts with the intention to resell into the PJM market as financial offsets against its retail load billing. For this purpose, the Customer's affiliate is in the process of joining PJM as a market participant to engage in wholesale transactions and receive the associated PJM market-based revenues and charges. As the Customer financially integrates renewable energy and/or economic energy into its portfolio through these wholesale transactions, the separate EMSA would allow the Company to provide the Customer and/or Customer's designated wholesale power marketer with the Incidental Services, which include: (i) wholesale energy scheduling and settlement services, (ii) other wholesale energy management services, and (iii) demand response management services.

Q. Please describe the provision of the wholesale energy scheduling and settlement services and other wholesale energy management services under the EMSA.

A. Through the EMSA and if so requested Vadata, the Company will provide daily PJM scheduling services for any wholesale energy delivered to the PJM grid on behalf of the Customer, along with associated PJM settlement services. The scheduling services under the EMSA would allow the Company to manage the Customer's PJM account to schedule associated wholesale energy on the Customer's behalf and to report settlement information to the Customer on a routine basis.

Under the EMSA, the Company may also execute, assuming mutual agreement by both parties, wholesale market transactions on behalf of Customer and at Customer's direction by entering into wholesale PPAs and/or physical forward contract(s) for energy and capacity either (i) with third parties using Dominion Virginia Power's counterparty agreements; and/or (ii) through direct wholesale purchases and/or sales between the Company and Customer. In the event that the Company were to enter into any such third party transactions on behalf of the Customer, any gains or losses associated with such transactions will be borne and realized by the Customer.

As part of these wholesale energy scheduling and settlement services, the Company will provide settlement reports to the Customer to outline the performance of the Customer's PPAs and physical purchase contracts, occurring within the Customer's PJM account, in comparison to the Customer's Dominion Virginia Power retail bill under the SCR Rate Schedules.

Q. Would you please provide more detail about the demand response management services contemplated in the EMSA?

A. PJM has a host of demand response programs available to qualifying PJM market participants. Participation in some of those programs can be complex and time consuming and, at a minimum, requires dedicated, knowledgeable resources to effectively participate. Under the EMSA, upon mutual written agreement by the parties, the Company may provide demand response portfolio management services to the Customer for an agreed upon fee at the time such service is rendered. That service may consist of some or all of the following: (i) the evaluation of Customer resources for suitability for PJM capacity and/or energy markets, (ii) registration of demand resources in the PJM capacity market, and (iii) coordination with respect to curtailment during events, testing requirements, etc.

Q. How will the EMSA's Incidental Services be billed to the Customer?

A. If the Customer elects to move a retail account to the applicable SCR Rate Schedule and then elects to receive EMSA services, the related monthly charges for the Incidental Services under the EMSA will be billed separately to the Customer in accordance with the terms of the EMSA, and will be in addition to the monthly charges under the SCR Rate Schedules applicable to Customer accounts elected to be served on either Rate

Schedule SCR - GS-3 or Rate Schedule SCR - GS-4. The Company will charge a scheduling and settlement fee for all energy volumes scheduled and settled with PJM for wholesale PPAs and block purchase contracts administered by the Company on the Customer's behalf through the Customer's PJM account. For other elective services that the Customer requests under the EMSA, such as the demand response management services, the Company will charge additional fees at rates mutually agreed to by the parties at or prior to the execution of such transactions.

Q. Does this conclude your direct testimony?

A. Yes, it does.

BACKGROUND AND QUALIFICATIONS OF MICHAEL S. HUPP, JR.

Michael S. Hupp graduated from West Virginia University in 1999 with a Bachelor of Science degree in Petroleum & Natural Gas Engineering. In 2004, he received a Master's degree in Business Administration from Virginia Commonwealth University.

Mr. Hupp has worked for Dominion for 16 years in a variety of functions including as a Petroleum Engineer in the Exploration and Production group, the Business Planning and Market Analysis ("BPMA") group within Dominion Resources Services, Inc. ("DRS"), and eventually the Pricing and Structuring ("P&S") segment of the BPMA organization. He was promoted to Director of the P&S group in 2007 which marked his first leadership role in his career.

In 2011, Mr. Hupp joined the Financial Analysis ("FA") group within DRS where he served as Director of the group. While in FA, he was responsible for overseeing the financial evaluation of a variety of investment opportunities by all segments of Dominion. His group studied the impacts of potential investment opportunities on shareholders and was responsible for the development of all financial analyses used for internal governance processes. In August of 2014, Mr. Hupp transitioned into the role of Director of Power Generation Regulated Operations where he currently serves.

Mr. Hupp has previously testified before the State Corporation Commission of Virginia.

CONFIDENTIAL IN ITS ENTIRETY

INFORMATION WITHHELD