Virginia State Corporation Commission
eFiling CASE Document Cover Sheet

Case Number (if already assigned)	PUR-2021-00281
Case Name (if known)	Petition of Virginia Electric and Power Company for revision of rate adjustment clause: Rider RGGI, pursuant to § 56-585.1 A 5 e of the Code of Virginia
Document Type	EXPE
Document Description Summary	Virginia Electric and Power Company's Rider RGGI Annual Update Filing
Total Number of Pages	147
Submission ID	23505
eFiling Date Stamp	12/6/2021 1:41:34PM

McGuireWoods LLP
Gateway Plaza
800 East Canal Street
Richmond, VA 23219-3916
Phone: 804.775.1000
Fax: 804.775.1061
www.mcguirewoods.com

Elaine S. Ryan
Direct: 804.775.1090

MCGUIREWOODS

eryan@mcguirewoods.com

December 6, 2021

BY ELECTRONIC DELIVERY

Bernard Logan, Clerk
State Corporation Commission
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Tyler Building, First Floor
1300 East Main Street
Richmond, Virginia 23219

Petition of Virginia Electric and Power Company for revision of rate adjustment clause: Rider RGGI, pursuant to § 56-585.1 A 5 e of the Code of Virginia
Case No. PUR-2021-00281

Dear Mr. Logan:

Enclosed for electronic filing in the above-captioned proceeding, please find *Virginia Electric and Power Company's Rider RGGI Annual Update Filing.*

Please do not hesitate to contact me if you have any questions in regard to this filing.

Highest regards,

/s/ Elaine S. Ryan

Elaine S. Ryan

enc.

cc: William H. Chambliss, Esq.
C. Meade Browder, Jr., Esq.
Paul E. Pfeffer, Esq.
David J. DePippo, Esq.
Timothy D. Patterson, Esq.
Dan Bumpus, Esq.

Dominion Energy®

Petition, Direct Testimony, Exhibits and Schedules of Virginia Electric and Power Company

Before the State Corporation Commission of Virginia

For revision of rate adjustment clause: Rider RGGI, pursuant to § 56-585.1 A 5 e of the Code of Virginia

Volume 1 of 1

Case No. PUR-2021-00281

Filed: December 6, 2021

Petition of Virginia Electric and Power Company
For revision of rate adjustment clause: Rider RGGI,
pursuant to § 56-585.1 A 5 e of the Code of Virginia
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COMMONWEALTH OF VIRGINIA

STATE CORPORATION COMMISSION

PETITION OF	)	
	)	
VIRGINIA ELECTRIC AND POWER COMPANY	)	
	)	Case No. PUR-2021-00281
For revision of rate adjustment clause: Rider RGGI,	)	
pursuant to § 56-585.1 A 5 e of the Code of Virginia	)	

VIRGINIA ELECTRIC AND POWER COMPANY'S
RIDER RGGI ANNUAL UPDATE FILING

Pursuant to § 56-585.1 A 5 e ("Subsection A 5 e") of the Code of Virginia ("Va. Code") and the State Corporation Commission of Virginia's ("Commission") Rules Governing Utility Rate Applications and Annual Informational Filings (the "Rate Case Rules"),[1] Virginia Electric and Power Company ("Dominion Energy Virginia" or the "Company"), by counsel, hereby submits this annual update filing with respect to its rate adjustment clause ("RAC" or "Rider"), designated Rider RGGI, approved to recover costs related to the purchase of allowances through the Regional Greenhouse Gas Initiative ("RGGI") market-based trading program for carbon dioxide ("CO_2") emissions, a program in which the Company is required to participate. In support of its petition ("Petition"), the Company respectfully shows as follows:

GENERAL INFORMATION

1. Dominion Energy Virginia 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 non-jurisdictional customers in Virginia and to the public in portions of North Carolina. The Company is engaged in the business of generating, transmitting, distributing, and selling electric power and energy to

[1] 20 VAC 5-204-10, *et seq.*

the public for compensation. The Company is also a public utility under the Federal Power Act, and certain of its operations are subject to the jurisdiction of the Federal Energy Regulatory Commission. The Company is an operating subsidiary of Dominion Energy, Inc.

2. The Company's address is:

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

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

Paul E. Pfeffer
David J. DePippo
Dominion Energy Services, Inc.
120 Tredegar Street
Richmond, Virginia 23219
(804) 787-6033 (PEP)
(804) 819-2411 (DJD)

Elaine S. Ryan
Timothy D. Patterson
Dan Bumpus
McGuireWoods LLP
Gateway Plaza
800 East Canal Street
Richmond, Virginia 23219-3916
(804) 775-1090 (ESR)
(804) 775-1069 (TDP)
(804) 775-1199 (DRB)

BACKGROUND

4. Initiated in 2009, RGGI is the first mandatory market-based program in the United States to reduce greenhouse gas emissions. RGGI is a collaborative effort among the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, Vermont, and Virginia to cap and reduce CO_2 emissions from the

power sector. CO_2 allowances are obtained by RGGI participants through quarterly, regional auctions.

5. In May 2019, the Virginia Department of Environmental Quality ("DEQ") issued a final rule establishing a state carbon regulation program linked to RGGI (the "DEQ Carbon Rule" or "Rule"). The DEQ Carbon Rule capped CO_2 emissions for Virginia at 27.1 million short tons for calendar year 2021 and decreases the emissions cap annually by approximately 3% to achieve a 30% reduction from 2020 levels to a level of 19.6 million short tons in 2030. Emission sources subject to the Rule are required to obtain and surrender a CO_2 emission allowance for every short ton of CO_2 emitted during a control period.

6. The Company owns regulated emissions sources, so it must comply with RGGI.

7. Va. Code § 56-585.1 A 5 e permits cost recovery related to compliance with RGGI and establishes the applicable standard of review:

> A utility may at any time, after the expiration or termination of capped rates, but not more than once in any 12-month period, petition the Commission for approval of one or more rate adjustment clauses for the timely and current recovery from customers of . . . [p]rojected and actual costs of projects that the Commission finds to be necessary . . . to comply with state or federal environmental laws or regulations applicable to generation facilities used to serve the utility's native load obligations, including the costs of allowances purchased through a market-based trading program for carbon dioxide emissions. The Commission shall approve such a petition if it finds that such costs are necessary to comply with such environmental laws or regulations.

8. On August 4, 2021, in Case No. PUR-2020-00169 ("2020 Rider RGGI Proceeding"), the Commission issued its Order Approving Rate Adjustment Clause ("Rider RGGI Order"), approving Rider RGGI to be effective for usage on and after September 1, 2021.[2]

[2] *Petition of Virginia Electric and Power Company For approval of a rate adjustment clause, designated Rider RGGI, under § 56-585.1 A 5 e of the Code of Virginia*, Case No PUR-2020-00169, Order Approving Rate Adjustment Clause at 11 (Aug. 4, 2021).

Subsequently, the Commission suspended the Rider RGGI Order on August 25, 2021 pending consideration of a Petition for Reconsideration or Clarification. On November 17, 2021, by its Order on Reconsideration, the Commission lifted the suspension of the Rider RGGI Order without modification of its initial order.

RIDER RGGI

9. For the period beginning September 1, 2022 and ending August 31, 2023 (the "Rate Year"), the Company estimates it will require approximately 19 million CO_2 allowances to cover CO_2 emissions from its Virginia-based generation fleet.

10. Generally, to meet its obligations under RGGI, the Company is following a programmatic approach by purchasing most of the required allowances in the RGGI quarterly auctions and using the secondary market to fill any auction deficiencies. More specifically, Dominion Energy Virginia plans to acquire approximately 25% of the forecasted annual allowance requirement in each of the quarterly auctions. If the Company fails to secure approximately 25% in an auction, the Company will look to purchase allowances in the secondary market. The Company's compliance strategy is not based on any price outlook. Instead, the Company intends to follow a programmatic, auction-based approach to compliance. The Company may adjust its compliance strategy as needed to adapt to changes in the structure of the RGGI program.

11. The Company has assumed a weighted average price of $10.53 per allowance. This assumption is based on December ICE futures contracts for 2021 and 2022 and the ICF International, Inc. forward price curve for 2023.

12. The Company's RAC revenue requirement in this proceeding includes the Projected Cost Recovery Factor and an Interim Correction Factor. It is anticipated that the

Actual Cost True-up Factor for calendar year 2021 will not be included as part of the RGGI revenue requirement until the 2022 annual update filing, since the Rider RGGI implementation was delayed due to the Petition for Reconsideration or Clarification in the 2020 Rider RGGI Proceeding. The Projected Cost Recovery Factor calculation results in the operating income necessary for recovery of amortization expense for CO_2 allowances as well as projected financing costs on the unamortized purchased CO_2 allowance balances. The Interim Correction Factor is proposed in this proceeding in an effort to minimize the impacts of carrying costs on future known under-recoveries that resulted from greater than anticipated allowance costs. The Interim Correction Factor will recover from, or credit to, any under/over collection of actual known costs and updated projected allowance usage for the months of September 1, 2020 through July 31, 2022, the end of the initial Rate Year for Rider RGGI. The actual and known costs from September 2020 through September 2021, and the updated projections from October 2021 through July 2022 are compared to the original projected and deferred amounts from the 2020 Rider RGGI filing for the same period. This difference becomes the Interim Correction Factor to be recovered from customers during the proposed September 1, 2022 through August 31, 2023 Rate Year. When the Actual Cost True-Up Factor is included, it will recover from, or credit to, customers any under- or over-recovery of costs from the most recently completed calendar year. Actual revenues recovered during the test year are compared to actual costs incurred during the test year. Any difference in these amounts becomes the Actual Cost True-Up Factor credited to, or recovered from, customers through the total revenue requirement requested for recovery during the rate year.

13. The total revenue requirement requested for recovery in this Rider RGGI Petition for the Rate Year beginning September 1, 2022, is $323,411,000.

14. For purposes of this Petition, and consistent with the Commission's November 18, 2021 Final Order in the Company's triennial review proceeding in Case No. PUR-2021-00058,[3] the Company is utilizing the approved ROE of 9.35% for the period subsequent to the date of that Final Order. For the time periods prior to the Final Order in that case, the Company is utilizing a ROE of 9.2%, as approved by the Commission in Case No. PUR-2019-00050.[4]

15. The implementation of the proposed Rider RGGI on September 1, 2022, will increase the residential customer's monthly bill, based on 1,000 kWh per month, by $1.98. Including the increase associated with this annual update, the total Rider RGGI impact on the typical bill of a residential customer is $4.37.

RGGI COMPLIANCE AND RPS DEVELOPMENT PLAN MODELING

16. In the 2020 Rider RGGI Order, the Commission directed the Company to "include in future Rider RGGI filings an analysis of how its RGGI compliance corresponds to its RPS plan filings."[5] The Company has prepared this analysis and included it as Exhibit 1 to this Petition. Exhibit 1 is sponsored by Company Witness Jeffrey D. Matzen.

SUPPORTING TESTIMONY AND FILING SCHEDULES 3, 4, 5, 8, AND 46

17. The Company's Petition is supported by the pre-filed direct testimonies of Company Witnesses George E. Hitch, Jeffrey D. Matzen, C. Alan Givens, and Paul B. Haynes.

A. Filing Schedules 3, 4, 5, and 8

18. Section 60 of the Rate Case Rules provides that rate adjustment clause

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[3] *Application of Virginia Electric and Power Company For a 2021 triennial review of the rates, terms and conditions for the provision of generation, distribution and transmission services pursuant to § 56-585.1 A of the Code of Virginia*, Case No. PUR-2021-00058, Final Order (Nov. 18, 2021).

[4] *Application of Virginia Electric and Power Company For the determination of the fair rate of return on common equity pursuant to § 56-585.1:1 C of the Code of Virginia*, Case No. PUR-2019-00050, Final Order (Nov. 21, 2019).

[5] *Petition of Virginia Electric and Power Company For approval of a rate adjustment clause, designated Rider RGGI, under § 56-585.1 A 5 e of the Code of Virginia*, Case No PUR-2020-00169, Order Approving Rate Adjustment Clause at 11 (Aug. 4, 2021).

"applications requiring an overall cost of capital shall include Schedules 3, 4, 5, and 8." The Company is filing with this Petition, Filing Schedules 3, 4, 5, and 8, as follows. These filing schedules are sponsored by Company Witness Givens.

19. Filing Schedules 3 and 3A provide the capital structure and cost of capital statements applicable to Rider RGGI. Filing Schedule 4 provides schedules of long-term debt, preferred stock, investment tax credits, and other components of ratemaking capital for the filing. Filing Schedule 5 provides the schedule of short-term debt, revolving credit agreements, and similar short-term financing arrangements. Filing Schedule 8 provides the proposed cost of capital statement for Rider RGGI.

B. Filing Schedule 46

20. Rule 60 of the Rate Case Rules provides than an application filed pursuant to Subsection A 5 "shall include Schedule 46 as identified and described in 20 VAC 5-204-90, which shall be submitted with the utility's direct testimony." The Company is filing with this Petition, Filing Schedule 46, as follows:

a. Company Witnesses Hitch and Matzen co-sponsor Schedule 46A, consisting of Statements 1 and 2. Schedule 46A, Statement 1, provides projected costs associated with Rider RGGI, while Schedule 46A, Statement 2, provides documentation supporting the projected costs.

b. Company Witness Givens sponsors Schedule 46B, consisting of Statement 1, which provides the annual revenue requirement information for the proposed rate year, Statement 2, which provides projected revenue requirement information for years 2023-2046, and Statement 3, which provides documentation to support the projected annual revenue requirements.

c. Company Witness Haynes sponsors Schedule 46C, consisting of Statements 1-2, which provide details of the Company's methodology for allocating the Rider RGGI revenue requirement.

COMPLIANCE WITH RULE 10 OF THE RATE CASE RULES

21. The Company's Petition for approval of Rider RGGI complies with the requirements contained in Rule 10 of the Rate Case Rules. In accordance with Rule 10 A, the Company filed with the Commission on October 7, 2021, the Company's notice of intent to file this Petition under Va. Code § 56-585.1 A 5. Copies of this Petition, to the extent required by Rule 10 J, along with the additional information required by Rule 10 J, have been served upon the persons addressed in that Rule. A complete copy of this Petition has been served upon the Office of the Attorney General's Division of Consumer Counsel in conformity with Rule 10 J. Also included with and following this Petition, pursuant to Rule 10, is a table of contents of this filing, including testimony and schedules.

22. Beyond the initial Petition, Rate Case Rule 10 J requires the Company to serve copies of certain information related to Dominion Energy Virginia's rate proceedings upon local officials electronically to the extent official email addresses are available, or via first class mail or personal delivery if electronic delivery is not possible. The Company will comply with this requirement in conjunction with the Commission's forthcoming procedural order.

CONCLUSION

WHEREFORE, Dominion Energy Virginia respectfully requests that the Commission (i) approve the proposed Rider RGGI under Va. Code § 56-585.1 A 5 e subject to future Rider RGGI proceedings and true-ups, effective for usage on and after September 1, 2022; (ii) approve the proposed revenue requirement, cost allocation, rate design, and accounting treatment for Rider RGGI for the Rate Year September 1, 2022 through August 31, 2023; and (iii) grant such other relief as deemed appropriate and necessary.

Respectfully submitted,

VIRGINIA ELECTRIC AND POWER COMPANY

By: _/s/ Elaine S. Ryan_
Counsel

Paul E. Pfeffer
David J. DePippo
Dominion Energy Services, Inc.
120 Tredegar Street
Richmond, Virginia 23219
(804) 787-6033 (PEP)
(804) 819-2411 (DJD)
paul.e.pfeffer@dominionenergy.com
david.j.depippo@dominionenergy.com

Elaine S. Ryan
Timothy D. Patterson
Dan Bumpus
McGuireWoods LLP
Gateway Plaza
800 East Canal Street
Richmond, Virginia 23219-3916
(804) 775-1090 (ESR)
(804) 775-1069 (TDP)
(804) 775-1199 (DRB)
eryan@mcguirewoods.com
tpatterson@mcguirewoods.com
dbumpus@mcguirewoods.com

Counsel for Virginia Electric and Power Company

December 6, 2021

Exhibit 1

Dominion Energy Virginia's RGGI Compliance and RPS Development Plan Modeling

I. Background – VCEA

The VCEA—Senate Bill No. 851 and House Bill No. 1526 from the 2020 Regular Session of the Virginia General Assembly—became law in the Commonwealth effective July 1, 2020. Relevant to this proceeding, the VCEA (i) requires the development of renewable energy generation resources; (ii) requires the development of energy storage resources; (iii) requires the submission of an annual plan to meet the development targets; and (iv) institutes a mandatory RPS Program.

Under Va. Code § 56-585.5 D 4, the Company must submit an annual plan outlining how it intends to meet the renewable energy generation and energy storage development targets. This annual filing must contain any request for approval to construct or purchase solar or onshore wind generation under Va. Code § 56-580 D, as well as any associated requests related to cost recovery of such facilities under Va. Code § 56-585.1 A 6. The Commission must determine whether such annual filings are reasonable and prudent, giving due consideration to certain factors: (i) the RPS and carbon dioxide reduction requirements in this section, (ii) the promotion of new renewable generation and energy storage resources within the Commonwealth and associated economic development, and (iii) fuel savings projected to be achieved by the plan.

II. Background – RPS Development Plan

Dominion Energy Virginia submitted its 2020 RPS Development Plan in Case No. PUR-2020-00134 on October 30, 2020. The Commission approved the 2020 RPS Development Plan as reasonable and prudent on April 30, 2021. Subsequently, Dominion Energy Virginia submitted its 2021 RPS Development Plan on September 15, 2021 in Case No. PUR-2021-00146. In that filing, the Company affirms that the 2021 RPS Plan is consistent with Alternative Plan B from the Company's 2021 update to its 2020 Integrated Resource Plan ("2021 IRP Update") filed on September 1, 2021 in Case No. PUR-2021-00201, which is described in more detail in Part IV, below. The Company further affirms that the modeling inputs and assumptions are consistent between the 2021 IRP Update and the 2021 RPS Development Plan. The 2021 RPS Development Plan will (i) support RPS Program compliance; (ii) support carbon dioxide ("CO_2") reductions in the Commonwealth; (iii) promote new renewable energy generation and energy storage resources in the Commonwealth and the associated economic development; and (iv) result in fuel savings while maintaining reliability.

III. Background – Rider RGGI

On November 9, 2020, in Case No. PUR-2020-00169, the Company filed for approval of a rate adjustment clause, designated Rider RGGI, under Va. Code § 56-585.1 A 5 e to recover projected and actual costs related to the purchase of allowances through the Regional Greenhouse Gas Initiative ("RGGI") market-based trading program for CO_2 emissions, a

program in which the Company is required to participate. In its August 4, 2021 Order Approving Rate Adjustment Clause and its November 17, 2021 Order on Reconsideration, the Commission approved Rider RGGI, finding that the Company's compliance approach is a reasonable way to manage operational facilities in the short-term and that the costs requested in that proceeding complied with the statutory standard. The Commission further directed the Company to include in future Rider RGGI filings an analysis of how its RGGI compliance corresponds to its RPS plan filings. Dominion Energy Virginia herein presents the required analysis as part of its 2021 Annual Update to Rider RGGI.

IV. Analysis

In the 2021 IRP Update, the Company presented three alternative plans ("Alternative Plans"). Alternative Plan A presents a least-cost plan that meets only applicable carbon regulations and the mandatory RPS Program requirements of the VCEA. The Company presented this Alternative Plan for cost comparison purposes only in compliance with prior Commission orders. Notably, Alternative Plan A does not meet the development targets for solar, wind, and energy storage resources in Virginia established through the VCEA. By contrast, Alternative Plan B is consistent with the 2021 RPS Development Plan.[1] Figure 1 presents the results for Alternative Plan A (*i.e.*, the "least-cost plan") and Alternative Plan B.

Figure 1: 2021 IRP Update Results for Alternative Plans A and B

	Plan A	Plan B
NPV Total ($B)	$47.8	$67.9
Approximate CO_2 Emissions from Company in 2046 (Metric Tons)	18 M	2 M
Solar (MW)	820 15-year 2,140 25-year	14,310 15-year 17,790 25-year
Wind (MW)	--- 15-year --- 25-year	5,174 15-year 5,174 25-year
Storage (MW)	--- 15-year --- 25-year	2,713 15-year 2,773 25-year
Natural Gas-Fired (MW)	970 15-year 970 25-year	--- 15-year --- 25-year
Retirements (MW)	2,567 15-year 2,567 25-year	2,561 15-year 4,792 25-year

Through PLEXOS, the Company models reliability at a system level by ensuring that sufficient resources are available to meet customer load based on the hourly profile of both load and resources. Because the Company is a member of PJM Interconnection, LLC ("PJM"), PLEXOS has the option to fill any deficits in any specific hour with market purchases. PLEXOS

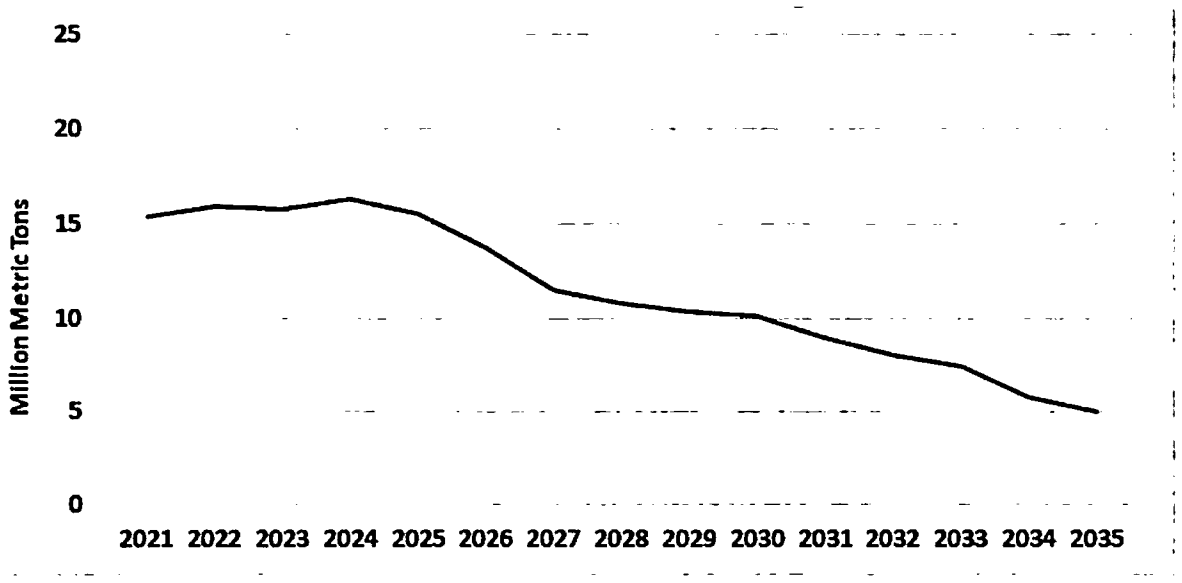
[1] Alternative Plan C uses similar assumptions as Plan B but retires all Company-owned carbon-emitting generation by the end of 2045, resulting in zero CO_2 emissions from the Company's fleet beginning in 2046.

does not currently show any reliability issues through 2035 based on the modeling completed for the 2021 RPS Plan proceeding and the 2021 IRP Update.

Importantly for future planning purposes, however, the Company must take other factors into account to ensure reliability in the long term. For example, if other states pursue the same clean energy future as the Company, resulting in significant volumes of intermittent resources with the same operational profiles as the Company's, the Company may not be able to fill any deficits in specific hours with market purchases. Separate from system level planning, planning at the more granular nodal and feeder level is also needed to ensure reliability, which is completed by the Company's transmission and distribution teams. It is at the nodal level that the system reliability and stability may become a concern based on physical transmission and distribution constraints. The Company continues to actively plan for these potential issues, and will continue to do so as the Company transitions to a cleaner fleet as envisioned by the Commonwealth, the Company, and its customers. See the Company's 2021 IRP Update for a further discussion of the Company's evaluation of seasonal concerns and a status of the Company's long-term transmission reliability analyses.

The RPS Development Plan will support CO_2 reductions in the Commonwealth through the development of a significant amount of CO_2-free generation resources that will displace both market purchases and output from other traditional Company-owned generation units that emit CO_2 as a byproduct of combustion. Figure 2 below shows the projected CO_2 output from the Company's fleet in the Commonwealth through 2035. Figure 2 reflects the RPS Development Plan, as well as the tentative retirements of certain generation units as reflected in Alternative Plan B of the Company's 2021 IRP Update.

Figure 2: Virginia CO_2 Output from Company Fleet, with RPS Development Plan



To date, the Company has followed the RPS Development Plan in developing CO_2-free generation. The Company has also retired certain generation units consistent with the RPS and IRP plans. The Company further endeavors to minimize customer cost while maintaining reliability through prudent dispatch of dispatchable units. As a member of PJM, the Company offers units for dispatch with accurate cost estimates that include RGGI compliance costs. The PJM market clearing process dispatches the fleet economically. In following the RPS Development Plan and including RGGI costs in dispatch decisions, the Company's RGGI compliance corresponds to its RPS plan filings.

For forward RGGI allowance requirements, the Company projects CO_2 emissions by modeling the system dispatch using assumptions that are consistent with both the 2021 IRP Update (Alternative Plan B) and the 2021 RPS Development Plan. The modeling assumes a capacity factor for existing and future solar resources of 21.2%, which is the three-year average of the Company's solar tracking facilities in Virginia. The RGGI modeling was completed using an updated load forecast and an updated commodity price forecast. The Company uses PLEXOS to model the dispatch of the fleet in the PJM energy market. The dispatch of the fleet produces the system's CO_2 emissions. The PLEXOS dispatch logic includes RGGI compliance costs in the same manner that it includes fuel costs. Therefore, a Company-owned fossil unit operates when the compliance cost of RGGI plus other variable costs like fuel are less than the cost of a market power purchase. In following the RPS Development Plan and including RGGI costs in dispatch decisions, the Company's RGGI compliance cost modeling corresponds to its RPS plan filings.

WITNESS DIRECT TESTIMONY SUMMARY

Witness: George E. Hitch

Title: Senior Market Originator

Summary:

Company Witness George E. Hitch provides a general overview of the Regional Greenhouse Gas Initiative ("RGGI") and describes the mechanics of the RGGI auctions. Mr. Hitch also explains how the Company plans to meet its obligations under RGGI, and will describe the Company's participation in these markets to date.

Mr. Hitch explains that RGGI is the first mandatory market-based program in the United States to reduce greenhouse gas emissions. CO_2 allowances are obtained by RGGI participants through quarterly, regional auctions or through secondary markets. The Virginia Department of Environmental Quality ("DEQ")'s Carbon Rule ("DEQ Carbon Rule") caps CO_2 emissions for Virginia at 27.1 million short tons for calendar year 2021, and decreases the emissions cap annually by approximately 3% to achieve a 30% reduction from 2020 levels to a level of 19.6 million short tons in 2030. The Company owns regulated emissions sources, so must comply with RGGI.

Regulated emissions sources must acquire CO_2 allowances equal to their CO_2 emissions over each three-year RGGI control period. Each allowance represents a limited authorization to emit one short ton of CO_2 from a regulated source. RGGI has had four three-year control periods since it began in 2009. The fifth control period started on January 1, 2021 and ends December 31, 2023. In addition to the three-year control period requirements, RGGI has interim control periods that require regulated sources to hold a minimum of 50% of their allowances by the end of each of the first two calendar years of the control period. Regulated sources demonstrate compliance by holding sufficient allowances in each source compliance account.

To meet its obligations under RGGI, the Company follows a programmatic approach by purchasing most of the required allowances in the quarterly auctions and using the secondary market to fill any auction deficiencies. More specifically, Dominion Energy Virginia plans to acquire approximately 25% of the forecasted annual allowance requirement in each of the quarterly auctions. If the Company fails to secure approximately 25% in an auction, the Company will look to purchase allowances in the secondary market. Rather than purchasing excess RGGI allowances and building a bank of excess allowances, the Company has been acquiring allowances to cover emissions that have already occurred.

Mr. Hitch supports the weighted average price assumption of $10.53 per CO_2 allowance. This assumption is based on the December ICE futures contracts for 2021 and 2022 and the ICF International, Inc. forward price curve for 2023.

DIRECT TESTIMONY
OF
GEORGE E. HITCH
ON BEHALF OF
VIRGINIA ELECTRIC AND POWER COMPANY
BEFORE THE
STATE CORPORATION COMMISSION OF VIRGINIA
CASE NO. PUR-2021-00281

Q. Please state your name, business address, and position with Virginia Electric and Power Company ("Dominion Energy Virginia" or the "Company").

A. My name is George E. Hitch, and I am a Senior Market Originator for the Company. My business address is 600 East Canal Street, Richmond, Virginia 23219. 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 part of the team that is responsible for managing the Company's short-term compliance with the Regional Greenhouse Gas Initiative ("RGGI") and the mandatory renewable energy portfolio standard program from a market procurement perspective. I also am responsible for management of the Company's power, capacity, renewable energy certificate ("REC"), and emissions portfolios.

Q. What is the purpose of your testimony in this proceeding?

A. I am testifying in support of the Company's petition for approval of the 2021 Annual Update to its rate adjustment clause ("RAC"), designated Rider RGGI, under § 56-585.1 A 5 e of the Code of Virginia ("Va. Code") to recover projected and actual costs related to the purchase of allowances through the RGGI market-based trading program for carbon dioxide ("CO_2") emissions. I will provide a general overview of RGGI and describe the mechanics of the RGGI auctions. I will also explain how the Company plans

to meet its obligations under RGGI, and will describe the Company's participation in these markets to date.

Q. Are you sponsoring an exhibit in this proceeding?

A. Yes. Although there are no schedules attached to my testimony, I am co-sponsoring Filing Schedule 46A with Company Witness Jeffrey D. Matzen, which provides information required by Rules 60 and 90 of the Commission's Rules Governing Utility Rate Applications and Annual Informational Filings. This schedule was prepared under my direction and supervision, and is accurate and complete to the best of my knowledge and belief.

Q. Please provide background on RGGI.

A. Initiated in 2009, RGGI is the first mandatory market-based program in the United States to reduce greenhouse gas emissions. RGGI is a collaborative effort among the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, Vermont, and Virginia to cap and reduce CO_2 emissions from the power sector. CO_2 allowances are created and sold by RGGI member states in quarterly auctions. In most RGGI states, auction revenue is returned to state coffers. Virginia joined RGGI in 2021. Pennsylvania is expected to join RGGI in 2022 or 2023.

Q. What does the DEQ Carbon Rule require in terms of reduced emissions?

A. In May 2019, the Virginia Department of Environmental Quality ("DEQ") issued a final rule establishing a state carbon regulation program linked to RGGI (the "DEQ Carbon Rule"). The DEQ Carbon Rule capped CO_2 emissions for Virginia at 27.1 million short tons for calendar year 2021 and decreases the emissions cap annually by approximately

3% to achieve a 30% reduction from 2020 levels to a level of 19.6 million short tons in 2030. Emission sources subject to the Rule are required to obtain and surrender a CO_2 emission allowance for every short ton of CO_2 emitted during a control period.

Q. Is the Company required to comply with the DEQ Carbon Rule?

A. Yes. The Company owns regulated emissions sources, so it must comply with RGGI.

Q. How is compliance demonstrated under RGGI?

A. Regulated emissions sources must acquire CO_2 allowances equal to their CO_2 emissions over each three-year RGGI control period. Each allowance represents a limited authorization to emit one short ton of CO_2 from a regulated source. These regulated sources can use CO_2 allowances issued by any participating RGGI state during the current year, or any future year.

RGGI has had four three-year control periods since it began in 2009. The fifth control period began on January 1, 2021 and ends December 31, 2023. In addition to the three-year control period requirements, RGGI has interim control periods that require regulated sources to hold a minimum of 50% of their allowances by the end of each of the first two calendar years of the control period. Regulated sources demonstrate compliance by holding sufficient allowances in each source compliance account.

Q. How do regulated sources acquire CO_2 allowances?

A. Regulated sources acquire CO_2 allowances by purchasing them in the quarterly auctions or through secondary markets. CO_2 allowances purchased by the winning bidders in the quarterly auctions and CO_2 allowances traded in the secondary market are tracked and recorded in the RGGI CO_2 Allowance Tracking System ("COATS"). RGGI allowances

currently do not have any limitations on banking. Potomac Economics serves as the independent market monitor for RGGI. The market monitor covers both the auctions and the secondary market, and publishes quarterly reports analyzing each RGGI auction and activity in the CO_2 allowance secondary market.

Q. Please explain how the RGGI quarterly auctions work.

A. The RGGI member states use an online platform to sell CO_2 allowances in quarterly auctions. The RGGI member states are the only market participants permitted to sell allowances in these auctions. The auctions are conducted in accordance with the statutory and/or regulatory authority of each state offering CO_2 allowances for sale in the auctions.

The quarterly auctions are open to any interested bidder that meets the financial qualifications. Auction bidders must provide, prior to the auction, sufficient collateral to fully cover all their bidding activity. Each auction clearing price is determined by ordering the bids by dollar value highest to lowest, and then allocating allowances to the bids in descending dollar value until all the allowances have been allocated. The marginal bid—or the lowest bid to receive allowances—then becomes the auction clearing price. All winning bidders pay the auction clearing price for every CO_2 allowance allocated to them.

Q. Please describe the secondary market for RGGI CO_2 allowances.

A. The secondary market allows market participants to buy and sell physical allowances outside of the quarterly auctions, facilitates price discovery in between quarterly auctions,

and provides tools to manage price risk and volatility. The secondary market includes the trading of physical allowances and financial products.

A physical CO_2 allowance trade occurs when a buyer and seller agree to specific commercial terms such as price, volume, and vintage, and then register the transfer of allowance ownership in RGGI COATS.

Financial products include any contracts whereby the buyer and seller agree to exchange funds and/or allowances at some future date under specific conditions. Many financial products are designed to, and eventually result in, the transfer of physical CO_2 allowances in COATS. Depending on the product and the agreed-to commercial terms, this transfer may occur months or even years after the financial transaction was executed by the buyer and seller. The most commonly traded financial products are forward contracts ("forwards") and futures contracts. In forward contracts, which typically are traded in the over the counter ("OTC") market, parties agree to exchange allowances at a set price and quantity at some future date. Forwards are non-standard contracts transacted outside of an exchange. Futures contracts are standardized, exchange-traded contracts. One futures contract equals 1,000 CO_2 allowances. All allowances, regardless of product, must be transferred from seller to buyer in the COATS registry.

Q. Please describe the historical pricing and volumes that have cleared in the RGGI auctions since 2015.

A. Figure 1 shows the RGGI quarterly auction volume that has cleared through September 2021. Note that the March 2021 auction shows the introduction of Virginia volumes into the quarterly auction for the first time.

Figure 1: RGGI Quarterly Auction Volume (Mar. 2015 to Sept. 2021)

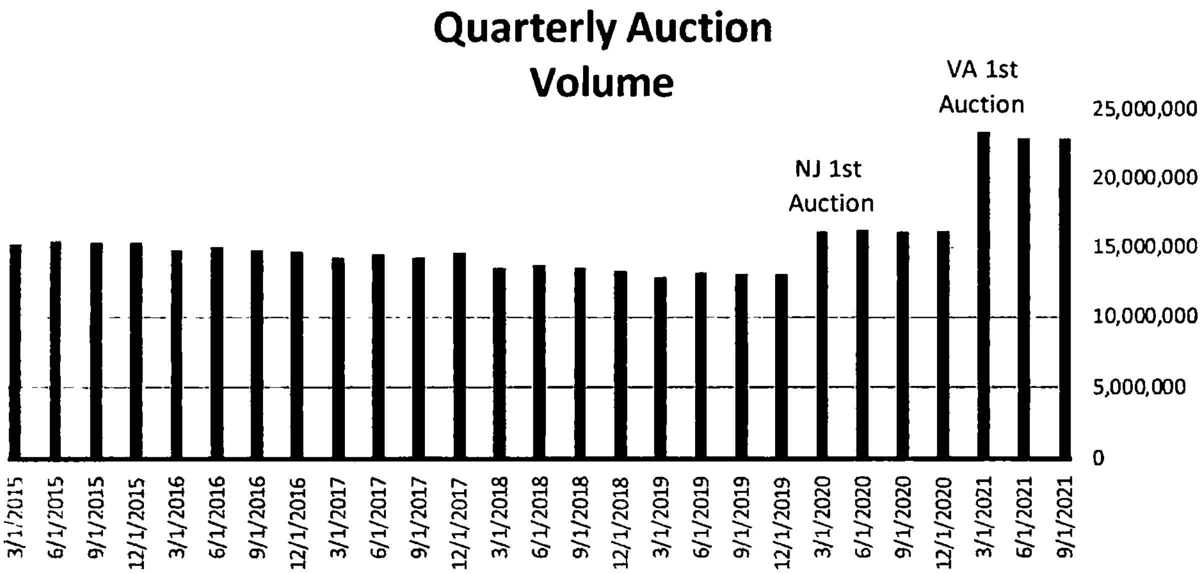
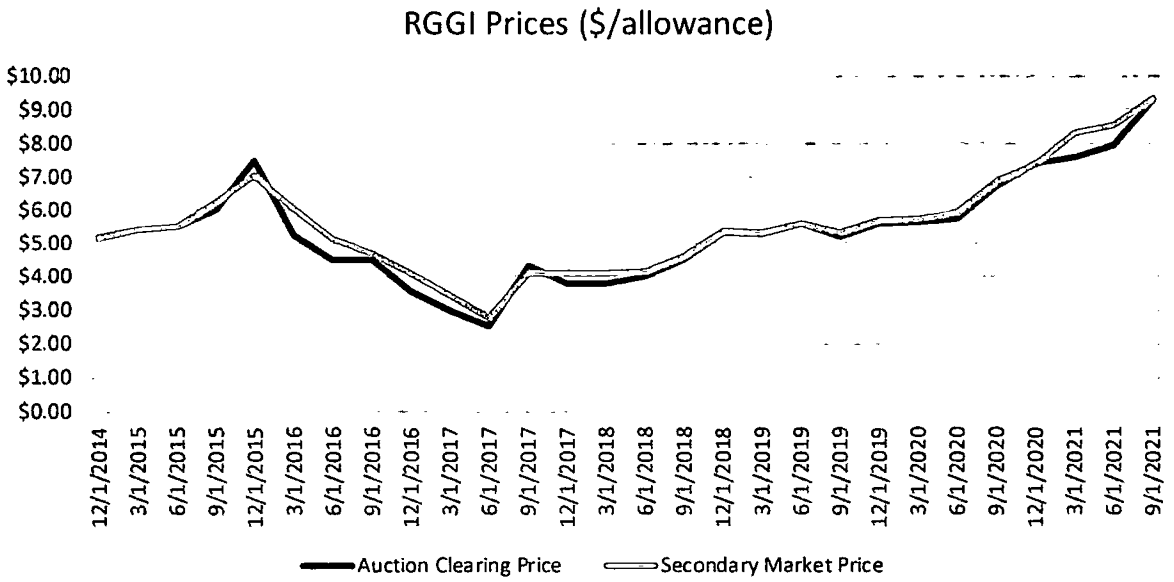


Figure 2 shows the historical prices of RGGI allowances that have cleared through the quarterly auctions as well as the secondary markets. Allowance prices have ranged from \$2.53/short ton to \$9.30/short ton in the RGGI auctions during this timeframe. Allowance prices have been steadily increasing since 2018, and set new record highs in 2021 due to several factors: increased generation from emitting sources, increased participation in the RGGI markets by financial players and speculators, potential for new member states, and the RGGI Third Program Review in 2022. The RGGI Program Review, which occurs every five years, provides, in part, for re-evaluation of the RGGI Model Rule, which is the set of requirements and parameters that form the basis for the program.

Figure 2: RGGI Auction Clearing and Secondary Market Prices (Mar. 2015 to Sept. 2021)



Q. How many CO_2 allowances does the Company expect to need to comply with the RGGI requirements in 2022 and 2023?

A. The Company will require approximately 55,300,000 allowances by the end of the fifth control period on December 31, 2023. In addition to the fifth control period requirement, the Company must comply with RGGI interim control period requirements. The interim control periods are comprised of each of the first two calendar years of the control period. The Company must hold a quantity of allowances not less than the total CO_2 emissions for the interim control period multiplied by 0.50. The first interim control period started on January 1, 2021 and ends on December 31, 2021. The Company currently has sufficient allowances in its COATS account to meet the first interim control period requirement. The second interim control period starts on January 1, 2022 and ends on December 31, 2022. Based on actual emissions in 2021 and projected future emissions,

the Company will need to hold at least 18,300,000 allowances by December 31, 2022 to meet the second interim control period requirement.

Q. Generally, how is the Company planning to meet its obligations under RGGI?

A. In general, the Company is following a programmatic approach by purchasing most of the required allowances in the quarterly auctions and using the secondary market to fill any auction deficiencies. More specifically, Dominion Energy Virginia plans to acquire approximately 25% of the forecasted annual allowance requirement in each of the quarterly auctions. If the Company fails to secure approximately 25% in an auction, the Company will look to purchase allowances in the secondary market.

The Company's compliance strategy is not based on any price outlook. Instead, the Company intends to follow a programmatic, auction-based approach to compliance. Although this approach is unchanged from 2020, the Company may adjust its compliance strategy as needed to adapt to changes in the structure of the RGGI program.

Q. Is the Company buying excess RGGI allowances and building a large inventory or bank?

A. No. The Company must hold one allowance for every short ton of CO_2 emitted by a regulated generation source. In the short term, RGGI compliance is based on the Company's existing generation fleet. This is because the actual number of allowances the Company must obtain to comply with RGGI is determined by the actual emissions of CO_2 from the Company's RGGI generators. If a RGGI generator clears the PJM day ahead market or is dispatched by PJM, the unit is required by PJM market rules to run. If a regulated generation source runs, it will emit CO_2. The Company must acquire

allowances to cover the CO_2 emissions of these generators. As Table 1 below illustrates, rather than building a bank of excess allowances, the Company has been acquiring allowances to cover emissions that have already occurred.

Table 1: RGGI Net Allowance Position

Net Allowance Position												
(thousands of short tons)	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21
CO_2 Emissions	1,528	2,027	1,597	1,128	1,015	1,670	2,488	2,294	1,384	1,145	968	1,647
Cumulative Requirement	1,528	3,555	5,152	6,280	7,295	8,965	11,453	13,747	15,131	16,276	17,244	18,891
Inventory	1,300	1,300	1,300	5,375	6,125	6,125	11,000	11,000	11,000	15,500	15,500	15,500
Auction Purchases	0	0	4,075	0	0	4,125	0	0	3,750	0	0	4,250
Bilateral Purchases	0	0	0	750	0	750	0	0	750	0	0	0
Planned Purchases	0	0	0	0	0	0	0	0	0	0	0	750
Net Position	(228)	(2,255)	223	(155)	(1,170)	2,035	(453)	(2,747)	369	(776)	(1,744)	1,609

Notes: 1) CO2 emissions volumes are actuals through October 2021, and forecasts for the balance of the calendar year. 2) If Rider RGGI is approved, these actual volumes will be accounted for through the true-up in next year's Rider RGGI.

Q. To date, how many CO_2 allowances has the Company procured to meet its obligations and what price did the Company pay for these allowances?

A. As of November 19, 2021, the Company has purchased 15,500,000 allowances at a weighted average price of $8.15 per allowance.

Q. What are the penalties for RGGI generators that do not have sufficient allowances to cover their CO_2 emissions?

A. During the three-year control period, if the CO_2 emissions from a RGGI generator exceed the number of allowances surrendered for the control period, the generator must surrender additional allowances for three times the number of excess emissions.

Q. What price for CO_2 allowances has the Company used to calculate the revenue requirement in this proceeding?

A. The Company has assumed a weighted average price of $10.53 per allowance. This assumption is based on the December ICE futures contracts for 2021 and 2022 and the ICF International, Inc. forward price curve for 2023, as supported by Company Witness Matzen. As discussed further by Company Witness C. Alan Givens, the revenue requirement will be trued up in future Rider RGGI proceedings based on actual prices paid for CO_2 allowances.

Q. Does this conclude your pre-filed direct testimony?

A. Yes, it does.

BACKGROUND AND QUALIFICATIONS
OF
GEORGE E. HITCH

George Hitch joined Dominion Energy in 2002 as an Hourly Trader. Since then he has also held the roles of Coordinator Hourly Trading and Generation Asset Trader at both the regulated utilities and Dominion Energy Marketing. In these roles, he has traded physical and financial power, capacity, RECs, and emissions in the spot and forward markets.

Mr. Hitch assumed his current role of Senior Market Originator in November 2016. In this role, he is part of the group responsible for managing the Company's regulated capacity, energy, emissions, and REC portfolios. His group is also responsible for developing and executing short-term compliance strategies for the renewable energy portfolio standards in both Virginia and North Carolina, and for the Regional Greenhouse Gas Initiative.

Mr. Hitch has a Bachelor of Science degree from Virginia Tech. He has previously presented testimony before the North Carolina Utility Commission and the Virginia State Corporation Commission.

WITNESS DIRECT TESTIMONY SUMMARY

Witness: Jeffrey D. Matzen

Title: Manager – Integrated Strategic Planning

Summary:

Company Witness Jeffrey D. Matzen provides the forecast of CO_2 emissions from the Company's generation facilities used to determine the projected volume of CO_2 allowances needed to meet the Company's obligations under the Regional Greenhouse Gas Initiative ("RGGI"). Mr. Matzen states that the Company used PLEXOS modeling software to simulate the economic dispatch of the Company's generating units to meet projected load requirements. The projected CO_2 emission production was then pulled for each Company-owned CO_2-emitting resource located in Virginia. Mr. Matzen estimates that the Company will require approximately 19,000,000 CO_2 allowances during the rate year of September 1, 2022 through August 31, 2023 to cover CO_2 emissions from its Virginia-based generation fleet.

DIRECT TESTIMONY
OF
JEFFREY D. MATZEN
ON BEHALF OF
VIRGINIA ELECTRIC AND POWER COMPANY
BEFORE THE
STATE CORPORATION COMMISSION OF VIRGINIA
CASE NO. PUR-2021-00281

Q. Please state your name, business address, and position with Virginia Electric and Power Company ("Dominion Energy Virginia" or the "Company").

A. My name is Jeffrey D. Matzen and I am Manager of Integrated Strategic Planning. My business address is 600 East Canal Street, Richmond, Virginia 23219. A statement of my background and qualifications is attached as Appendix A.

Q. Mr. Matzen, what is the purpose of your testimony in this proceeding?

A. I am testifying in support of the Company's petition for approval of the 2021 Annual Update to its rate adjustment clause ("RAC"), designated Rider RGGI, under § 56-585.1 A 5 e of the Code of Virginia ("Va. Code") to recover projected and actual costs related to the purchase of allowances through the Regional Greenhouse Gas Initiative ("RGGI") market-based trading program for carbon dioxide ("CO_2") emissions. Specifically, I support the forecast of CO_2 emissions from the Company's generation facilities and the forecasted price of CO_2 allowances.

Q. During the course of your testimony, will you introduce an exhibit?

A. Yes. Company Exhibit No. __, JDM, consisting of Schedule 1, was prepared under my supervision and direction, and is accurate and complete to the best of my knowledge and belief. I am also co-sponsoring Filing Schedule 46A, with Company Witness George E. Hitch, which provides information required by Rules 60 and 90 of the Commission's

Rules Governing Utility Rate Applications and Annual Informational Filings. In addition, I sponsor Exhibit 1 to the Application, which presents an analysis of how the Company's RGGI compliance corresponds to its RPS plan filings as directed by the Commission's August 4, 2021 Order Approving Rate Adjustment Clause and November 17, 2021 Order on Reconsideration in Case No. PUR-2020-00169.

Q. How did the Company determine the projected volume of CO_2 allowances needed to meet its obligation under RGGI?

A. PLEXOS modeling software was used to simulate the economic dispatch of the Company's generating units to meet projected load requirements. The projected CO_2 emission production was then pulled for each Company-owned CO_2-emitting resource located in Virginia. The Company did not include CO_2 emissions from its units in West Virginia (*i.e.*, Mt. Storm) or North Carolina (*i.e.*, Rosemary). As explained by Company Witness George E. Hitch, the Company must obtain and surrender one CO_2 allowance for every short ton of CO_2 emitted from Virginia regulated sources. During the three-year control period, if the CO_2 emissions from a generator subject to RGGI exceeds the number of allowances surrendered for the control period, the generator must surrender additional allowances for three times the number of excess emissions.

Q. What is the projected volume of CO_2 allowances that the Company expects to require through the end of the rate year in this proceeding—August 31, 2023?

A. For the rate year September 1, 2022 through August 31, 2023, the Company expects to need approximately 19 million CO_2 allowances. My Schedule 1 details the projected Virginia-based CO_2 emissions by month for October 2021 through December 2023.

Q. Did Virginia joining RGGI affect the dispatch of the Company's generation units?

A. Yes, it did. Regulated sources (*i.e.*, the Company's carbon-emitting generating units that are subject to RGGI) must purchase a CO_2 allowance for every CO_2 short ton emitted during a specific compliance period. Therefore, a CO_2 cost is added to Virginia regulated fossil units in both the PJM Interconnection, LLC bids and the PLEXOS forecasting model. All else equal, adding the cost of CO_2 allowances to carbon-emitting generating units that are subject to RGGI results in those units dispatching less.

Q. How did the Company forecast the price of CO_2 allowances?

A. My Schedule 1 shows the projected CO_2 allowance prices used in PLEXOS. The Company relies on ICF International, Inc. ("ICF") to provide an independent forecast of commodity prices. Historically, the Company has developed allowance prices using 18 months of forward market prices, 18 months of blended prices (blend of market and ICF prices), and then ICF prices exclusively starting in month 37 of the forecast period. For Schedule 1 specifically, the Company used 18 months of forward market prices and 9 months of blended prices. For calendar year 2023, the average blend was 80% market price and 20% ICF price, resulting in an average rate of $9.80 per allowance. The Company assumed a simple average price of $10.52 (weighted by volume, $10.53) per allowance for the period of October 2021 through December 2023, as shown in Schedule 1.

Q. Does this conclude your pre-filed direct testimony?

A. Yes, it does.

APPENDIX A

BACKGROUND AND QUALIFICATIONS
OF
JEFFREY D. MATZEN

Jeffrey D. Matzen graduated from Virginia Tech in 1996 with a Bachelor of Arts degree in Economics. In 2001, he earned Master of Business Administration and Master of Public Policy degrees from the College of William and Mary. He joined the Company in 2007 as an Electric Pricing and Structuring Analyst. He has since held positions at the Company as an Energy Consulting Manager for Retail, a Business Modeling & Support Consultant for Alternative Energy Solutions, and a Market Operations Advisor for Energy Supply. In January 2020, Mr. Matzen was promoted to Manager of Generation System Planning, where he is currently responsible for the Company's short-term operational forecast (PLEXOS model). Prior to joining Dominion, Mr. Matzen worked for Wells Fargo Advisors as an analyst and the Virginia Department of Taxation as an economist.

CO_2 Volume and Price Forecast

(Tons CO_2 and Allowance Prices from Oct. 2021 PLEXOS Outlook)

Short Term RGGI Case

	Tons CO_2	Allowance Price
Oct-21	981,203	10.96
Nov-21	968,261	10.96
Dec-21	1,647,496	10.96
Jan-22	2,497,762	11.13
Feb-22	2,422,456	11.13
Mar-22	1,518,382	11.13
Apr-22	878,193	11.13
May-22	1,215,478	11.13
Jun-22	1,611,812	11.13
Jul-22	2,199,823	11.13
Aug-22	2,041,623	11.13
Sep-22	1,431,277	11.13
Oct-22	1,044,565	11.13
Nov-22	1,348,580	11.13
Dec-22	1,586,382	11.13
Jan-23	2,051,476	9.8
Feb-23	1,984,757	9.8
Mar-23	1,489,673	9.8
Apr-23	1,022,360	9.8
May-23	1,086,935	9.8
Jun-23	1,648,052	9.8
Jul-23	2,089,410	9.8
Aug-23	2,010,167	9.8
Sep-23	1,474,620	9.8
Oct-23	1,009,747	9.8
Nov-23	1,273,799	9.8
Dec-23	1,534,842	9.8

WITNESS DIRECT TESTIMONY SUMMARY

Witness: C. Alan Givens

Title: Regulatory Consultant – Regulatory Accounting

Summary:

Company Witness C. Alan Givens provides the calculation of the revenue requirement associated with Rider RGGI for the rate year of September 1, 2022 through August 31, 2023 ("Rate Year"). The Company is requesting a total revenue requirement of $323,411,000 for the Rate Year.

Mr. Givens explains that the Company's RAC revenue requirement in this proceeding includes the Projected Cost Recovery Factor and an Interim Correction Factor. The Projected Cost Recovery Factor calculation results in the operating income necessary for recovery of amortization expense for CO_2 allowances as well as projected financing costs on the unamortized purchased CO_2 allowance balances. The Interim Correction Factor will recover from, or credit to, any under/over collection of actual known costs and updated projected allowance usage for the months of September 1, 2020 through July 31, 2022, the end of the initial rate year for Rider RGGI. The actual and known costs from September 2020 through September 2021, and the updated projections from October 2021 through July 2022 are compared to the original projected and deferred amounts from the 2020 Rider RGGI Proceeding for the period. The difference becomes the Interim Correction Factor to be recovered from customers during the proposed Rate Year in this proceeding.

Because the initial rate year for the previous Rider RGGI filing was to be implemented August 1, 2021, it is anticipated that the Actual Cost True-up Factor for calendar year 2021 will not be included as part of the Rider RGGI revenue requirement until the 2022 annual update filing, for implementation during the September 1, 2023 through August 31, 2024 rate year. At that time, and for years beyond, the Actual Cost True-up Factor will recover from, or credit to, customers any under- or over-recovery of costs from the most recently completed calendar year. Actual revenues recovered during the test year are compared to actual costs incurred during the test year. Any difference in these amounts becomes the Actual Cost True-up Factor credited to, or recovered from, customers through the total revenue requirement requested for recovery during the rate year.

DIRECT TESTIMONY
OF
C. ALAN GIVENS
ON BEHALF OF
VIRGINIA ELECTRIC AND POWER COMPANY
BEFORE THE
STATE CORPORATION COMMISSION OF VIRGINIA
CASE NO. PUR-2021-00281

Q. Please state your name, business address, and position with Virginia Electric and Power Company ("Dominion Energy Virginia" or the "Company").

A. My name is C. Alan Givens, and my business address is 120 Tredegar Street, Richmond, Virginia 23219. I am a Regulatory Consultant in the Regulatory Accounting Department at Dominion Energy Virginia. A statement of my background and qualifications is attached as Appendix A.

Q. What is the purpose of your testimony in this proceeding?

A. I am testifying in support of the Company's petition for approval of the 2021 Annual Update to its rate adjustment clause ("RAC"), designated Rider RGGI, under § 56-585.1 A 5 e of the Code of Virginia ("Va. Code") to recover projected and actual costs related to the purchase of allowances through the RGGI market-based trading program for carbon dioxide ("CO_2") emissions. Specifically, I will address the development of the revenue requirement associated with Rider RGGI for the rate year of September 1, 2022 through August 31, 2023 ("Rate Year").

Q. Are you sponsoring an exhibit in this proceeding?

A. Yes. Company Exhibit No. __, CAG, consisting of Schedule 1, was prepared under my supervision and direction, and is accurate and complete to the best of my knowledge and belief. I am also sponsoring Filing Schedules 3-5 and Filing Schedule 8, which

provide information regarding the Company's cost of capital, as required by Rules 60 and 90 of the Commission's Rules Governing Utility Rate Applications and Annual Informational Filings. Additionally, I am sponsoring Filing Schedule 46B, consisting of Statement 1, which provides the annual revenue requirement information for the proposed rate year, Statement 2, which provides projected revenue requirement information for years 2023-2046, and Statement 3, which provides documentation to support the projected annual revenue requirements, as required by the Commission's Rules Governing Utility Rate Applications and Annual Informational Filings.

Q. Before discussing the revenue requirement, will you give a brief overview of the accounting treatment for RGGI allowances?

A. As noted in the Company's initial Rider RGGI proceeding, Case No. PUR-2020-00169 ("2020 Rider RGGI Proceeding"), purchased CO_2 allowances will be tracked in the aggregate as an intangible asset. As CO_2 emissions are produced each month, this intangible asset will be amortized based on the then-present weighted average cost per allowance. Based on the timing of allowance auctions and purchase dates, the Company generally expects to carry an intangible asset representing aggregated purchased but unamortized RGGI CO_2 allowances.

Q. What rate of return on common equity ("ROE") is the Company utilizing in this proceeding?

A. For purposes of this Petition and consistent with the Commission's November 18, 2021 Final Order in the Company's triennial review proceeding in Case No. PUR-2021-00058, the Company is utilizing the approved ROE of 9.35% for the period subsequent to the date of that Final Order. In addition, the capital structure used in the calculation of the

revenue requirement reflects the methodology proposed by Staff and approved by the Commission in that Final Order. For the time periods prior to the Final Order in Case No. PUR-2021-00058, the Company is utilizing a ROE of 9.2%, as approved by the Commission in its Final Order on November 2, 2019 in the Company's 2019 ROE Proceeding, Case No. PUR-2019-00050.

Q. Are the Company's revenue requirement calculations presented in this 2021 Annual Update consistent with the Final Order and Order on Reconsideration in the 2020 Rider RGGI Proceeding?

A. There are a couple of changes the Company is proposing in this 2021 Annual Update filing. First, as discussed in more detail in the pre-filed direct testimony of Company Witness Paul B. Haynes, the Company is utilizing a monthly Virginia jurisdictional allocation factor to calculate the revenue requirement in my Schedule 1.

In addition, similar to the interim true-up correction utilized in the Company's Rider B filing, Case No. PUR-2021-00111, the Company is proposing an interim correction factor ("Interim Correction Factor") to projected allowances from the previous filing with updated actual and projected amounts to be recovered over the September 1, 2022 through August 31, 2023 Rate Year. The Interim Correction Factor is being proposed by the Company in an effort to minimize the impacts of carrying costs on future known under-recoveries that resulted from greater than anticipated allowance costs.

As noted below, the first Actual Cost True-up Factor for calendar year 2021 (August through December) will not be included in a revenue requirement until the Company's 2022 annual update filing, and therefore will not be recovered or returned to customers

until the September 1, 2023 through August 31, 2024 rate year. This interim correction is being proposed now to address significant known under-recoveries that resulted from higher than anticipated allowance prices and CO_2 emission tons. In addition, as a result of the Commission's Order on Reconsideration in the 2020 Rider RGGI Proceeding, the Company will not be recovering any revenues from customers until January 2022 for the approved revenue requirement amount which should have started in August 2021. Including this Interim Correction Factor effectively advances the true-up of those original projections by at least twelve months and up to twenty-four months, which significantly reduces financing costs to customers on under-recoveries over a reduced recovery period.

Q. What are the key components of the revenue requirement in this proceeding?

A. The three key components of the revenue requirement will be the Projected Cost Recovery Factor, the Interim Correction Factor, and eventually the Actual Cost True-up Factor. The Company's RAC revenue requirement in this proceeding includes only the Projected Cost Recovery Factor and the proposed Interim Correction Factor. As noted earlier, the initial rate year for the previous Rider RGGI filing was to be implemented August 1, 2021. It is anticipated that the Actual Cost True-up Factor for calendar year 2021 will not be included as part of the RGGI revenue requirement until the 2022 annual update filing, for implementation during the September 1, 2023 through August 31, 2024 rate year.

The Projected Cost Recovery Factor calculation results in the operating income necessary for recovery of amortization expense for CO_2 allowances as well as projected financing costs on the unamortized purchased CO_2 allowance balances.

The Interim Correction Factor calculation will recover from, or credit to, any under/over collection of actual known costs and updated projected allowance usage for the months of September 1, 2020 through July 31, 2022, the end of the initial Rate Year for Rider RGGI. The actual and known costs from September 2020 through September 2021, and the updated projections from October 2021 through July 2022 are compared to the original projected and deferred amounts from the 2020 Rider RGGI filing for the same period. This difference becomes the Interim Correction Factor to be recovered from customers during the proposed September 1, 2022 through August 31, 2023 Rate Year.

The Actual Cost True-Up Factor will recover from, or credit to, customers any under-/ or over-recovery of costs from the most recently completed calendar year. Actual revenues recovered during the test year are compared to actual costs incurred during the test year. Any difference in these amounts becomes the Actual Cost True-Up Factor credited to, or recovered from, customers through the total revenue requirement requested for recovery during the Rate Year.

This request utilizes the end-of-test period capital structure and cost of capital pursuant to Va. Code § 56-585.1 A 10 and is consistent with the Commission's Order on Commission Staff's Motion in Limine dated July 14, 2009 in Case No. PUE-2009-00019. For purposes of setting rates during the Rate Year, the end-of-test-period capital structure and cost of capital ("Cost of Capital") is the Company's actual December 31, 2020 year-end capital structure and year-end Cost of Capital. The 2020 year-end capital structure and year-end Cost of Capital is consistent with the Staff's proposed methodology and the Commission's September 4, 2020 Final Order in the Company's 2020 Environmental Rider ("Rider E") in Case No. PUR-2020-00003.

Q. Please describe the current Projected Cost Recovery Factor presented in this filing.

A. The revenue requirement to be recovered from Virginia Jurisdictional customers through the Projected Cost Recovery Factor is presented in my Schedule 1, page 1, and consists of the projected amortization expense for the CO_2 allowances during the Rate Year, and projected financing costs on purchased CO_2 allowances for the Rate Year (including income taxes on the equity component of the return). CO_2 allowance purchase volumes and prices and amortization volumes included in the revenue requirement calculation are supported by the direct testimony of Company Witnesses George E. Hitch and Jeffrey D. Matzen.

The financing cost portion of the revenue requirement is the result of multiplying thirteen-month average rate base as of August 31, 2023, by the Company's Cost of Capital. As noted above, the operating cost portion of the revenue requirement consists of projected amortization expense for CO_2 allowances during the Rate Year.

Q. For purposes of this filing, please describe the composition of the rate base as presented in your Schedule 1.

A. Rate base is comprised of month-end unamortized purchased CO_2 allowance balances and cash working capital. The rate base balance is allocated to the Virginia jurisdictional customers on a monthly basis using a monthly 2021 Energy Allocation Factor (Factor 3) as supported in the testimony of Company Witness Haynes.

Q. Will any of the expenses requested for recovery in the instant case be requested for recovery in any of the Company's unrelated Virginia rate proceedings or filings such as its base rates, fuel, sales and use tax, or other unrelated rider cases?

A. No. Pursuant to Subsection A 5 e, the Company will only request recovery of those costs and expenses directly associated with the purchase and amortization of CO_2 allowances in Rider RGGI proceedings. Any indirect operating costs, such as broker fees or Dominion Energy Services, Inc. costs, will be recovered in the Company's base rates.

Q. What is the total revenue requirement in this filing?

A. As summarized on my Schedule 1, page 1, for the Rate Year beginning September 1, 2022, the Company is requesting recovery of a total revenue requirement of $323,411,000. Company Witness Haynes's testimony addresses allocation of this revenue requirement among the customer classes.

Q. Does this conclude your pre-filed direct testimony?

A. Yes, it does.

APPENDIX A

BACKGROUND AND QUALIFICATIONS OF C. ALAN GIVENS

C. Alan Givens graduated from Radford University with a Bachelor of Science degree in Business Finance. Mr. Givens is a Certified Public Accountant and a member of both the American Institute of Certified Public Accountants and the Virginia Society of Certified Public Accountants. Prior to joining the Company in December 2003, he had over ten years of experience in auditing and accounting. Mr. Givens has held numerous accounting positions within the Company prior to joining the Regulatory Accounting Department in December 2007. His current position of Regulatory Consultant includes responsibility for analyzing and calculating revenue requirements for Dominion Energy Virginia rate proceedings.

Mr. Givens has previously provided testimony before the State Corporation Commission of Virginia and the North Carolina Utilities Commission.

Virginia Electric and Power Company
Rider RGGI Revenue Requirement
For the Rate Year September 1, 2022 to August 31, 2023

(000s)

Line No.			
1	Projected Cost Recovery Factor	$	170,018
2	Interim Correction Factor	$	153,393
3	Actual Cost True-Up Factor	$	-
4	Total Revenue Requirment	$	323,411

Virginia Electric and Power Company
Rider RGGI - Projected Cost Recovery Factor
For the Rate Year September 1, 2022 to August 31, 2023
(000s)

Line No.		Rider RGGI
1	Rate Base	$ 16,518
2	Weighted Average Cost of Capital	6.896%
3	Net Operating Income	1,139
	Less Interest Expense on Debt	
4	Weighted Average Cost Of Debt	2.005%
5	Weighted Average Debt Component Of JDC Expense	0.011%
6	Total Weighted Average Cost Of Debt	2.016%
7	Rate Base	16,518
8	Revenue Requirement - Interest Expense On Debt	333
9	Net Income	806
10	Income Tax Gross-up Factor	74.5%
11	Revenue Requirement - Net Income Including Income Taxes	1,082
12	**Revenue Requirement - Financing Costs**	1,415
13	**Revenue Requirement - Operating Expenses**	168,602
14	**Revenue Requirement Per Projected Cost Recovery Factor**	**$ 170,018**

Company Exhibit No. __
Witness: CAG
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Virginia Electric and Power Company
Rider RGGI Rate Base
For the Period September 2020 to August 2023
($000s)

Line No.		Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21
1	Allowances Inventory	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 6,798	$ 6,795	$ 6,793	$ 9,021	$ (2,457)	$ (17,156)	$ (124)	$ (3,437)	$ (10,904)	$ 18,590	$ (1,314)	$ (20,015)	$ 7,162	$ (3,346)	$ (13,517)	$ 13,497
2	Cash Working Capital	-	-	-	-	-	-	-	-	-	(57)	(57)	(57)	(57)	(47)	(47)	(47)	(47)	(47)	(47)	(47)	27,992	27,992	27,992	27,992	27,992
3	Subtotal	-	-	-	-	-	-	-	-	-	6,741	6,741	6,741	8,964	(2,504)	$ (17,203)	$ (171)	$ (3,484)	$ (10,952)	$ 18,543	$ (1,361)	$ 7,977	$ 35,154	$ 24,646	$ 14,475	$ 41,488
4	Virginia Jurisdictional Allocation Factor	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	81.81%	82.66%	84.28%	84.64%	87.90%	86.84%	84.73%	82.01%	83.93%	84.57%	85.70%	84.54%	83.64%	84.47%	84.40%	85.30%
5	Rate Base - Virginia Jurisdiction	-	-	-	-	-	-	-	-	-	5,515	5,572	5,680	7,587	(2,201)	$ (14,953)	$ (734)	$ (2,857)	$ (9,191)	$ 16,011	$ (1,186)	$ 6,743	$ 29,402	$ 20,806	$ 12,217	$ 35,383
6	Unamortized Deferred Costs (net of ADIT)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 55,534	$ 50,827	$ 46,261	$ 41,835	$ 37,009	$ 32,383
7	Rate Base - Virginia Jurisdiction	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,515	$ 5,572	$ 5,680	$ 7,587	$ (2,201)	$ (14,953)	$ (734)	$ (2,857)	$ (9,191)	$ 16,011	$ 54,347	$ 57,811	$ 75,663	$ 62,523	$ 49,226	$ 67,766

Line No.		Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	
8	Allowances Inventory	$ 13,497	$ (7,861)	$ (28,569)	$ 1,823	$ (11,635)	$ (29,560)	$ 10,291	$ (6,678)	$ (22,426)	$ 8,943	$ (6,126)	$ (26,061)	$ 13,103	$ (3,890)	$ (20,329)	$ 8,235	$ (3,403)	$ (15,831)	$ 14,900	$ (4,099)	$ (22,377)	
9	Cash Working Capital	27,992	29,871	29,871	29,871	29,871	29,871	29,871	29,871	29,871	29,871	29,871	29,871	29,871	22,503	22,503	22,503	22,503	22,503	22,503	22,503	22,503	
10	Subtotal	41,489	22,010	1,302	31,694	18,237	291	40,162	23,194	7,445	38,814	23,536	3,810	42,974	18,613	2,174	30,737	19,100	6,672	37,402	18,404	126	
11	Virginia Jurisdictional Allocation Factor	85.30%	86.28%	88.57%	88.54%	85.92%	85.85%	86.04%	88.29%	85.98%	84.40%	84.71%	84.75%	86.20%	86.79%	88.69%	86.75%	86.33%	86.35%	86.43%	86.55%	86.49%	
12	Rate Base - Virginia Jurisdiction	35,383	18,991	1,126	28,056	15,665	250	34,554	20,013	6,402	32,758	19,938	3,229	37,042	16,154	1,884	26,650	16,489	5,758	32,328	15,929	109	
13	Unamortized Deferred Costs (net of ADIT)	$ 32,383	$ 27,757	$ 23,131	$ 18,505	$ 13,878	$ 9,252	$ 4,626	$ (0)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	13-Mo Average
14	Rate Base - Virginia Jurisdiction	$ 67,766	$ 46,747	$ 24,257	$ 45,561	$ 29,544	$ 9,502	$ 39,180	$ 20,013	$ 6,402	$ 32,758	$ 19,938	$ 3,229	$ 37,042	$ 16,154	$ 1,884	$ 26,650	$ 16,489	$ 5,758	$ 32,328	$ 15,929	$ 109	$ 18,518

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Virginia Electric and Power Company
Rider RGGI Pre-RAC Cost Deferral
For the Period September 2020 to July 31, 2021
(000s)

Line No.		Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21
1	Allowance Amortization	$ -	$ -	$ -	$ -	$ 11,477	$ 14,699	$ 14,638	$ 8,305	$ 7,468	$ 8,952	$ 20,304
2	Virginia Jurisdictional Allocation Factor	81.81%	82.66%	84.26%	84.64%	87.90%	86.34%	84.23%	82.01%	83.93%	84.52%	85.70%
3	Virginia Jurisdictional Total	-	-	-	-	10,089	12,691	12,330	6,811	6,267	7,566	17,400
4	Cumulative Regulatory Asset Balance	-	-	-	-	10,089	22,780	35,110	41,921	48,188	55,754	73,155
5	Regulatory Asset Balance (Net of ADIT)	-	-	-	-	7,514	16,966	26,149	31,221	35,889	41,524	54,483
6	Average Regulatory Asset Balance (Net of ADIT)	-	-	-	-	3,757	12,240	21,557	28,685	33,555	38,707	48,004
7	Virginia Jurisdictional Rate Base	5,515	5,572	5,680	7,587	(2,201)	(14,853)	(734)	(2,857)	(9,191)	16,011	(1,166)
8	Average Jurisdictional Rate Base	2,757	5,543	5,626	6,633	2,693	(8,527)	(7,793)	(1,795)	(6,024)	3,410	7,422
9	Pre-Tax Weighted Cost of Capital	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%
10	Financing Costs on Deferred Amortization	-	-	-	-	26	86	152	202	236	273	338
11	Financing Costs on Rate Base	19	39	40	47	19	(60)	(55)	(13)	(42)	24	52
12	Total Deferred Costs Including Financing Costs	19	39	40	47	10,134	12,717	12,427	7,001	6,461	7,863	17,790
											Total	74,538

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Virginia Electric and Power Company
Rider RGGI Operating Expenses
For the Rate Year September 1, 2022 to August 31, 2023
(000s)

Line No.		Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Total
1	Allowance Amortization	$ 20,935	$ 15,279	$ 19,725	$ 13,140	$ 16,992	$ 16,440	$ 17,102	$ 11,737	$ 12,478	$ 14,985	$ 18,998	$ 18,278	$ 196,090
2	Virginia Jurisdictional Allocation Factor	84.40%	84.71%	84.75%	86.20%	86.79%	86.69%	86.75%	86.33%	86.35%	86.43%	86.55%	86.49%	
3	Virginia Jurisdictional Total	17,668	12,943	16,717	11,326	14,748	14,252	14,836	10,133	10,775	12,952	16,444	15,808	$ 168,602
4	Deferred Cost Amortization (VA Jurisdiction)	-	-	-	-	-	-	-	-	-	-	-	-	$ -
5	Total Rate Year Expense												VA Jurisdiction Total	$ 168,602

Virginia Electric and Power Company
Rider RGGI – Actual and Projected CO2 Allowance Activity
For the Period September 2020 to August 2023

Line No.		Purchases		Amortization		Ending Balance		W/A Cost
		Dollars	Allowances	Dollars	Allowances	Dollars	Allowances	
1	Sep-20	$ 6,797,500	1,000,000	$ -	-	$ 6,797,500	1,000,000	$ 6.80
2	Oct-20	-	-	-	-	6,797,500	1,000,000	6.80
3	Nov-20	-	-	-	-	6,797,500	1,000,000	6.80
4	Dec-20	2,223,000	300,000	-	-	9,020,500	1,300,000	6.94
5	Jan-21	-	-	(11,477,087)	(1,653,759)	(2,456,587)	(353,759)	6.94
6	Feb-21	-	-	(14,699,245)	(2,116,754)	(17,155,832)	(2,470,513)	6.94
7	Mar-21	30,970,000	4,075,000	(14,637,945)	(1,700,167)	(823,777)	(95,680)	8.61
8	Apr-21	5,692,500	750,000	(8,305,409)	(1,116,185)	(3,436,687)	(461,865)	7.44
9	May-21	-	-	(7,467,580)	(1,003,587)	(10,904,267)	(1,465,452)	7.44
10	Jun-21	38,846,250	4,875,000	(8,951,963)	(1,092,340)	18,990,021	2,317,208	8.20
11	Jul-21	-	-	(20,303,870)	(2,477,527)	(1,313,849)	(160,319)	8.20
12	Aug-21	-	-	(18,701,221)	(2,281,968)	(20,015,070)	(2,442,287)	8.20
13	Sep-21	41,842,500	4,500,000	(14,665,369)	(1,382,532)	7,162,061	675,181	10.61
14	Oct-21	-	-	(10,408,228)	(981,203)	(3,246,167)	(306,022)	10.61
15	Nov-21	-	-	(10,270,941)	(968,261)	(13,517,108)	(1,274,283)	10.61
16	Dec-21	41,092,500	4,500,000	(14,083,802)	(1,647,496)	13,491,590	1,578,220	8.55
17	Jan-22	-	-	(21,352,389)	(2,497,762)	(7,860,799)	(919,541)	8.55
18	Feb-22	-	-	(20,708,632)	(2,422,456)	(28,569,431)	(3,341,998)	8.55
19	Mar-22	52,303,500	4,950,000	(22,411,267)	(1,518,382)	1,322,802	89,621	14.76
20	Apr-22	-	-	(12,962,109)	(878,193)	(11,639,307)	(788,572)	14.76
21	May-22	-	-	(17,940,420)	(1,215,478)	(29,579,727)	(2,004,051)	14.76
22	Jun-22	52,303,500	4,950,000	(12,432,814)	(1,611,812)	10,290,959	1,334,138	7.71
23	Jul-22	-	-	(16,968,478)	(2,199,823)	(6,677,519)	(865,685)	7.71
24	Aug-22	-	-	(15,748,189)	(2,041,623)	(22,425,708)	(2,907,308)	7.71
25	Sep-22	52,303,500	4,950,000	(20,934,823)	(1,431,277)	8,942,969	611,415	14.63
26	Oct-22	-	-	(15,278,508)	(1,044,565)	(6,335,539)	(433,150)	14.63
27	Nov-22	-	-	(19,725,235)	(1,348,580)	(26,060,774)	(1,781,729)	14.63
28	Dec-22	52,303,500	4,950,000	(13,139,973)	(1,586,382)	13,102,753	1,581,888	8.28
29	Jan-23	-	-	(16,992,334)	(2,051,476)	(3,889,581)	(469,587)	8.28
30	Feb-23	-	-	(16,439,705)	(1,984,757)	(20,329,287)	(2,454,344)	8.28
31	Mar-23	45,766,000	4,670,000	(17,102,107)	(1,489,673)	8,334,606	725,983	11.48
32	Apr-23	-	-	(11,737,141)	(1,022,360)	(3,402,535)	(296,377)	11.48
33	May-23	-	-	(12,478,493)	(1,086,935)	(15,881,029)	(1,383,311)	11.48
34	Jun-23	45,766,000	4,670,000	(14,985,292)	(1,648,052)	14,899,679	1,638,637	9.09
35	Jul-23	-	-	(18,998,439)	(2,089,410)	(4,098,760)	(450,773)	9.09
36	Aug-23	-	-	(18,277,907)	(2,010,167)	**(22,376,667)**	**(2,460,941)**	9.09
37	**Totals**	**$ 468,210,250**	**49,140,000**	**$ (490,586,917)**	**(51,600,941)**			

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Witness: CAG
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Virginia Electric and Power Company
Rider RGGI - Interim Projected Allowance Cost Correction
For the Period of January 2021 Through July 2022
(000's)

Line No.		Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Total
1	Current vs. Previously Projected Difference	2,310	5,184	4,619	356	(2,327)	(2,332)	5,839	25,991	21,955	17,698	17,561	21,374	11,228	10,248	12,420	4,385	10,621	2,484	2,754	
2	VA Jurisdictional Allocation Factor	87.902%	86.340%	84.231%	82.009%	83.927%	84.522%	85.699%	84.535%	83.638%	84.410%	84.404%	85.295%	86.280%	86.519%	86.543%	85.923%	85.846%	86.037%	86.289%	
3	VA Juris Interim Cost Projection Correction	2,031	4,476	3,891	292	(1,953)	(1,971)	5,004	21,972	18,363	14,939	14,822	18,231	9,688	8,867	10,749	3,768	9,118	2,138	2,376	146,800
4	ADIT	(518)	(1,142)	(993)	(75)	498	503	(1,277)	(5,608)	(4,687)	(3,813)	(3,783)	(4,653)	(2,473)	(2,263)	(2,743)	(962)	(2,327)	(546)	(606)	
5	Net of ADIT	1,512	3,334	2,898	218	(1,454)	(1,468)	3,727	16,364	13,676	11,126	11,039	13,578	7,215	6,604	8,005	2,806	6,791	1,592	1,770	
6	Cumulative Net ADIT	1,512	4,846	7,744	7,962	6,507	5,040	8,766	25,130	38,807	49,933	60,972	74,550	81,765	88,369	96,374	99,180	105,971	107,563	109,332	
7	Two-Month Average	756	3,179	6,295	7,853	7,235	5,773	6,903	16,948	31,968	44,370	55,452	67,761	78,157	85,067	92,371	97,777	102,575	106,767	108,447	
8	Overall Cost of Capital Grossed-Up	0.704%	0.704%	0.704%	0.704%	0.704%	0.704%	0.704%	0.704%	0.704%	0.704%	0.708%	0.714%	0.714%	0.714%	0.714%	0.714%	0.714%	0.714%	0.714%	
9	Financing Costs	5	22	44	55	51	41	49	119	225	312	993	484	558	607	660	698	732	762	774	6,594
10	Total Interim Correction Revenue Requirement	2,036	4,499	3,935	348	(1,902)	(1,930)	5,052	22,091	18,588	15,251	15,215	18,715	10,246	9,474	11,408	4,466	9,850	2,900	3,150	153,393

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Virginia Electric and Power Company
Rider RGGI – Actual and Projected CO2 Allowance Activity
Final Order Revenue Requirement - Projected in PUR-2020-00169

Line No.		Purchases		Amortization		Ending Balance		W/A Cost
		Dollars	Allowances	Dollars	Allowances	Dollars	Allowances	
1	Sep-20	$ 6,797,500	1,000,000	$ -	-	$ 6,797,500	1,000,000	$ 6.80
2	Oct-20	-	-	-	-	6,797,500	1,000,000	6.80
3	Nov-20	-	-	-	-	6,797,500	1,000,000	6.80
4	Dec-20	6,910,000	1,000,000	-	-	13,707,500	2,000,000	6.85
5	Jan-21	-	-	(9,166,802)	(1,337,487)	4,540,698	662,513	6.85
6	Feb-21	-	-	(9,514,870)	(1,388,272)	(4,974,173)	(725,759)	6.85
7	Mar-21	34,550,000	5,000,000	(10,018,745)	(1,447,889)	19,557,082	2,826,351	6.92
8	Apr-21	-	-	(7,949,021)	(1,148,777)	11,608,061	1,677,574	6.92
9	May-21	-	-	(9,794,144)	(1,415,430)	1,813,918	262,144	6.92
10	Jun-21	34,550,000	5,000,000	(11,283,786)	(1,632,852)	25,080,131	3,629,292	6.91
11	Jul-21	-	-	(14,464,997)	(2,093,198)	10,615,134	1,536,093	6.91
12	Aug-21	-	-	(14,865,325)	(2,151,129)	(4,250,190)	(615,036)	6.91
13	Sep-21	34,550,000	5,000,000	(10,500,072)	(1,519,562)	19,799,738	2,865,402	6.91
14	Oct-21	-	-	(6,033,347)	(873,141)	13,766,390	1,992,261	6.91
15	Nov-21	-	-	(8,539,382)	(1,235,813)	5,227,008	756,448	6.91
16	Dec-21	34,550,000	5,000,000	(11,184,563)	(1,618,607)	28,592,444	4,137,841	6.91
17	Jan-22	-	-	(11,232,421)	(1,625,533)	17,360,023	2,512,308	6.91
18	Feb-22	-	-	(11,569,060)	(1,674,251)	5,790,964	838,057	6.91
19	Mar-22	33,450,000	5,000,000	(11,099,753)	(1,651,361)	28,141,210	4,186,696	6.72
20	Apr-22	-	-	(9,685,594)	(1,440,970)	18,455,616	2,745,726	6.72
21	May-22	-	-	(8,427,843)	(1,253,849)	10,027,773	1,491,877	6.72
22	Jun-22	33,450,000	5,000,000	(11,056,885)	(1,650,957)	32,420,887	4,840,920	6.70
23	Jul-22	-	-	(15,323,476)	(2,288,023)	17,097,411	2,552,898	6.70
24	Totals	$ 218,807,500	32,000,000	$ (201,710,089)	(29,447,103)	$ 17,097,411	2,552,898	

Virginia Electric and Power Company
Rider RGGI – Actual and Projected CO2 Allowance Activity
Actuals through September 2021 and Updated Projected to July 2022

	Purchases		Amortization		Ending Balance		W/A Cost	Interim Projection Variance	Interim Deferral Correction	Total System Interim Correction
	Dollars	Allowances	Dollars	Allowances	Dollars	Allowances				
Sep-20	$ 6,797,500	1,000,000	$ -	-	$ 6,797,500	1,000,000	$ 6.80	$ -	$ -	$ -
Oct-20	-	-	-	-	6,797,500	1,000,000	6.80	$ -	$ -	$ -
Nov-20	-	-	-	-	6,797,500	1,000,000	6.80	$ -	$ -	$ -
Dec-20	2,223,000	300,000	-	-	9,020,500	1,300,000	6.94	$ -	$ -	$ -
Jan-21	-	-	(11,477,087)	(1,653,759)	(2,456,587)	(353,759)	6.94	$ (2,310,285)	$ -	$ 2,310,285
Feb-21	-	-	(14,699,245)	(2,116,754)	(17,155,832)	(2,470,513)	6.94	$ (5,184,375)	$ -	$ 5,184,375
Mar-21	30,970,000	4,075,000	(14,637,945)	(1,700,167)	(823,777)	(95,680)	8.61	$ (4,619,199)	$ -	$ 4,619,199
Apr-21	5,692,500	750,000	(8,305,409)	(1,116,185)	(3,436,687)	(461,865)	7.44	$ (356,389)	$ -	$ 356,389
May-21	-	-	(7,467,580)	(1,003,587)	(10,904,267)	(1,465,452)	7.44	$ 2,326,564	$ -	$ (2,326,564)
Jun-21	38,846,250	4,875,000	(8,951,963)	(1,092,340)	18,990,021	2,317,208	8.20	$ 2,331,823	$ -	$ (2,331,823)
Jul-21	-	-	(20,303,870)	(2,477,527)	(1,313,849)	(160,319)	8.20	$ (5,838,872)	$ -	$ 5,838,872
Aug-21	-	-	(18,701,221)	(2,281,968)	(20,015,070)	(2,442,287)	8.20	*$ (18,701,221)*	*$ 7,290,098*	$ 25,991,320
Sep-21	41,842,500	4,500,000	(14,665,369)	(1,382,532)	7,162,061	675,181	10.61	*$ (14,665,369)*	*$ 7,290,098*	$ 21,955,467
Oct-21	-	-	(10,408,228)	(981,203)	(3,246,167)	(306,022)	10.61	*$ (10,408,228)*	*$ 7,290,098*	$ 17,698,327
Nov-21	-	-	(10,270,941)	(968,261)	(13,517,108)	(1,274,283)	10.61	*$ (10,270,941)*	*$ 7,290,098*	$ 17,561,039
Dec-21	41,092,500	4,500,000	(14,083,802)	(1,647,496)	13,491,590	1,578,220	8.55	*$ (14,083,802)*	*$ 7,290,098*	$ 21,373,900
Jan-22	-	-	(21,352,389)	(2,497,762)	(7,860,799)	(919,541)	8.55	$ (10,119,968)	$ 1,108,506	$ 11,228,475
Feb-22	-	-	(20,708,632)	(2,422,456)	(28,569,431)	(3,341,998)	8.55	$ (9,139,572)	$ 1,108,506	$ 10,248,079
Mar-22	52,303,500	4,950,000	(22,411,267)	(1,518,382)	1,322,802	89,621	14.76	$ (11,311,513)	$ 1,108,506	$ 12,420,019
Apr-22	-	-	(12,962,109)	(878,193)	(11,639,307)	(788,572)	14.76	$ (3,276,514)	$ 1,108,506	$ 4,385,021
May-22	-	-	(17,940,420)	(1,215,478)	(29,579,727)	(2,004,051)	14.76	$ (9,512,576)	$ 1,108,506	$ 10,621,083
Jun-22	52,303,500	4,950,000	(12,432,814)	(1,611,812)	10,290,959	1,334,138	7.71	$ (1,375,929)	$ 1,108,506	$ 2,484,435
Jul-22	-	-	(16,968,478)	(2,199,823)	(6,677,519)	(865,685)	7.71	$ (1,645,002)	$ 1,108,506	$ 2,753,508
Totals	$ 272,071,250	29,900,000	$ (278,748,769)	(30,765,685)	$ (6,677,519)	(865,685)		$ (128,161,370)	$ 44,210,035	$ 172,371,405

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Virginia Electric and Power Company
Rider RGGI Cash Working Capital
September 1, 2020 to December 31, 2020
(000s)

Line No.		Amount	Average Daily Amount	Expense (Lead) Lag Days	Revenue Lag	Net (Lead) Lag Days	Working Capital (Provided) Required
	Amortization Expense						
1	Allowance Amortization	-	-	-	43.21	43.21	-
2	Amortization of Regulatory Assets (Deferred Costs)	-	-	-	43.21	43.21	-
3	Pre RAC Cost Deferral	-	-	-	43.21	43.21	-
4	Pre RAC Cost Deferral - Debt Interest	(117)	(0.96)	-	43.21	43.21	(42)
5	Pre RAC Cost Deferral - Equity	(374)	(3.07)	(43.21)	43.21	-	-
6	Pre RAC Cost Deferral - JDC	(3)	(0.02)	(43.21)	43.21	-	-
7	Interest Expense	117	0.32	(90.93)	43.21	(47.72)	(15)
8	Preferred Dividends	-	-	(43.21)	43.21	-	-
9	JDC Expense	3	0.01	(43.21)	43.21	-	-
10	Income Available for Common Equity	374	1.02	(43.21)	43.21	-	-
11	Totals	-					(57)
12	Balance Sheet Items (A/P - Allowance Purchases)	9,021	74.14	-	-	-	-
13	System Cash Working Capital						(57)

Virginia Electric and Power Company
Rider RGGI Cash Working Capital
January 1, 2021 to July 31, 2021
(000s)

Line No.		Amount	Average Daily Amount	Expense (Lead) Lag Days	Revenue Lag	Net (Lead) Lag Days	Working Capital (Provided) Required
	Amortization Expense						
1	Allowance Amortization	-	-	-	43.21	43.21	-
2	Amortization of Regulatory Assets (Deferred Costs)	-	-	-	43.21	43.21	-
3	Pre RAC Cost Deferral	0	0.00	-	43.21	43.21	0
4	Pre RAC Cost Deferral - Debt Interest	(142)	(0.67)	-	43.21	43.21	(29)
5	Pre RAC Cost Deferral - Equity	(453)	(2.13)	(43.21)	43.21	-	-
6	Pre RAC Cost Deferral - JDC	(3)	(0.02)	(43.21)	43.21	-	-
7	Interest Expense	142	0.39	(90.93)	43.21	(47.72)	(19)
8	Preferred Dividends	-	-	(43.21)	43.21	-	-
9	JDC Expense	3	0.01	(43.21)	43.21	-	-
10	Income Available for Common Equity	453	1.24	(43.21)	43.21	-	-
11	Totals	-					(47)
12	Balance Sheet Items (A/P - Allowance Purchases)	75,509	354.64	-	-	-	-
13	System Cash Working Capital						(47)

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Virginia Electric and Power Company
Rider RGGI Cash Working Capital
August 1, 2021 to December 31, 2021
(000s)

Line No.		Amount	Average Daily Amount	Expense (Lead) Lag Days	Revenue Lag	Net (Lead) Lag Days	Working Capital (Provided) Required
	Amortization Expense						
1	Allowance Amortization	68,130	447.98	-	43.21	43.21	19,357
2	Amortization of Regulatory Assets (Deferred Costs)	31,057	204.21	-	43.21	43.21	8,824
3	Pre RAC Cost Deferral	-	-	-	43.21	43.21	-
4	Pre RAC Cost Deferral - Debt Interest	-	-	-	43.21	43.21	-
5	Pre RAC Cost Deferral - Equity	-	-	(43.21)	43.21	-	-
6	Pre RAC Cost Deferral - JDC	-	-	(43.21)	43.21	-	-
7	Interest Expense	1,447	3.96	(90.93)	43.21	(47.72)	(189)
8	Preferred Dividends	-	-	(43.21)	43.21	-	-
9	JDC Expense	33	0.09	(43.21)	43.21	-	-
10	Income Available for Common Equity	4,627	12.68	(43.21)	43.21	-	-
11	Totals	105,293					27,992
12	Balance Sheet Items (A/P - Allowance Purchases)	82,935	545.33	-	-	-	-
13	System Cash Working Capital						**27,992**

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Virginia Electric and Power Company
Rider RGGI Cash Working Capital
January 1, 2022 to December 31, 2022
(000s)

Line No.		Amount	Average Daily Amount	Expense (Lead) Lag Days	Revenue Lag	Net (Lead) Lag Days	Working Capital (Provided) Required
	Amortization Expense						
1	Allowance Amortization	209,603	574.25	-	43.21	43.21	24,814
2	Amortization of Regulatory Assets (Deferred Costs)	43,480	119.12	-	43.21	43.21	5,147
3	Pre RAC Cost Deferral	-	-	-	43.21	43.21	-
4	Pre RAC Cost Deferral - Debt Interest	-	-	-	43.21	43.21	-
5	Pre RAC Cost Deferral - Equity	-	-	(43.21)	43.21	-	-
6	Pre RAC Cost Deferral - JDC	-	-	(43.21)	43.21	-	-
7	Interest Expense	687	1.88	(90.93)	43.21	(47.72)	(90)
8	Preferred Dividends	-	-	(43.21)	43.21	-	-
9	JDC Expense	16	0.04	(43.21)	43.21	-	-
10	Income Available for Common Equity	2,233	6.12	(43.21)	43.21	-	-
11	Totals	256,019					29,871
12	Balance Sheet Items (A/P - Allowance Purchases)	209,214	573.19	-	-	-	-
13	System Cash Working Capital						**29,871**
0							

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Virginia Electric and Power Company
Rider RGGI Cash Working Capital
January 1, 2023 to August 31, 2023
(000s)

Line No.		Amount	Average Daily Amount	Expense (Lead) Lag Days	Revenue Lag	Net (Lead) Lag Days	Working Capital (Provided) Required
	Amortization Expense						
1	Allowance Amortization	127,011	521.96	-	43.21	43.21	22,554
2	Amortization of Regulatory Assets (Deferred Costs)	-	-	-	43.21	43.21	-
3	Pre RAC Cost Deferral	-	-	-	43.21	43.21	-
4	Pre RAC Cost Deferral - Debt Interest	-	-	-	43.21	43.21	-
5	Pre RAC Cost Deferral - Equity	-	-	(43.21)	43.21	-	-
6	Pre RAC Cost Deferral - JDC	-	-	(43.21)	43.21	-	-
7	Interest Expense	392	1.08	(90.93)	43.21	(47.72)	(51)
8	Preferred Dividends	-	-	(43.21)	43.21	-	-
9	JDC Expense	9	0.02	(43.21)	43.21	-	-
10	Income Available for Common Equity	1,276	3.50	(43.21)	43.21	-	-
11	Totals	128,689					22,503
12	Balance Sheet Items (A/P - Allowance Purchases)	91,532	376.16	-	-	-	-
13	System Cash Working Capital						22,503
0							

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VIRGINIA ELECTRIC AND POWER COMPANY
Actual Cost of Capital and Capital Structure
As of December 31, 2020

Line No.	Description	Amount	Percent	Annual Cost	Embedded Cost	Weighted Cost
1	Total long-term debt	$ 13,026,283,483	46.310%	$ 563,000,609	4.322%	2.002%
2	Short-term debt	347,887,714	1.237%	925,578	0.266%	0.003%
3	Total debt	$ 13,374,171,197	47.547%	563,926,187	4.217%	2.005%
4	Total preferred stock	-	0.000%	-	0.000%	0.000%
5	Common stock	$ 5,737,401,834	20.397%		9.350%	1.907%
6	Other paid-in capital	1,112,875,284	3.956%		9.350%	0.370%
8	AOCI	7,759,107,191	27.585%		9.350%	2.579%
7	Retained earnings	(52,423,500)	-0.186%		9.350%	-0.017%
9	Adjustments	46,482,221	0.165%		9.350%	0.015%
10	Total common equity	$ 14,603,443,030	51.917%		9.350%	4.854%
	Job development tax credits					
11	Allocation: debt	$ 71,067,392	0.253%		4.322%	0.011%
12	Allocation: preferred stock	0	0.000%		0.000%	0.000%
13	Allocation: equity	79,671,889	0.283%		9.350%	0.026%
14	*Total Job development tax credits*	$ 150,739,281	0.536%		6.980%	0.037%
15	Total Capital	$ 28,128,353,508	100.000%			6.8965%

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VIRGINIA ELECTRIC AND POWER COMPANY
Actual Cost of Capital and Capital Structure
As of December 31, 2020

Line No.	Description	Amount	Percent	Annual Cost	Embedded Cost	Weighted Cost
1	Total long-term debt	$ 13,026,283,483	46.223%	$ 563,000,609	4.322%	1.998%
2	Short-term debt (13-month average)	400,884,382	1.423%	1,093,952	0.273%	0.004%
3	Total debt	$ 13,427,167,865	47.646%	564,094,561	4.201%	2.002%
4	Total preferred stock	-	0.000%	-	0.000%	0.000%
5	Common stock	$ 5,737,401,834	20.359%		9.200%	1.873%
6	Other paid-in capital	1,112,875,284	3.949%		9.200%	0.363%
8	AOCI	7,759,107,191	27.533%		9.200%	2.533%
7	Retained earnings	(52,423,500)	-0.186%		9.200%	-0.017%
9	Adjustments	46,482,221	0.165%		9.200%	0.015%
10	Total common equity	$ 14,603,443,030	51.820%		9.200%	4.767%
	Job development tax credits					
11	Allocation: debt	$ 71,067,392	0.252%		4.322%	0.011%
12	Allocation: preferred stock	0	0.000%		0.000%	0.000%
13	Allocation: equity	79,671,889	0.283%		9.200%	0.026%
14	Total Job development tax credits	$ 150,739,281	0.535%		6.900%	0.037%
15	Total Capital	$ 28,181,350,176	100.000%			6.80596%

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