

August 13, 2019

**VIA ELECTRONIC FILING**

Ms. Janice Fulmore, Deputy Clerk  
Ms. Antonia Dunston, Deputy Clerk  
North Carolina Utilities Commission  
Dobbs Building  
430 North Salisbury Street  
Raleigh, North Carolina 27603

Re: *Docket No. E-22, Sub 579*  
*Dominion Energy North Carolina's 2019 Fuel Charge Adjustment*  
*Proceeding*

Dear Ms. Fulmore and Ms. Dunston:

Enclosed for filing is the *Application for a Change in Fuel Component of Electric Rates* ("Application") of Virginia Electric and Power Company, d/b/a Dominion Energy North Carolina (the "Company"), in compliance with North Carolina General Statute § 62-133.2 and North Carolina Utilities Commission ("Commission") Rule R8-55. In support of its Application, the Company is filing the Direct Testimony and Exhibits of Katherine E. Farmer, Ronnie T. Campbell, Dale E. Hinson, Tom A. Brookmire, and George G. Beasley, as well as Commission Rule R8-55 Information and Workpapers.

Pursuant to Commission Rule R1-28(e)(2), the Company will deliver fifteen (15) paper copies of the Application to the Clerk's Office by August 14, 2019.

Thank you for your assistance with this matter. Please call me if additional information is required.

Very truly yours,

/s/Andrea R. Kells

ARK:kjg

Enclosures

cc: Lucy E. Edmondson – NC Utilities Commission Public Staff



**Dominion  
Energy®**

**Application, Testimony, and  
Exhibits of Virginia Electric and  
Power Company, d/b/a  
Dominion Energy North  
Carolina**

**Before the North Carolina Utilities  
Commission**

**In the Matter of  
Application by Virginia Electric and  
Power Company, d/b/a Dominion  
Energy North Carolina, for Authority  
to Adjust its Electric Rates and  
Charges and Revise its Fuel Factor  
Pursuant to N.C.G.S. § 62-133.2 and  
NCUC Rule R8-55**

**Docket No. E-22, Sub 579**

**Filed: August 13, 2019**

**STATE OF NORTH CAROLINA  
UTILITIES COMMISSION  
RALEIGH**

DOCKET NO. E-22, SUB 579

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of		
Application by Virginia Electric and Power	)	
Company, d/b/a Dominion Energy North	)	APPLICATION FOR A CHANGE
Carolina, for Authority to Adjust its Electric	)	IN FUEL COMPONENT OF
Rates and Charges and Revise its Fuel	)	ELECTRIC RATES
Factor Pursuant to N.C. Gen. Stat. § 62-	)	
133.2 and NCUC Rule R8-55	)	

Pursuant to North Carolina General Statutes (“N.C. Gen. Stat.”) § 62-133.2 and Rule R8-55 of the Rules and Regulations of the North Carolina Utilities Commission (“Commission”), Virginia Electric and Power Company, d/b/a Dominion Energy North Carolina (“DENC” or the “Company”), by counsel, hereby applies to the Commission to adjust the fuel component of its electric rates to become effective February 1, 2020, and remain in effect through January 31, 2021. In support thereof, the Company respectfully demonstrates as follows:

1. The Company is a public utility operating in the State of North Carolina as Dominion Energy North Carolina and is engaged in the business of generating, transmitting, distributing, and selling electric power and energy to the public for compensation. As such, the Company’s operations in the State are subject to the jurisdiction of the Commission. 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 a wholly-owned operating subsidiary of Dominion Energy, Inc. DENC serves approximately 120,000 customers in North Carolina, with a service territory of about 2,600 square miles in northeastern North

Carolina, including Roanoke Rapids, Albemarle, Ahoskie, Williamston, Elizabeth City, and the Outer Banks. The Company serves major industrial facilities like Nucor Steel, Kapstone, Enviva, and Hospira, as well as commercial and residential customers. The Company's headquarters are located at 120 Tredegar Street, Richmond, Virginia 23219. The post office address of DENC is P.O. Box 26666, Richmond, Virginia 23261.

2. The attorneys for the Company are:

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Horace P. Payne, Jr.  
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Copies of all pleadings, testimony, orders, and correspondence in this proceeding should be served upon the attorneys listed above.

3. Pursuant to Rule R8-55(f), the Company is to file its direct testimony, exhibits, and workpapers supporting its fuel adjustment 98 days prior to the hearing. Accordingly, DENC hereby files the direct testimony, exhibits, and workpapers of the following witnesses in support of its proposed fuel adjustment: Katherine E. Farmer, Ronnie T. Campbell, Dale E. Hinson, Tom A. Brookmire, and George G. Beasley.

4. Pursuant to Rule R8-55(c), DENC's test period for this proceeding is the 12-month period ending June 30, 2019 ("Test Period").

5. Consistent with the Company's 2018 Fuel Case, Updated Rider A and Rider B will be in effect for the twelve-month period from February 1, 2020, through January 31, 2021, the proposed "Rate Period."

6. The last general rate case order for the Company was issued by the Commission on December 22, 2016, in Docket No. E-22, Sub 532 ("2016 Base Rate Case Order"). In the 2016 Base Rate Case Order, the Commission reset the Company's system average base fuel factor applicable to the North Carolina jurisdiction to \$0.02073/kWh, including regulatory fee (\$0.02070/kWh without the fee). The Commission's last fuel adjustment proceeding order for the Company was issued on January 23, 2019, in Docket No. E-22, Sub 558 ("2018 Fuel Order"), which approved the current Rider A and Experience Modification Factor ("EMF") Rider B. The 2016 Base Rate Case Order and the 2018 Fuel Order also set the marketer's percentage at 78% (to be reviewed during this proceeding or during the Company's next general rate case).

### **2019 Base Rate Application**

7. On March 29, 2019, in Docket No. E-22, Sub 562 (the "2019 Base Rate Case"), the Company filed an application for authority to adjust and increase its retail electric rates and charges pursuant to N.C. Gen. Stat. §§ 62-133, 62-133.2, 62-134 and 62-135 (the "2019 Base Rate Application"). With regard to the base component of fuel, the rates presented in the 2019 Base Rate Application used the currently approved base fuel and Rider A rates for each class as a proposed "placeholder" base fuel rate, as discussed by Company Witness Paul B. Haynes in that case. The Company explained

that it planned to supplement this placeholder base fuel rate after filing its annual fuel factor application, with actual fuel rate information for the 12-month period ending June 30, 2019. Pursuant to the 2019 Base Rate Procedural Order,<sup>1</sup> the Company filed supplemental testimony and exhibits in that case on August 5, 2019, and will file additional supplemental testimony and exhibits in that case on or before August 14, 2019, supporting the proposed change to the base fuel factor and other updates.

8. In the 2019 Base Rate Application, the Company proposed through the direct testimony of Company Witness Bruce E. Petrie to update the marketer percentage that is used to approximate the percentage of unreported power purchase costs related to fuel to 71%. In this case, Company Witness Katherine E. Farmer uses the updated 71% marketer percentage to calculate costs associated with purchases of power from the PJM Interconnection, L.L.C. market and dispatchable non-utility generators.

9. Also in the 2019 Base Rate Application, the Company proposed to simultaneously implement the proposed non-fuel base rate increase and the proposed base fuel factor decrease discussed further herein on a temporary basis subject to refund on November 1, 2019, under the authority of N.C. Gen. Stat. § 62-135, and to put new permanent rates as approved by the Commission into effect on and after January 1, 2020. The Company stated that, prior to implementing these rates on November 1, 2019, DENC will provide the required notices pursuant to N.C. Gen. Stat. § 62-135(a) and seek Commission approval of the required bond or undertaking pursuant to N.C. Gen. Stat. § 62-135(c).

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<sup>1</sup> *Order Scheduling Investigation and Hearings, Establishing Intervention and Testimony Due Dates and Discovery Guidelines and Requiring Public Notice*, at Ordering ¶ 8, Docket No. E-22, Subs 562 and 566 (May 30, 2019).

### 2019 Fuel Factor and Rate Adjustments

10. As explained by the direct testimony of Company Witness Farmer, consistent with the methodology applied in the Company's fuel adjustment proceedings dating back to 2008, the Company's cost of fuel calculations are based on the 12-month historical average for fuel prices incurred during the Test Period. As Company Witness Farmer explains, this methodology is a fair representation of the expected expense rates during the February 1, 2020 through January 31, 2021 Rate Period.

11. For the Test Period, the normalized system fuel expense is \$1,783,381,223, which is then divided by system sales of 85,389,162,794 kWh, which reflect the normalization adjustments for change in usage, weather, and customer growth. The result is a normalized system average fuel factor of \$0.02092/ kWh, which is a decrease of 0.05 ¢/kWh, applicable to the North Carolina jurisdiction.

12. DENC has under-recovered its fuel costs for the Test Period by \$550,353. The total under-recovered fuel expense as of June 30, 2019, based on the current 78% marketer percentage, is provided in the direct testimony and exhibits of Company Witness Ronnie T. Campbell. This minor fuel under-recovery was primarily driven by moderate winter weather and the absence of major spikes or movements in commodity prices.

13. The Company calculated the EMF Rider B, including interest, applicable to the North Carolina jurisdiction and to each customer class using the methodology approved in the 2018 Fuel Order. These calculations are addressed in the direct testimony and exhibits of Company Witness George G. Beasley.

14. The Company proposes that the total fuel rate (base fuel factor, Rider A, and EMF Rider B) for each class be set as follows, effective February 1, 2020:

<u>Customer Class</u>	<u>Total</u>
Residential	\$0.02132
SGS & PA	\$0.02129
LGS	\$0.02112
Schedule NS	\$0.02049
6VP	\$0.02078
Outdoor Lighting	\$0.02132
Traffic	\$0.02132

15. For the North Carolina jurisdiction, the proposed jurisdictional fuel cost levels result in a total fuel recovery decrease of \$18,311,512.

16. As explained by Company Witnesses Farmer and Beasley, the Company anticipates over-recovery of fuel expenses during the second half of 2019 which, in the normal course under N.C. Gen. Stat. § 62-133.2, would be addressed through the EMF approved in the Company's 2020 fuel adjustment proceeding and effective in rates on and after February 1, 2021.

17. To reduce the anticipated over-recovery for the second half of 2019, and to further mitigate the effect of the November 1, 2019 non-fuel base rate increase on customer rates discussed above, the Company proposes to implement a three-month decrement rider, Rider A1, for each class to be effective November 1, 2019. The Rider A1 rate will be equal to the proposed change between the actual February 1, 2019 customer class EMFs and the proposed February 1, 2020 customer class EMFs, or (\$0.00375)/kWh, for the North Carolina jurisdiction. Rider A1 will remain in effect for three months until the currently approved EMF is reset effective February 1, 2020. The actual over/under recovery during the period July 1, 2019, to December 31, 2019, will be

included in the proposed EMF in the Company's 2020 fuel proceeding to be effective in rates on and after February 1, 2021. Rider A1 will reduce fuel recoveries for the months of November 2019 through January 2020.

18. The Company submits that the proposed voluntary decrement Rider A1 is reasonable, beneficial to customers, and in the public interest. Therefore, the Company requests that the Commission issue an order in this proceeding approving Rider A1 at a rate of (\$0.00375)/kWh, and directing notice to the public of this proposed action as may be required by N.C. Gen. Stat. §§ 62-133.2(d) and 62-134. Specifically, the Company requests that the Commission authorize Rider A1 to become effective for usage on and after November 1, 2019, through and including January 31, 2020, and to be allocated based on voltage-differentiated adjustments to the respective customer classes in the same manner as class fuel rates for the period have been determined (as set out more fully in the testimony of Company Witness Beasley).

WHEREFORE, Dominion Energy North Carolina respectfully requests that the Commission: (1) approve the proposed total fuel factor of 2.105 ¢/kWh, effective on a temporary basis November 1, 2019, and effective on a permanent basis February 1, 2020, which shall be allocated based on voltage differentiated adjustments, including the base fuel factor, Rider A, and EMF Rider B, as follows:

- (a) 2.132 ¢/kWh for the Residential class of customers,
- (b) 2.129 ¢/kWh for the Small General Service and Public Authority classes of customers,
- (c) 2.112 ¢/kWh for the Large General Service class of customers,
- (d) 2.049 ¢/kWh for the Schedule NS class of customers,
- (e) 2.078 ¢/kWh for the Schedule 6VP class of customers, and
- (f) 2.132 ¢/kWh for the Outdoor Lighting and Traffic classes of customers;

(2) issue an order authorizing implementation of a decrement Rider A1 of (\$0.00375)/kWh, to be effective for usage on and after November 1, 2019, through and including January 31, 2020, as set out herein; and (3) and grant any other relief the Commission deems appropriate.

Respectfully submitted, this the 13<sup>th</sup> day of August, 2019.

DOMINION ENERGY NORTH CAROLINA

By: /s/Mary Lynne Grigg  
Counsel

Counsel for Virginia Electric and Power Company, d/b/a Dominion Energy North Carolina

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**DIRECT TESTIMONY  
OF  
KATHERINE E. FARMER  
ON BEHALF OF  
DOMINION ENERGY NORTH CAROLINA  
BEFORE THE  
NORTH CAROLINA UTILITIES COMMISSION  
DOCKET NO. E-22, SUB 579**

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

2   A.     My name is Katherine E. Farmer, and my business address is 5000 Dominion  
3           Boulevard, Glen Allen, Virginia 23060. I am a Senior Financial Analyst  
4           Specialist in the Generation System Planning Department for Virginia Electric  
5           and Power Company, which operates in North Carolina as Dominion Energy  
6           North Carolina (the “Company”). I am responsible for forecasting the  
7           Company’s system energy supply mix, and total system fuel and purchased  
8           power expenses. A statement of my background and qualifications is attached  
9           as Appendix A.

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

11   A.     The purpose of my testimony is to present the Company’s nuclear and major  
12           coal-fired generating unit actual performance, the Company’s level of power  
13           purchases, and the generation mix for the 12-month test period ended June 30,  
14           2019 (“Test Period”). My testimony describes drivers that affected system  
15           fuel expense and the normalization adjustments that impact the expected  
16           system fuel expense. I will present the system fuel expenses for the Test  
17           Period, and the normalized system fuel expense projected for the rate period  
18           February 2020 through January 2021.

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

2     A.     Yes. Company Exhibit KEF-1, which consists of four schedules, has been  
3           prepared under my supervision and is accurate and complete to the best of my  
4           knowledge.

5     **Q.     Please review the performance of the Company's major generating units**  
6           **for the Test Period.**

7     A.     Schedules 1 and 2 of Company Exhibit KEF-1 show the actual monthly and  
8           12-month period ending June 30, 2019 average Equivalent Availability  
9           ("EA") and Capacity Factors ("CF") for the Company's nuclear units and  
10          large coal-fired units during the Test Period.

11          During the Test Period, the Company's coal units generated 9,259 GWh of  
12          energy. Mt. Storm Units 1-3 performed at EA factors of 68.5%, 64.5%, and  
13          69.4%, respectively. Chesterfield Units 5 – 6 had EA factors of 53.2% and  
14          54.1%, respectively. Virginia City Hybrid Energy Center ("VCHEC") had an  
15          EA of 58.4% during the Test Period.

16          In regards to what constitutes reasonable nuclear unit performance,  
17          Commission Rule R8-55(k) requires that the Company's actual system-wide  
18          nuclear capacity factor in the Test Period must exceed the national average  
19          capacity factor for nuclear production facilities based on the most recent  
20          five-year period available as reflected by the North American Electric  
21          Reliability Corporation ("NERC"), appropriately weighted for size and type of  
22          plant. The NERC 2013-2017 five-year industry average net capacity factor

1 for Pressurized Water Reactors, which is the most recent available NERC  
2 average, is 91.4% for 800-999 MW units. The net capacity factors during the  
3 historic Test Period for the Company's nuclear units are shown below.

4	N. Anna 1	101.1%
5	N. Anna 2	89.9%
6	Surry 1	101.3 %
7	Surry 2	90.6%

8 The aggregate capacity factor was 95.7 % for the Company's nuclear units for  
9 the Test Period. This is based on the weighted average of the four units at  
10 100% of capacity. Based on these figures, the Company's nuclear fleet  
11 performance during the Test Period was clearly better than the industry five-  
12 year average for comparable units.

13 In addition, for the same five-year period, the Company's net capacity factor  
14 was 94.7% compared to the national average of 91.4%. Nuclear net capacity  
15 factor is the best measure for reliable baseload performance and related  
16 operating efficiency and is the predominant standard recognized in the energy  
17 arena when evaluating nuclear power plant performance. A high net capacity  
18 factor reflects an excellent level of reliable baseload operations, which  
19 translates to many customer benefits in terms of reduced system fuel cost and  
20 consistency in availability. Maximizing generation from this low variable  
21 cost baseload resource reflects good operating efficiency and results in overall  
22 lower energy costs to customers.

1    **Q.     What is the expected performance of the Company's nuclear generating**  
2       **units for the 12-month rate period ending January 31, 2021?**

3    A.     The projected capacity factors for both North Anna and Surry are expected to  
4       be above the most recent NERC five-year average capacity factors of 89.8%.  
5       The projected capacity factors are shown below.

6	N. Anna 1	100.4%
7	N. Anna 2	92.4 %
8	Surry 1	100.2%
9	Surry 2	89.6%

10       The projected weighted average for the nuclear fleet at ownership is 95.7%.

11   **Q.     What was the Company's generation mix during the Test Period?**

12   A.     The generation mix during the Test Period is shown on Schedule 3 of  
13       Company Exhibit KEF-1. Nuclear generation supplied 30.9%; coal-fired  
14       generation supplied 10.2%; combined cycle and combustion turbine  
15       generation supplied 39.1%; and power transactions (net) supplied 16.9%.  
16       These four energy sources accounted for 97.1% of the total energy supply.  
17       Natural gas-steam, oil, biomass, solar, and hydro generation provided the  
18       remaining 2.9% (net) of the energy supplied.

19   **Q.     Please describe the major drivers that affected the \$/MWh average fuel**  
20       **expense during the Test Period.**

21   A.     As stated by Company Witness Ronnie T. Campbell, the Company  
22       experienced a slight under-recovery of fuel expenses during the test year.

1 This minor fuel under-recovery was primarily driven by moderate winter  
2 weather and the absence of major spikes or movements in commodity prices.

3 **Q. Does the Company propose to normalize nuclear capacity factor levels in**  
4 **determining an appropriate fuel factor in this proceeding?**

5 A. Yes. The Company's projected nuclear generation during the upcoming rate  
6 year is expected to be slightly lower than the actual generation during the Test  
7 Period. We have normalized expected nuclear generation and fuel expenses  
8 using the expected nuclear capacity factors shown above for the 12-month  
9 period ending January 31, 2021, in developing the proposed fuel cost rider in  
10 this proceeding.

11 **Q. Please describe the Company's normalization of system fuel expenses.**

12 A. Schedule 4 of Company Exhibit KEF-1 illustrates an expense normalization  
13 methodology that has been used by the Company and approved in previous  
14 North Carolina annual fuel factor proceedings. The first step in computing  
15 normalized system fuel expenses is to calculate nuclear generation based on  
16 the expected future operating parameters for each unit. The expected  
17 generation from the nuclear units was calculated for the 12-month period  
18 ending January 2021. Other sources of generation were then normalized for  
19 the Test Period. The total of coal, heavy oil, combustion turbine and  
20 combined cycle, non-utility generation ("NUG"), and purchased energy  
21 during the Test Period was then calculated. A percentage of this total was  
22 then calculated for each of the above resources. Normalized generation was  
23 computed by applying these percentages to a new total, which includes an

1 adjustment for weather, customer growth, increased usage, and the net change  
2 in nuclear generation. This methodology for normalizing the Test Period  
3 generation resulted in adjusted annual system energy requirements of  
4 88,616,747 MWh, a decrease of 2,140,396 MWhs from the actual energy  
5 requirements for the 12 months ended June 30, 2019.

6 **Q. Please describe any major changes to the generation fleet or regulatory**  
7 **changes that will impact the system fuel expense.**

8 A. During the Test Period, the 1,588 MW Greenville County state-of-the art  
9 combined-cycle unit was brought online in December 2018. The Colonial  
10 Trail West Solar Facility, an approximately 142 (nominal alternating current  
11 (“AC”)) facility located in Surry County, is expected to be in service by  
12 December 2019. For this case, the system fuel expense was adjusted to reflect  
13 the expected full-year fuel benefits related to the Greenville County power  
14 station. The system fuel savings, calculated using a production cost model,  
15 are forecasted to be approximately \$40.0 million in 2019.

16 As discussed in the 2018 fuel factor case, the Company placed 10 generating  
17 units into “cold reserve.” These units, which are a combination of older, less  
18 efficient coal, biomass, and natural gas units totaling 1,292 MW of generation,  
19 were retired in March 2019 and are no longer in operation. In addition, the  
20 power purchase contracts for the 200 MW associated with the Roanoke Valley  
21 NUG expired in March 2019 and the 218 MW associated with Birchwood was  
22 terminated in April 2019.

1 The Company does not anticipate a significant impact to system fuel expense  
2 from these changes.

3 In addition, due to the enactment of North Carolina House Bill 589 on July 27,  
4 2017, and House Bill 374 on June 27, 2018, the Company can now recover  
5 the total delivered costs, including capacity and non-capacity costs, associated  
6 with certain purchases of power from qualifying facilities (“QFs”) under  
7 PURPA that are not subject to economic dispatch or curtailment. Reflecting  
8 these costs will increase system fuel expense allocated to the North Carolina  
9 jurisdiction by approximately \$44.7 million.

10 **Q. Please describe the other fuel expense normalization items.**

11 A. The following normalization adjustments were made in Schedule 4.

12 (1) The \$/MWh expense rates for nuclear, coal, natural gas, oil, purchases,  
13 and NUGs are based on the actual 12-month average expense rates incurred  
14 during the Test Period. Using the 12-month average rate for these  
15 commodities is consistent with the methodology used in the 2008 – 2018 fuel  
16 cases, and is a fair representation of the expected expense rates during the  
17 February 2020 – January 2021 rate period.

18 (2) The NUG expense is adjusted higher to account for the new legislation.

19 **Q. Please comment on the changes in the expenses included for PJM market  
20 purchases, NUG energy purchases, and off-system sales.**

21 A. Schedule 4 shows the PJM market purchases during the Test Period including  
22 the firm transmission right net revenues, congestion costs, as well as off-

1 system sales and NUG purchases made with the marketer percentage applied  
2 to these expenses at the appropriate level. As filed in the 2019 base rate case  
3 (Docket No. E-22, Sub 562), the Company is using an updated marketer  
4 percentage of 71%. Schedule 4 shows a breakdown of these expenses with  
5 the current 78% marketer percentage with an adjustment to reflect the revised  
6 71% marketer percentage.

7 **Q. What is the resulting normalized system fuel expense?**

8 A. As shown by Schedule 4, which also presents the detailed calculations in  
9 support, the resulting normalized system fuel expense is approximately \$1.78  
10 billion.

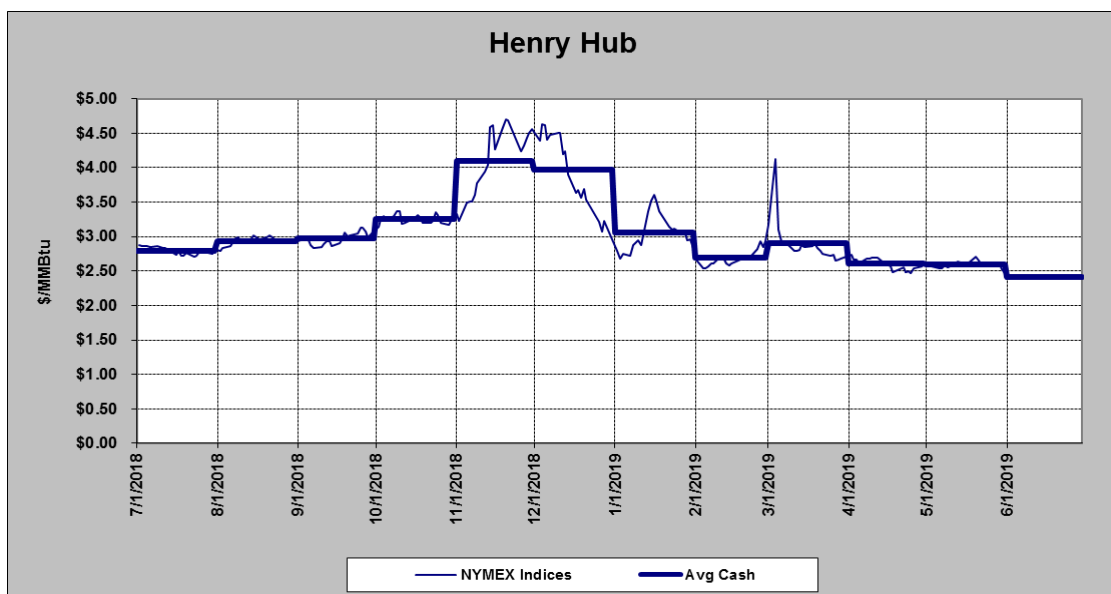
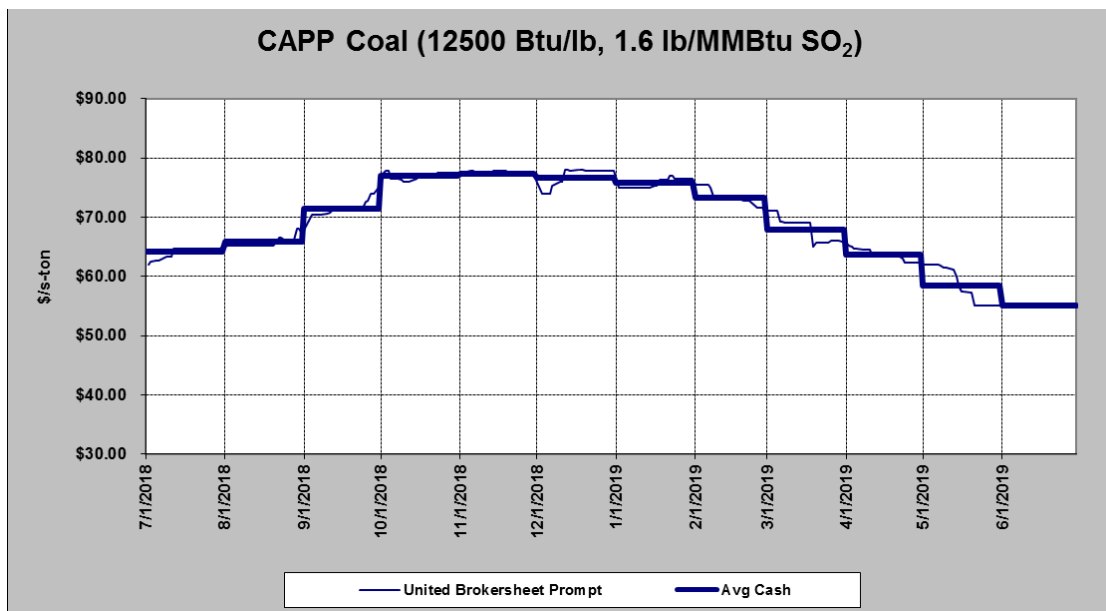
11 **Q. With the interim rate change proposed in the supplemental filing to the**  
12 **base rate case, Docket No. E-22, Sub 562, what is the forecast of the**  
13 **Company's fuel expense recovery position for the period July 1, 2019**  
14 **through December 31, 2019?**

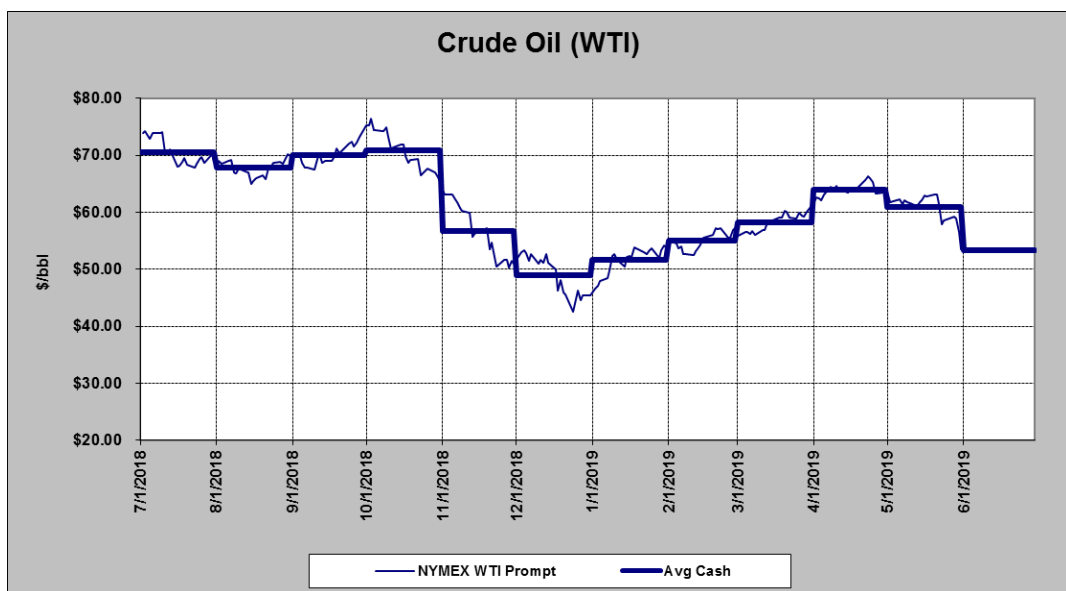
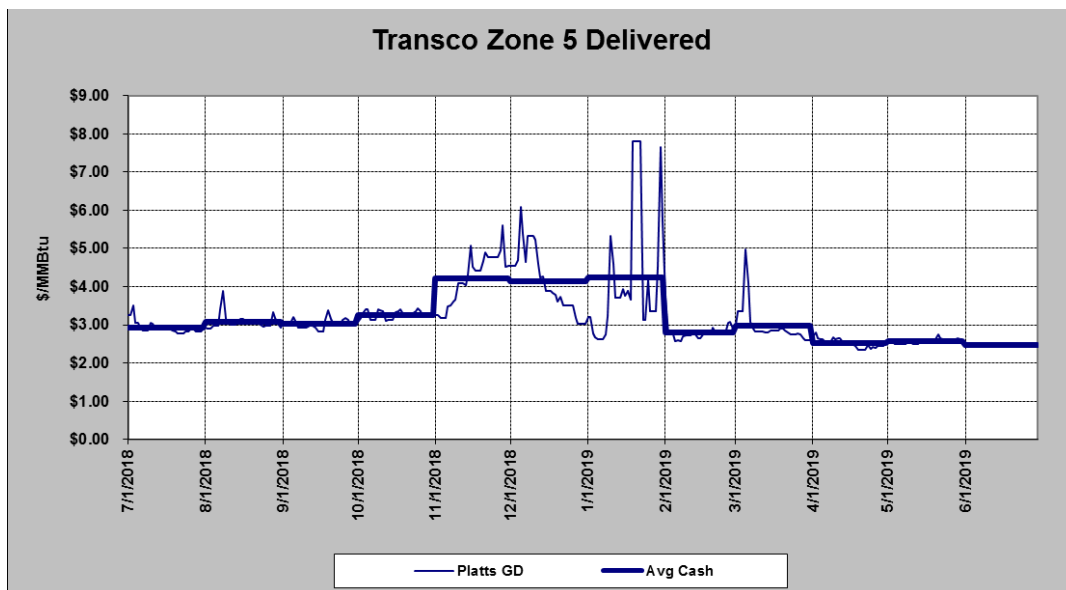
15 A. The tables below show the Company's projected fuel expense rate and  
16 revenue rate by month for the remainder of 2019. Without an interim rate  
17 change on November 1, 2019, the fuel over-recovery at the end of December  
18 2019 is expected to be approximately \$11.8 million. Assuming an interim rate  
19 change on November 1, 2019, as described by Company Witness Haynes in  
20 his additional supplemental testimony, the fuel over-recovery at the end of  
21 December 2019 is expected to be approximately \$8.9 million.

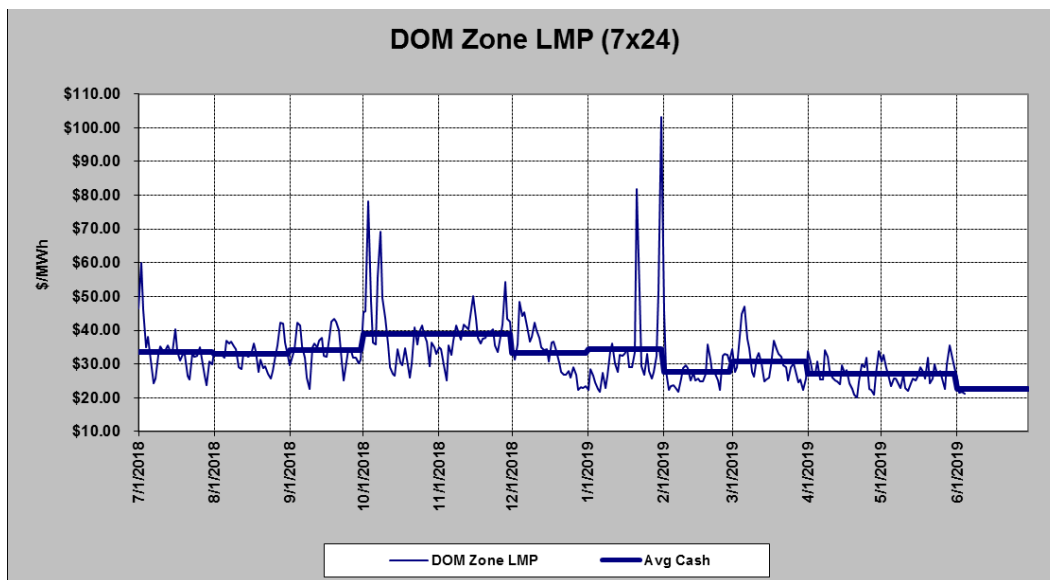
	<u>Jul-19</u>	<u>Aug-19</u>	<u>Sep-19</u>	<u>Oct-19</u>	<u>Nov-19</u>	<u>Dec-19</u>	
NC MWh sales	430,324	401,997	364,787	327,231	318,564	367,234	
NC cost (\$/MWh)	20.28	20.02	18.96	19.65	23.15	21.82	
NC Fuel Cost (\$/MWh)	19.67	19.42	18.39	19.06	22.45	21.17	
NC Recovery rate	25.30	25.30	25.30	25.30	25.30	25.30	
Recovery (\$/MWh)	5.63	5.88	6.91	6.24	2.85	4.13	
Proj over(under) recovery	\$ 2,422,672	\$ 2,363,067	\$ 2,518,972	\$ 2,043,334	\$ 907,549	\$ 1,517,051	\$ 11,772,645
Month End Def Balance							PROJECTED DEFERRAL \$ (550,353)
( ) under recovery							

	<u>Jul-19</u>	<u>Aug-19</u>	<u>Sep-19</u>	<u>Oct-19</u>	<u>Nov-19</u>	<u>Dec-19</u>	
NC MWh sales	430,324	401,997	364,787	327,231	318,564	367,234	
NC cost (\$/MWh)	20.28	20.02	18.96	19.65	23.15	21.82	
NC Fuel Cost (\$/MWh)	19.67	19.42	18.39	19.06	22.45	21.17	
NC Recovery rate	25.30	25.30	25.30	25.30	21.05	21.05	
Recovery (\$/MWh)	5.63	5.88	6.91	6.24	(1.40)	(0.12)	
Proj over(under) recovery	\$ 2,422,672	\$ 2,363,067	\$ 2,518,972	\$ 2,043,334	\$ (446,348)	\$ (43,694)	\$ 8,858,003
Month End Def Balance							PROJECTED DEFERRAL \$ (550,353)
( ) under recovery							

- 1 **Q. Please summarize how commodity prices varied over the Test Period.**
- 2 A. The graphs below show the actual spot commodity prices during the Test
- 3 Period. Spot coal prices trended downward during the Test Period. Natural
- 4 gas spot prices trended downward slightly during the Test Period with slight
- 5 volatility during the winter. Company Witness Dale E. Hinson describes the
- 6 Company's coal and natural gas buying practices, which determine the actual
- 7 coal and natural gas expenses. Spot power prices showed relatively moderate
- 8 prices and volatility during the Test Period.







- 1 Q. Mrs. Farmer, does this conclude your direct testimony?
- 2 A. Yes, it does.

**BACKGROUND AND QUALIFICATIONS  
OF  
KATHERINE E. FARMER**

As a Senior Financial Analyst Specialist, Katherine Farmer is responsible for forecasting the Company's system energy supply mix, and total system fuel and purchased power expenses.

Mrs. Farmer joined Dominion Energy in Distribution Engineering and has held multiple individual and management roles in Distribution, Electric Transmission, Telecommunications, Risk Management, and Generation System Planning. She graduated from the College of William and Mary with a Bachelor of Science degree and earned her MBA from the University of Richmond.

She has previously submitted testimony before the State Corporation Commission of Virginia.

**DOMINION ENERGY NORTH CAROLINA  
EQUIVALENT AVAILABILITY FACTORS (%)  
NUCLEAR AND LARGE COAL UNITS**

**July 2018-June 2019**

	Nuclear Units				Large Coal Units					
	North Anna Unit 1	Unit 2	Surry Unit 1	Unit 2	Mt. Storm Unit 1	Unit 2	Unit 3	Chesterfield Unit 5	Unit 6	VaCity Unit 1
Jul-18	99.3%	94.4%	100.0%	100.0%	99.1%	84.7%	93.2%	91.7%	95.2%	86.3%
Aug-18	99.5%	99.8%	100.0%	100.0%	89.5%	86.2%	81.1%	57.3%	88.3%	89.0%
Sep-18	99.7%	99.9%	100.0%	100.0%	99.2%	66.1%	97.2%	26.5%	39.5%	30.0%
Oct-18	99.9%	100.0%	81.7%	83.5%	99.2%	78.3%	82.0%	0.0%	0.0%	0.0%
Nov-18	99.9%	100.0%	100.0%	0.0%	75.5%	61.8%	0.7%	0.0%	39.1%	75.6%
Dec-18	100.0%	100.0%	100.0%	79.6%	91.5%	100.0%	58.7%	90.3%	99.2%	64.2%
Jan-19	91.4%	100.0%	100.0%	100.0%	91.3%	86.8%	94.3%	94.7%	83.5%	66.0%
Feb-19	100.0%	99.1%	100.0%	100.0%	32.2%	52.9%	61.2%	11.2%	83.2%	35.7%
Mar-19	100.0%	5.9%	100.0%	100.0%	0.0%	0.0%	76.8%	76.4%	68.7%	63.7%
Apr-19	100.0%	64.9%	100.0%	98.4%	0.0%	7.7%	52.3%	94.6%	6.7%	69.0%
May-19	100.0%	100.0%	100.0%	100.0%	81.0%	76.9%	52.3%	0.0%	0.0%	58.1%
Jun-19	100.0%	92.2%	100.0%	100.0%	61.1%	70.3%	79.0%	91.5%	45.7%	60.8%
12-Month Average	99.1%	87.9%	98.4%	88.5%	68.5%	64.5%	69.4%	53.2%	54.1%	58.4%

**DOMINION ENERGY NORTH CAROLINA  
NET CAPACITY FACTORS (%)  
NUCLEAR AND LARGE COAL UNITS**

**July 2018-June 2019**

	Nuclear Units				Large Coal Units					
	North Anna Unit 1	Unit 2	Surry Unit 1	Unit 2	Mt. Storm Unit 1	Unit 2	Unit 3	Chesterfield Unit 5	Unit 6	VaCity Unit 1
Jul-18	99.6%	94.7%	100.8%	101.0%	73.6%	55.6%	52.1%	37.0%	38.7%	71.5%
Aug-18	99.7%	100.1%	100.4%	100.2%	58.8%	56.4%	37.2%	37.2%	49.3%	76.2%
Sep-18	100.4%	100.9%	100.6%	100.3%	71.2%	34.0%	45.0%	20.4%	29.0%	20.9%
Oct-18	101.8%	102.7%	84.3%	85.3%	75.5%	58.5%	63.1%	0.0%	0.0%	0.0%
Nov-18	102.9%	103.8%	104.9%	0.0%	34.4%	0.0%	0.0%	3.0%	8.3%	69.1%
Dec-18	103.0%	103.8%	104.5%	83.2%	11.7%	0.0%	0.0%	7.5%	33.5%	47.4%
Jan-19	95.1%	103.4%	104.6%	104.4%	27.2%	29.3%	18.8%	26.7%	19.2%	26.8%
Feb-19	102.9%	101.1%	104.6%	104.4%	5.6%	0.0%	13.5%	3.2%	3.0%	13.1%
Mar-19	103.2%	5.7%	104.6%	104.3%	0.0%	0.0%	47.3%	9.6%	0.0%	23.4%
Apr-19	102.4%	68.6%	103.6%	100.7%	0.0%	6.3%	43.3%	0.0%	0.0%	26.5%
May-19	101.8%	102.5%	101.7%	101.7%	75.3%	71.2%	23.7%	0.0%	0.0%	42.8%
Jun-19	100.8%	93.4%	101.1%	101.3%	25.5%	61.2%	48.7%	51.6%	30.4%	26.6%
12-Month Average	101.1%	89.9%	101.3%	90.6%	38.6%	31.4%	32.9%	16.4%	17.7%	37.2%

Actual 12-Month Ended June 2019

	<u>Generation (MWhs)</u>	<u>% of Energy Supply</u>
Nuclear	28,083,596	30.9%
Coal	9,259,384	10.2%
Heavy Oil	0	0.0%
Wood and Natural Gas Steam	1,032,011	1.1%
Combined Cycle and Combustion Turbine	35,509,724	39.1%
Solar and Hydro - Conventional and Pumped Storage	4,609,788	5.1%
Net Power Transactions	15,301,134	16.9%
Less Energy for Pumping	(3,038,494)	-3.3%
Total System	90,757,143	100.0%
Nuclear, Coal and Net Power Transactions		97.1%

**DOMINION ENERGY NORTH CAROLINA  
ENERGY AND FUEL EXPENSES**

**Normalized and Adjusted Energy and Fuel Expense based on Actual 12-Months Ended June 2019  
(Company Ownership Only)**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	12-Months Ended June 2019								June 2019		
	Expense (\$)	Generation (MWh)	Rate (\$/MWh)	Supply (%)	Ratio of Coal Oil, CT & CC NUG & Other MWh To Total Sum	Coal, Oil, CT & CC, NUG, Other, Nuclear Adj. and Growth MWh	Adjusted Generation (MWh)	Expense (\$)	Generation (MWh)	Rate (\$/MWh)	Normalized & Adjusted Fuel Expense at Applicable Rate (8) x (11)
Coal (1)	329,626,242	10,291,395	32.03	11.3	0.1671	59,532,474	9,950,079	38,640,485	999,127	32.03	(5) 318,701,030
Nuclear											
Surry	86,857,325	14,084,831	6.17	15.5			13,932,840	7,679,153	1,216,093		
North Anna	88,327,543	13,998,765	6.31	15.4			14,128,653	7,827,546	1,214,886		
Total Nuclear	175,184,868	(4) 28,083,596	6.24	30.9			28,061,493	15,506,699	2,430,979	6.24	(5) 175,103,716
Heavy Oil	0	0	0.00	0.0	0.0000	59,532,474	0	0	0	0.00	(5) 0
CC & CT (2)	967,449,526	35,509,724	27.24	39.1	0.5767	59,532,474	34,331,961	78,233,786	4,004,986	27.24	(5) 935,202,618
Hydro	0	4,533,733		5.0			4,533,733	0	322,191		0
Solar		76,055		0.1			76,055		11,894		
Power Transactions											
NUG Fuel (6)	48,928,014	3,604,032	13.58	4.0	0.0585	59,532,474	3,484,495	3,416,701	207,158	13.58	(5) 47,305,190
PJM Purchases	341,059,652	12,169,620	28.03	13.4	0.1976	59,532,474	11,765,998	174,907	196,459	28.03	(7) 329,747,945
Marketer Percent Adj to 71%											(30,607,918)
NUG Expense Adj (8)											44,736,521
NCEMC Expense Adj (9)											(23,683,023)
Greensville Adjustment (10)											(39,997,000)
Congestion removed from Base (11)											31,820,071
Adjustments											
Sales for Resale	(4,947,928)	(472,518)	10.47	-0.5			(472,518)	0	(280,934)		(4,947,928) (3)
Net	385,039,738	15,301,134	25.16	16.9			14,777,975	3,591,608	122,683		354,373,859
Pumping	0	(3,038,494)		-3.3			(3,038,494)	0	(238,864)		0
Energy Supply	1,857,300,374	90,757,143	20.46	100.0			88,616,747	135,972,578	7,652,996	20.12	1,783,381,223
										at gen level	

NOTE: ALL VALUES REFLECT COMPANY'S OWNERSHIP OF NORTH ANNA, CLOVER AND BATH COUNTY

- (1) Coal includes wood and natural gas steam generation  
 (2) CC & CT includes jet oil, light oil and natural gas generation  
 (3) Fuel expense is equal to 12 months ended June 2019  
 (4) Nuclear expense excludes interim storage  
 (5) Fuel expense rate based on weather normalized fuel expense  
 (6) NUG fuel includes expenses related to dispatchable NUGs at 78% for those units subject to the marketer percentage  
 (7) Purchases include 71% of the fuel expense and the impact of the FTRs  
 (8) NUG Expense adjustment includes the impact of statutory changes to NUG capacity and fuel expense  
 (9) System Expense adjustment includes the impact of the end of the NCEMC contract in Dec 2019  
 (10) System Expense adjustment includes the impact of a full year of operations for Greensville  
 (11) Purchased power expense adjusted for the impact of the removal of congestion expense from Base Rate

**Aug 13 2019**

**OFFICIAL COPY**

**DIRECT TESTIMONY  
OF  
RONNIE T. CAMPBELL  
ON BEHALF OF  
DOMINION ENERGY NORTH CAROLINA  
BEFORE THE  
NORTH CAROLINA UTILITIES COMMISSION  
DOCKET NO. E-22, SUB 579**

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

2   A.     My name is Ronnie T. Campbell, and my business address is 120 Tredegar  
3           Street, Richmond, Virginia 23219. I am a Supervisor of Accounting for the  
4           Power Generation and Power Delivery Groups, which includes responsibility  
5           for Virginia Electric & Power Company, which operates in North Carolina as  
6           Dominion Energy North Carolina (the “Company”). My responsibilities  
7           include overseeing personnel responsible for recording the Company’s actual  
8           fuel and purchased power expenses, as well as any under-/over-recovery of  
9           such expenses through the fuel deferral mechanism, operation and  
10          maintenance accounting activities, reserve analysis, and joint owner billings.  
11          A statement of my background and qualifications is attached as Appendix A.

12   **Q.     Mr. Campbell, what is the purpose of your testimony in this proceeding?**

13   A.     My testimony presents: 1) the Company’s actual system fuel expenses for the  
14          twelve months ended June 30, 2019 (“test period”); 2) the Company’s North  
15          Carolina recovery experience as of June 30, 2019; and 3) the accounting  
16          treatment for non-utility generators (“NUGs”).

1     **Q.     In the course of your testimony will you introduce any exhibits?**

2     A.     Yes. Company Exhibit RTC-1 has been prepared under my direction and  
3           supervision and is accurate and complete to the best of my knowledge and  
4           belief. Exhibit RTC-1 consists of the following five schedules, as prescribed  
5           by North Carolina Utilities Commission (“Commission”) Rule R8-55:

6           Schedule 1: Actual System Fuel and Purchased Power Expenses

7           Schedule 2: North Carolina Recovery Experience

8           Schedule 3: Actual Kilowatt-hour Sales

9           Schedule 4: Actual Fuel-Related Revenues

10          Schedule 5: Inventories of Fuel Burned

11    **Q.     Please provide the Company’s actual fuel expenses incurred for the test**  
12           **period and the Company’s North Carolina recovery position as of June**  
13           **30, 2019.**

14    A.     Based on the North Carolina jurisdictional fuel factor methodology approved  
15           by the Commission, the actual system fuel expenses incurred by the Company  
16           during the test period totaled \$1,857,300,374. The Company was in a fuel  
17           cost under-recovery position of \$550,353 on a North Carolina jurisdictional  
18           basis as of June 30, 2019. Details regarding fuel expenses and the calculation  
19           of this under-recovery position, also referred to as the Experience  
20           Modification Factor (“EMF”), are provided in Exhibit RTC-1 and are  
21           discussed later in my testimony.

1    **Q.     How did the Company account for NUG energy costs?**

2    A.     The Company continues to include in the EMF calculation the actual fuel  
3           costs provided by dispatchable NUGs (ROVA and Birchwood). The contract  
4           with ROVA ended March 31, 2019. The contract with Birchwood was  
5           terminated April 1, 2019. For dispatchable NUGs that do not provide actual  
6           fuel costs (ROVA I and ROVA II), the Company continued to include 78% of  
7           the reasonable and prudent energy costs in the EMF calculation. Additionally,  
8           to the extent a dispatchable NUG provides market-based energy rather than  
9           dispatching its facility, the Company included 78% of the reasonable and  
10          prudent energy costs for such market-based energy in the EMF calculation.  
11          Use of the 78% “marketer’s percentage” was agreed to between the Company  
12          and the Public Staff and approved by the Commission in the Company’s 2016  
13          fuel factor proceeding, Docket No. E-22, Sub 534.

14   **Q.     Please provide an explanation of the five schedules presented in Exhibit**  
15   **RTC-1.**

16   A.     Schedule 1, Column 1 presents the system fuel and purchased power expenses  
17          incurred by the Company during the test period totaling \$2,243,254,838. Of  
18          that amount, \$1,857,300,374 was included in the EMF calculation based on  
19          the North Carolina jurisdictional fuel factor methodology approved by the  
20          Commission, as shown by month in Column 2.

1    **Q.     Please explain the adjustments that cause the amounts in Schedule 1,**  
2           **Column 1 to differ from those in Schedule 1, Column 2.**

3    A.     The following adjustments are necessary to comply with Commission Rule  
4           R8-55 and its orders pertaining to fuel expenses.

5           1. Nuclear (page 1 of Schedule 1)

6           Column 2 excludes costs related to the interim storage of spent nuclear  
7           fuel.

8           2. Purchased Power (page 2 of Schedule 1)

9           Column 2 excludes (1) capacity costs; (2) the non-fuel portion of  
10          purchases from dispatchable NUGs; (3) actual energy costs for non-  
11          dispatchable NUGs; and (4) the non-fuel portion of purchases from  
12          PJM.

13   **Q.     Schedule 2 shows that the EMF calculation resulted in an under-recovery**  
14          **of \$550,353. Please provide further explanation of this schedule.**

15   A.     Schedule 2 presents the North Carolina jurisdictional recovery experience by  
16          month for the test period. Schedule 2 is presented in three parts. Part 1 shows  
17          the total North Carolina system fuel and purchased power costs excluding the  
18          system allowance for funds used during construction (“AFUDC”). Part II  
19          shows the North Carolina jurisdictional fuel and purchased power costs  
20          including credit adjustments for the fuel cost from non-requirements sales and  
21          PJM off-system sales, and other fuel-related adjustments. Part III presents, by

1 month, the North Carolina jurisdictional fuel revenues and the North Carolina  
2 jurisdictional monthly and cumulative recovery experience.

3 **Q. What were the total fuel costs and fuel revenues for North Carolina**  
4 **jurisdictional customers?**

5 A. The fuel costs allocated to North Carolina jurisdictional customers totaled  
6 \$92,397,802. The Company received fuel revenues totaling \$91,847,449.  
7 The difference between the fuel costs and the fuel revenues resulted in an  
8 under-recovery of \$550,353 for the test period.

9 **Q. Please describe the information contained in Schedules 3 - 5 presented in**  
10 **Exhibit RTC-1.**

11 A. Schedule 3 provides the actual kilowatt-hour sales at a system level and at the  
12 North Carolina jurisdictional customer level for the test period. Schedule 4  
13 provides actual fuel revenues recorded for the test period. Column 1 of  
14 Schedule 4 provides the system fuel revenue, Column 2 provides the revenue  
15 received from North Carolina jurisdictional customers for the current fuel test  
16 period, and Column 3 provides the revenue received from North Carolina  
17 jurisdictional customers for Rider B. Schedule 5 provides inventory values of  
18 fuels burned in the production of electricity. Inventory values are recorded on  
19 the books of Virginia Electric and Power Company and its subsidiary,  
20 Virginia Power Services Energy Corp, Inc.

- 1    **Q.**     **Mr. Campbell, does this conclude your direct testimony?**
- 2    **A.**     Yes, it does.

**BACKGROUND AND QUALIFICATIONS  
OF  
RONNIE T. CAMPBELL, CPA**

Ronnie T. Campbell graduated from Virginia Tech with Bachelor of Science degree in Accounting. Mr. Campbell received his Certified Public Accountant license in 1998. He was controller at World Access Service Corporation (Allianz Global Assistance) prior to joining Dominion Energy Services, Inc. in 2007. His accounting experience includes retail, non-utility generation, petroleum, and insurance industries. He has held several supervisor positions within the Dominion Energy Services, Inc. accounting organization, including merchant and non-fuel accounting. He transitioned into his current role in 2009. His current responsibilities include overseeing personnel responsible for the Company's regulated fuel and operation and maintenance accounting activities, purchased power expenses, deferred fuel mechanism, reserve analysis, and joint owner billings.

Mr. Campbell has previously presented testimony before the North Carolina Utilities Commission.

**Dominion Energy North Carolina**  
**Actual System Fuel and Purchased Power Expenses**  
**July 2018 - June 2019**

	System Expenses As Booked (1)	North Carolina System Expenses As Booked (2)
<b><u>Steam Generation Fuel Cost</u></b>		
July 2018	\$ 58,058,725	\$ 58,058,725
August	40,671,768	40,671,768
September	34,446,929	34,446,929
October	30,281,902	30,281,902
November	19,334,014	19,334,014
December	20,652,879	20,652,879
January 2019	24,861,983	24,861,983
February	10,521,449	10,521,449
March	15,189,154	15,189,154
April	13,477,365	13,477,365
May	29,044,241	29,044,241
June	33,085,832	33,085,832
FERC Account 501 - Steam Fuel Cost	\$ 329,626,241	\$ 329,626,241
<b><u>Nuclear Generation Fuel Cost</u></b>		
July 2018	\$ 16,678,671	\$ 15,172,542
August	16,720,875	15,929,444
September	15,827,981	15,486,024
October	14,781,402	14,375,330
November	12,631,733	12,110,737
December	15,564,053	15,500,480
January 2019	15,974,537	15,945,010
February	14,510,105	14,409,710
March	12,202,191	12,166,538
April	14,473,811	13,896,775
May	16,088,729	15,549,592
June	15,969,968	14,642,685
FERC Account 518 - Nuclear Fuel Cost	\$ 181,424,055	\$ 175,184,868

**Dominion Energy North Carolina**  
**Actual System Fuel and Purchased Power Expenses**  
**July 2018 - June 2019**

	System Expenses As Booked (1)	North Carolina System Expenses As Booked (2)
<b><u>Other Generation Fuel Cost</u></b>		
July 2018	\$ 69,195,504	\$ 69,195,504
August	87,333,353	87,333,353
September	69,673,944	69,673,944
October	54,200,460	54,200,460
November	81,600,777	81,600,777
December	94,139,139	94,139,139
January 2019	133,929,396	133,929,396
February	110,437,571	110,437,571
March	91,116,088	91,116,088
April	44,629,486	44,629,486
May	52,958,855	52,958,855
June	78,234,952	78,234,952
FERC Account 547 - Other Fuel Cost	\$ 967,449,526	\$ 967,449,526
Total Cost of Fuel Used in Current Generation	\$ 1,478,499,823	\$ 1,472,260,636
<b><u>Purchased Power</u></b>		
July 2018	58,553,840	\$ 29,607,716
August	75,074,803	27,171,649
September	73,756,154	34,646,775
October	91,770,946	49,204,640
November	102,463,399	60,305,911
December	61,295,311	32,729,354
January 2019	69,572,080	32,237,834
February	40,398,406	14,953,679
March	63,836,754	31,936,713
April	61,848,383	36,825,667
May	58,656,756	31,828,193
June	7,528,183	3,591,608
FERC Account 555 - Purchased Power Cost	\$ 764,755,015	\$ 385,039,738

**Dominion Energy North Carolina**  
**Actual System Fuel and Purchased Power Expenses**  
**July 2018 - June 2019**

	System Expenses As Booked (1)	North Carolina System Expenses As Booked (2)
<b><u>Total Fuel and Purchased Power Cost</u></b>		
July 2018	\$ 202,486,740	\$ 172,034,487
August	219,800,800	171,106,214
September	193,705,008	154,253,672
October	191,034,710	148,062,333
November	216,029,924	173,351,440
December	191,651,382	163,021,853
January 2019	244,337,995	206,974,222
February	175,867,530	150,322,409
March	182,344,187	150,408,493
April	134,429,046	108,829,293
May	156,748,581	129,380,881
June	134,818,936	129,555,077
Total Fuel and Purchased Power Cost	<u>\$ 2,243,254,838</u>	<u>\$ 1,857,300,374</u>

**Dominion Energy North Carolina  
North Carolina Recovery Experience  
Twelve Months Ended June 2019**

<b>PART I</b>	July-18	August-18	September-18	October-18	November-18	December-18	January-19	February-19	March-19	April-19	May-19	June-19	Total
FERC Account 501 - Steam Fuel Cost	\$ 58,058,725	\$ 40,671,768	\$ 34,446,929	\$ 30,281,902	\$ 19,334,014	\$ 20,652,879	\$ 24,861,983	\$ 10,521,449	\$ 15,189,154	\$ 13,477,365	\$ 29,044,241	\$ 33,085,832	\$ 329,626,241
FERC Account 518 - Nuclear Fuel Cost	\$ 15,172,542	\$ 15,929,444	\$ 15,486,024	\$ 14,375,330	\$ 12,110,737	\$ 15,500,480	\$ 15,945,010	\$ 14,409,710	\$ 12,166,538	\$ 13,896,775	\$ 15,549,592	\$ 14,642,685	\$ 175,184,868
FERC Account 547 - Other Fuel Cost	\$ 69,195,504	\$ 87,333,353	\$ 69,673,944	\$ 54,200,460	\$ 81,600,777	\$ 94,139,139	\$ 133,929,396	\$ 110,437,571	\$ 91,116,088	\$ 44,629,486	\$ 52,958,855	\$ 78,234,952	\$ 967,449,526
FERC Account 555 - Purchased Power Cost	\$ 29,607,716	\$ 27,171,649	\$ 34,646,775	\$ 49,204,640	\$ 60,305,911	\$ 32,729,354	\$ 32,237,834	\$ 14,953,679	\$ 31,936,713	\$ 36,825,667	\$ 31,828,193	\$ 3,591,608	\$ 385,039,738
Total NC System Fuel and Purchased Power Cost	\$ 172,034,487	\$ 171,106,214	\$ 154,253,672	\$ 148,062,333	\$ 173,351,440	\$ 163,021,853	\$ 206,974,222	\$ 150,322,409	\$ 150,408,493	\$ 108,829,293	\$ 129,380,881	\$ 129,555,077	\$ 1,857,300,374
Exclude System AFUDC	(18,409)	(18,717)	(18,217)	(17,847)	(16,685)	(19,658)	(19,722)	(17,947)	(14,129)	(17,855)	(20,718)	(19,332)	(219,236)
Total NC System Fuel and Purchased Power Cost w/o AFUDC	<u>\$ 172,016,078</u>	<u>\$ 171,087,497</u>	<u>\$ 154,235,455</u>	<u>\$ 148,044,485</u>	<u>\$ 173,334,754</u>	<u>\$ 163,002,195</u>	<u>\$ 206,954,500</u>	<u>\$ 150,304,462</u>	<u>\$ 150,394,364</u>	<u>\$ 108,811,439</u>	<u>\$ 129,360,163</u>	<u>\$ 129,535,745</u>	<u>\$ 1,857,081,139</u>
<b>PART II</b>													
NC Jurisdictional Fuel and Purchased Power Cost w/o AFUDC	\$ 9,269,226	\$ 7,785,297	\$ 8,502,667	\$ 7,168,928	\$ 9,217,677	\$ 8,027,413	\$ 9,986,538	\$ 6,780,920	\$ 7,060,062	\$ 5,554,386	\$ 5,771,818	\$ 7,385,944	\$ 92,510,876
Credit for the fuel cost from Non-Requirement Sales	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Credit for the fuel cost from PJM Off-system Sales	\$ (79,354)	\$ (1,900)	\$ (6,444)	\$ (488)	\$ (4,754)	\$ (39,341)	\$ (33,807)	\$ (38,162)	\$ (830)	\$ -	\$ (5,061)	\$ (67,242)	\$ (277,382)
Other Fuel Related Adjustments <sup>(1)</sup>	<u>13,120</u>	<u>13,092</u>	<u>13,103</u>	<u>12,990</u>	<u>12,107</u>	<u>14,537</u>	<u>14,316</u>	<u>14,014</u>	<u>11,033</u>	<u>14,182</u>	<u>16,456</u>	<u>15,355</u>	<u>164,307</u>
Adjusted NC Jurisdiction Fuel and Purchased Power Cost	<u>\$ 9,202,992</u>	<u>\$ 7,796,489</u>	<u>\$ 8,509,326</u>	<u>\$ 7,181,431</u>	<u>\$ 9,225,030</u>	<u>\$ 8,002,610</u>	<u>\$ 9,967,048</u>	<u>\$ 6,756,772</u>	<u>\$ 7,070,265</u>	<u>\$ 5,568,568</u>	<u>\$ 5,783,213</u>	<u>\$ 7,334,057</u>	<u>\$ 92,397,802</u>
<b>PART III</b>													
Adjusted NC Jurisdiction Fuel and Purchased Power Cost	\$ 9,202,992	\$ 7,796,489	\$ 8,509,326	\$ 7,181,431	\$ 9,225,030	\$ 8,002,610	\$ 9,967,048	\$ 6,756,772	\$ 7,070,265	\$ 5,568,568	\$ 5,783,213	\$ 7,334,057	\$ 92,397,802
NC Jurisdictional Revenue	<u>(9,180,601)</u>	<u>(7,773,467)</u>	<u>(8,686,306)</u>	<u>(6,704,261)</u>	<u>(7,508,220)</u>	<u>(7,561,018)</u>	<u>(8,352,526)</u>	<u>(6,523,936)</u>	<u>(7,035,991)</u>	<u>(6,557,793)</u>	<u>(6,708,521)</u>	<u>(9,254,808)</u>	<u>(91,847,449)</u>
(Over)/Under Recovery	\$ 22,391	\$ 23,022	\$ (176,980)	\$ 477,170	\$ 1,716,810	\$ 441,592	\$ 1,614,522	\$ 232,837	\$ 34,273	\$ (989,225)	\$ (925,308)	\$ (1,920,751)	\$ 550,353
Cumulative (Over)/Under Recovery	\$ 22,391	\$ 45,414	\$ (131,567)	\$ 345,603	\$ 2,062,413	\$ 2,504,004	\$ 4,118,526	\$ 4,351,363	\$ 4,385,636	\$ 3,396,411	\$ 2,471,104	\$ 550,353	

<sup>(1)</sup> Includes jurisdictional AFUDC and AFUDC tax credits.

**Dominion Energy North Carolina  
Actual Kilowatt-hour (kWh) Sales  
Twelve Months Ended June 2019**

*(In Thousands)*

	<b>System kWh Sales*</b>	<b>North Carolina Retail kWh Sales*</b>
	<u>(1)</u>	<u>(2)</u>
July 2018	8,214,825	442,467
August	8,199,615	372,965
September	7,595,195	418,504
October	6,656,594	322,144
November	6,822,348	362,604
December	7,394,922	364,016
January 2019	8,088,932	390,122
February	6,741,980	303,985
March	7,005,786	328,675
April	6,026,773	307,427
May	7,015,191	312,814
June	7,601,060	433,226
Total kWh Sales	<u>87,363,222</u>	<u>4,358,951</u>

\*Including unbilled kWh sales.

**Dominion Energy North Carolina  
Actual Fuel Related Revenues  
Twelve Months Ended June 2019**

	System Fuel Related Revenues As Booked*	North Carolina Retail Fuel Factor Related Revenues*	
		Current Period	EMF Rider B
	(1)	(2)	(3)
July 2018	\$213,425,271	\$ 9,180,601	(569,969)
August	216,218,567	7,773,467	(482,238)
September	199,230,951	8,686,306	(539,376)
October	172,511,108	6,704,261	(416,202)
November	177,621,501	7,508,220	(466,330)
December	193,470,389	7,561,018	(469,463)
January 2019	213,581,280	8,352,526	1,538,807
February	177,737,987	6,523,936	1,181,390
March	184,416,577	7,035,991	1,274,107
April	157,725,298	6,557,793	1,187,556
May	184,071,713	6,708,521	1,214,876
June	<u>200,360,016</u>	<u>9,254,808</u>	<u>1,676,005</u>
Total Fuel Related Revenues	<u>\$ 2,290,370,657</u>	<u>\$ 91,847,449</u>	<u>\$ 5,129,164</u>

\*Including unbilled kWh revenues.

**Dominion Energy North Carolina**  
**Inventories of Fuel Burned**  
**As of June 30, 2019**

<b>Fuel</b>	<b>Inventory Measure</b>		<b>Inventory Volume</b>	<b>Inventory Value</b>
<b>(1)</b>	<b>(2)</b>		<b>(3)</b>	<b>(4)</b>
Coal <sup>(b)</sup>	Tons	Coal Rec	1,430,049	\$ 92,253,466
Wood <sup>(b)</sup>	Tons	Wood & Jet Fuel Rec	60,679	1,840,562
Light Oil <sup>(a)</sup>	Gallons	Oil Rec	65,692,948	133,854,088
Heavy Oil <sup>(a)</sup>	Barrels	Oil Rec	1,563,468	73,904,515
Jet Fuel <sup>(a)</sup>	Gallons	Wood & Jet Fuel Rec	41,376	118,474
Natural Gas <sup>(a)</sup>	Dth	Power Gen. Summary	2,252,374	5,494,874
Nuclear Fuel Stock <sup>(b)</sup>	N/A			413,442,917
Total				<u>\$ 720,908,896</u>

(a) Inventories are held by Virginia Power Services Energy Corp, Inc.

(b) Inventories are held by Virginia Electric & Power Company.

**DIRECT TESTIMONY  
OF  
DALE E. HINSON  
ON BEHALF OF  
DOMINION ENERGY NORTH CAROLINA  
BEFORE THE  
NORTH CAROLINA UTILITIES COMMISSION  
DOCKET NO. E-22, SUB 579**

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

2   A.     My name is Dale E. Hinson, and my business address is 120 Tredegar Street,  
3           Richmond, Virginia 23219. I am the Manager-Gas Supply and a member of  
4           the management team responsible for fossil fuel procurement for Virginia  
5           Electric and Power Company, which operates in North Carolina as Dominion  
6           Energy North Carolina (the “Company”). The Dominion Energy Fuels group  
7           handles the procurement, scheduling, transportation, and inventory  
8           management for natural gas, coal, biomass, and oil consumed at the  
9           Company’s power stations. A statement of my background and qualifications  
10          is attached as Appendix A.

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

12   A.     I will discuss the Company’s fossil fuel procurement practices, including any  
13          recent changes to those practices, for the delivery of fuels to the Company’s  
14          fossil generation fleet during the test period of July 1, 2018 to June 30, 2019  
15          (“Test Period”), in compliance with Rule 8-55(e)(5).

16   **Q.     Are you sponsoring any exhibits?**

17   A.     Yes. Company Exhibit DEH-1, consisting of one schedule, was prepared  
18          under my direction and is accurate and complete to the best of my knowledge.

1 Exhibit DEH-1 is the Dominion Energy North Carolina Summary Report of  
2 Fuel Transactions with Affiliates during the Test Period.

3 **SECTION I**  
4 **FUEL COMMODITY MARKETS AND PROCUREMENT STRATEGIES**

5 **Q. Please discuss the trends that affected fuel commodity markets during the**  
6 **Test Period.**

7 A. During the Test Period of July 2018 through June 2019, domestic natural gas  
8 production increased. This was in conjunction with an increase in natural gas  
9 exports as well as an increase in domestic natural gas demand, particularly in  
10 the electric generation and industrial sectors. After a period of warmth to start  
11 the meteorological winter, some volatility returned to the weather for January  
12 and February throughout the northeastern quadrant of the country. Despite  
13 this volatility, Transco Z5 natural gas prices averaged lower than the previous  
14 winter period. For the first half of the Test Period, coal prices rose due to  
15 thermal coal exports and the continued rise of global coking coal prices.  
16 However, the Company has seen a steady decline in coal prices for the second  
17 half of the Test Period resulting from the generally mild winter domestically  
18 and in Europe and continued low natural gas prices resulting in little coal  
19 demand for power generation during the same period. After a short period of  
20 decline, oil prices have had upward momentum, with a West Texas  
21 Intermediate (“WTI”) price of around \$62/barrel for the Test Period.

1    **Q.     Has the Company changed its fuel procurement practices?**

2    A.     No. The Company continues to follow the same procurement policy as it has  
3           in the past in accordance with the Company's Fuel Procurement Practices  
4           Report ("Dominion Fuel Policy"), a copy of which was filed with the  
5           Commission on December 30, 2013, in Docket No. E-100, Sub 47A. The  
6           Dominion Fuel Policy addresses the physical procurement of fossil and  
7           nuclear fuels.

8    **Q.     Does the Company currently have a price hedging program?**

9    A.     Yes, the Company has a price hedging program under which the Company  
10          price hedges commodities needed for power generation using a range of  
11          volume targets, which gradually decrease over a three-year period. The  
12          Company's fuel price hedging program is discussed in greater detail in the  
13          Fuel Procurement Strategy Report filed with the Virginia Commission on  
14          January 31, 2019, in Case No. PUR-2018-00067 (the "Report"). In summary,  
15          as that Report describes, through competitive fuel supply solicitations and  
16          other market purchases, the Company maintains a reliable supply of fuel  
17          specifically designed for combustion in the Company's generation stations.  
18          The duration of these physical procurement agreements is staggered (*i.e.*,  
19          different contract lengths) and can also include a fixed price component, the  
20          inclusion of which creates a price hedge. Managing price volatility is an  
21          important aspect of the Company's price hedging program and can be further  
22          supported, as needed, using financial transactions.

SECTION II  
NATURAL GAS PROCUREMENT

**Q. Please discuss the Company's gas procurement practices.**

A. The Company employs a disciplined natural gas procurement plan to ensure a reliable supply of natural gas at competitive prices. Through periodic solicitations and the open market, the Company serves its natural gas-fired fleet using a combination of day-ahead, monthly, seasonal, and multiyear physical gas supply purchases.

In addition to managing its natural gas supply portfolio, the Company evaluates the diverse portfolio of pipeline and storage contracts to determine the most reliable and economical delivered fuel options for each power station. This portfolio of natural gas transportation contracts provides access to multiple natural gas supply and trading points from the Marcellus shale region to the southeast region. Further, the Company actively participates in the interstate pipeline capacity release and physical supply markets, as well as longer-term, pipeline expansion projects that will augment its transportation portfolio and enhance reliability at a reasonable cost.

**Q. Please discuss any changes to the Company's gas-fired fleet.**

A. The Company continues to utilize more natural gas to serve the electricity needs of its customers. In fact, during the Test Period, energy production at the Company's natural gas-fired power stations accounted for about 39.1%, up from 33% in the prior test period, of the electricity generated.

1 On December 8, 2018, the Company added the Greenville County Power  
2 Station (“Greenville”) to its regulated fleet. Greenville is a natural gas-fired  
3 combined-cycle power station with a generating capacity of 1,588 MW.  
4 Additionally, as mentioned in Company Witness Katherine E. Farmer’s direct  
5 testimony, the Company retired certain older, less efficient natural gas units in  
6 March 2019.

7 **SECTION III**  
8 **COAL PROCUREMENT**

9 **Q. Please discuss the Company’s coal procurement practices.**

10 A. The Company employs a multiyear physical procurement plan to ensure a  
11 reliable supply of coal, delivered to its generating stations by truck or rail, at  
12 competitive prices. This is accomplished by procuring the Company’s long-  
13 term coal requirements primarily through periodic solicitations and  
14 secondarily on the open market for short-term or spot needs. The effect of  
15 procuring both long- and short-term coal supplies provides a layering-in of  
16 contracts with staggered terms and blended prices. This ensures a reliable  
17 supply of fuel with limited exposure to potential dramatic market price  
18 swings. This blend of contract terms creates a diverse coal fuel portfolio and  
19 allows the Company to actively manage its fuel procurement strategy,  
20 contingency plans, and any risk of supplier non-performance.

## **SECTION IV**

### **BIOMASS PROCUREMENT**

**3 Q. Please discuss the Company's biomass procurement practices.**

A. The Company has a varied procurement strategy for its biomass stations depending on the geographical region of the power station. Hopewell and Southampton Power Stations are served by multiple suppliers under both short and long-term agreements, enabling the Company to increase the reliability of its biomass supply by diversifying its supplier base. The Company purchases long-term fuel supply through one primary supplier at its Altavista Power Station. Procurement for the Company's biomass needs at its co-fired Virginia City Hybrid Energy Center facility is also conducted via short and long-term contracts with various suppliers. All four biomass-consuming plants receive wood deliveries via truck.

## SECTION V

### OIL PROCUREMENT

16 **Q. Please discuss the Company's oil procurement practices.**

A. The Company purchases its No. 2 fuel oil and No. 6 fuel oil requirements on the spot market and optimizes its inventory, storage, and transportation to ensure reliable supply to its power generating facilities. Trucks, vessels, barges, and pipelines are employed to transport oil to the Company's stations and third-party storage locations, ensuring a reliable supply of oil and mitigating the price risk associated with potentially volatile prices for these products.

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

2    **A.**     Yes, it does.

**BACKGROUND AND QUALIFICATIONS  
OF  
DALE E. HINSON**

Dale E. Hinson graduated from the University of Missouri-Columbia in 1989 with a Bachelor of Science degree in Accounting and received a Master of Business Administration degree from Washington University in St. Louis-Olin Business School in 1997. He joined Dominion in 2006 as a Senior Energy Asset Trader and in 2011 became Manager of Power Asset Management. In 2013, Mr. Hinson assumed his current role as Manager – Gas Supply.

Prior to joining Dominion, Mr. Hinson worked most recently as a Senior Trader for LG&E and KU Energy LLC from 1997 to 2006. He has also held positions with Arch Coal as Director of Market Research and with Arthur Andersen & Co. as an Auditor.

Mr. Hinson has previously presented testimony before the State Corporation Commission of Virginia.

**DOMINION ENERGY NORTH CAROLINA**  
**SUMMARY REPORT OF FUEL TRANSACTIONS WITH AFFILIATES**  
**FOR THE PERIOD JULY 2018 - JUNE 2019**  
**(IN THOUSANDS)**

**Dominion Energy North Carolina Receiving from Affiliate:**

**VP Services Energy Corp., Inc.**

Sale Of Natural Gas And Oil Inventory

<u>Month</u>	<u>Amount</u>
July-18	\$81,113
August-18	\$83,071
September-18	\$72,530
October-18	\$57,793
November-18	\$85,733
December-18	\$119,857
January-19	\$139,220
February-19	\$111,496
March-19	\$92,302
April-19	\$44,925
May-19	\$53,665
June-19	<u>\$79,605</u>

Total Charged to FERC Account 151      \$1,021,310

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**DOMINION ENERGY NORTH CAROLINA**  
**SUMMARY REPORT OF FUEL TRANSACTIONS WITH AFFILIATES**  
**FOR THE PERIOD JULY 2018 - JUNE 2019**

**Dominion Energy Fuel Services, Inc. and Virginia Power Services Energy Corp., Inc.**  
**Natural Gas Transaction Summary**

	Volume			Dollars			WACOG		
	Purchase	Sale	Difference	Purchase	Sale	Difference	Purchase	Sale	Difference
Jul-18	25,801,856	25,802,798	(942)	\$ 69,726,721.31	\$ 69,725,893.51	\$ 827.81	\$ 2.702	\$ 2.702	0.000
Aug-18	25,997,243	25,999,855	(2,612)	\$ 72,937,825.48	\$ 72,946,644.48	\$ (8,819.00)	\$ 2.806	\$ 2.806	(0.000)
Sep-18	22,714,615	22,716,340	(1,725)	\$ 60,179,369.83	\$ 60,184,151.43	\$ (4,781.60)	\$ 2.649	\$ 2.649	(0.000)
Oct-18	27,639,458	27,643,942	(4,484)	\$ 77,662,566.76	\$ 77,684,213.82	\$ (21,647.06)	\$ 2.810	\$ 2.810	(0.000)
Nov-18	21,955,772	21,960,205	(4,433)	\$ 85,205,997.22	\$ 85,227,438.30	\$ (21,441.09)	\$ 3.881	\$ 3.881	(0.000)
Dec-18	27,671,012	27,671,011	1	\$ 122,784,106.60	\$ 122,783,483.04	\$ 623.56	\$ 4.437	\$ 4.437	0.000
Jan-19	26,647,311	26,647,914	(603)	\$ 129,234,252.91	\$ 129,237,539.53	\$ (3,286.62)	\$ 4.850	\$ 4.850	(0.000)
Feb-19	24,135,956	24,137,202	(1,246)	\$ 93,092,358.88	\$ 93,095,890.89	\$ (3,532.01)	\$ 3.857	\$ 3.857	0.000
Mar-19	24,447,471	24,442,788	4,683	\$ 77,287,041.73	\$ 77,275,943.48	\$ 11,098.25	\$ 3.161	\$ 3.162	(0.000)
Apr-19	19,934,450	19,939,449	(4,999)	\$ 47,646,624.25	\$ 47,658,949.78	\$ (12,325.52)	\$ 2.390	\$ 2.390	(0.000)
May-19	21,383,675	21,386,554	(2,879)	\$ 49,149,624.67	\$ 49,136,987.71	\$ 12,636.96	\$ 2.298	\$ 2.298	0.001
Jun-19	26,336,142	26,337,914	(1,772)	\$ 57,123,124.83	\$ 57,126,901.26	\$ (3,776.43)	\$ 2.169	\$ 2.169	0.000
Total	294,664,961	294,685,972	(21,011)	\$ 942,029,614.44	\$ 942,084,037.20	\$ (54,422.76)			

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**DOMINION ENERGY NORTH CAROLINA**  
**SUMMARY REPORT OF FUEL TRANSACTIONS WITH AFFILIATES**  
**FOR THE PERIOD JULY 2018 - JUNE 2019**

Company Exhibit DEH-1  
Schedule 1  
Page 3 of 3

**Dominion Energy North Carolina Receiving and Providing to Dominion Energy Fuel Services, Inc.:**

July 2018 - June 2019 Contracted Affiliated Fuel Transactions

There were no affiliate transactions of Fuel from July 2018 through June 2019

**DIRECT TESTIMONY  
OF  
TOM A. BROOKMIRE  
ON BEHALF OF  
DOMINION ENERGY NORTH CAROLINA  
BEFORE THE  
NORTH CAROLINA UTILITIES COMMISSION  
DOCKET NO. E-22, SUB 579**

1   **Q.     Please state your name, position, business address, and responsibilities.**

2   A.     My name is Tom A. Brookmire, and I am the Manager of Nuclear Fuel  
3           Procurement. My business address is Innsbrook Technical Center, 5000  
4           Dominion Boulevard, Glen Allen, Virginia 23060. I am responsible for  
5           nuclear fuel procurement, fuel-related project management, long-term nuclear  
6           spent fuel disposal, and nuclear fuel price forecasting and budgeting used by  
7           Virginia Electric and Power Company, which operates in North Carolina as  
8           Dominion Energy North Carolina (the “Company”). A statement of my  
9           background and qualifications is attached hereto as Appendix A.

10   **Q.     What is the purpose of your testimony?**

11   A.     The purpose of my testimony is to discuss the nuclear fuel market and any  
12           significant impact of the market on nuclear fuel costs during the test period of  
13           July 1, 2018 through June 30, 2019 (“test period”), in compliance with Rule 8-  
14           55(e)(5). Section I of my testimony will discuss the market and components  
15           of the Company’s nuclear fuel costs. Section II will discuss how the  
16           Company’s nuclear fuel expense rates are calculated.



1 Germany's decision to permanently shut down eight reactors and the closing  
2 and announced closings of several U.S. reactors). There have also been some  
3 reductions in supply (*e.g.*, postponement and deferral of new mines and mine  
4 capacity expansions, the idling of a U.S.-based uranium conversion plant  
5 along with delays in planned increases in uranium enrichment capacity) which  
6 have, in part, offset some of the downward trend in demand. The uranium  
7 market prices have continued to be depressed through the second quarter of  
8 2019, most likely due to the uranium Section 232 trade case (see below).

9 The price for conversion services has also experienced some upward price lift  
10 due to production cuts in the US. Long-term conversion prices have remained  
11 high due to concern over the lack of investment in new conversion production  
12 facilities, and the possibility for shortfalls in capacity longer-term.

13 The cost for enrichment services has stabilized somewhat during the test  
14 period. Although prices in this market are still depressed, there appears to be  
15 more balance in the supply and demand.

16 The price trend in U.S. domestic nuclear fuel fabrication continues to be  
17 difficult to measure because there is no active spot market, but the general  
18 consensus is that costs will continue to increase due to regulatory  
19 requirements, reduced competition, and underserved demand both in the U.S.  
20 and abroad. Additionally, the parent companies for both U.S. nuclear fuel  
21 fabricators (Westinghouse Electric Corporation ("Westinghouse") and former  
22 AREVA (fabrication now Framatome after restructuring)) have experienced

1 financial distress, which is likely to put upward pressure on fabrication costs  
2 and nuclear fuel engineering services.

3 Calendar year 2019 may mark the restart of several more reactors in Japan,  
4 which may have some short-term price lift on front-end components. Five  
5 reactors have met new standards and were restarted in 2018, six additional  
6 reactors have received initial approval with another 12 applications submitted  
7 to restart. The timing and extent of other reactor restarts in Japan remains  
8 uncertain at this time. China continues to have an aggressive nuclear energy  
9 program. It currently has 46 reactors in operation, 11 plants under  
10 construction, and others in planning, with a planned doubling of nuclear  
11 generating capacity by the early 2020s.

12 **Q. Have these changes in market costs impacted the Company's projected**  
13 **near-term costs?**

14 A. Yes, but not significantly. The Company's current mix of longer-term front-  
15 end component contracts has reduced its exposure to market volatility that has  
16 occurred over the past several years. In addition, because the Company's  
17 nuclear plants replace about one-third of their fuel on an 18-month schedule,  
18 there is a delay before the full effect of any significant changes in a  
19 component price is seen in the plant operating costs. Finally, the Company  
20 has been active in the market and has executed some market-based and fixed  
21 price contracts, allowing the Company to take advantage of current lower  
22 prices for the benefit of customers.

1   **Q.     Two U.S. miners filed a Section 232 petition in January 2018 with the**  
2           **U.S. Department of Commerce. What does this mean and how will this**  
3           **potentially affect the Company’s fuel supply?**

4   **A.     Section 232 of the Trade Expansion Act of 1962, as amended, gives the**  
5           executive branch the ability to conduct investigations to “determine the effects  
6           on the national security of imports.”

7           The petition requested the federal government, specifically, the Department of  
8           Commerce, for relief for the domestic uranium mining sector as a matter of  
9           national security. The Department of Commerce opened the investigation on  
10          July 18, 2018, and made its recommendation to the President. On July 12,  
11          2019, the President announced he will take no action with regard to the  
12          Department of Commerce’s recommendation, and no quotas or tariffs will be  
13          imposed on foreign-supplied uranium as a result. I do not expect there to be  
14          any additional action with respect to tariffs or quotas on imported uranium in  
15          the foreseeable future. However, the President, in his decision on the uranium  
16          Section 232 case, requested that a high level interagency Working Group be  
17          formed to investigate means to improve the commercial viability of the  
18          domestic nuclear fuel supply chain, including domestically mined uranium.  
19          The Working Group’s final report is expected in October 2019. Any actions  
20          stemming from the Working Group’s recommendations could have an impact  
21          on nuclear fuel prices, but I expect any such impact to be far less significant  
22          than those resulting from either tariffs or quotas.

1     **Q.     Could sanctions resulting from the Iran Nuclear Deal affect nuclear fuel**  
2     **costs in the United States?**

3     A.     Yes. The U.S. government issued waivers to foreign organizations that  
4     continue to participate with the JCPOA (Joint Comprehensive Plan of Action  
5     – also known as the Iran Nuclear Deal). Those waivers were expected to  
6     expire on August 1, 2019, but the President extended the waivers for 90 days  
7     and they are now due to expire at the end of October 2019. Should the  
8     waivers expire, it is possible that sanctions may be imposed on those  
9     organizations. One of the organizations is Rosatom, a Russian company that  
10    supplies nuclear products, including nuclear fuel, to Iran and to the world  
11    market. Sanctions against Rosatom may also extend to Tenex, a subsidiary of  
12    Rosatom, that supplies limited quantities of enriched uranium to the U.S.  
13    commercial nuclear industry. Even though the amount of enriched material  
14    that Tenex supplies to the U.S. is limited by a quota pursuant to the Russian  
15    Suspension Agreement, with very limited producers of enriched uranium in  
16    the world, any disruption of supply from Tenex has the potential to affect the  
17    U.S. nuclear fuel market.

18                                   **SECTION II**  
19                                   **NUCLEAR FUEL EXPENSE RATES**

20    **Q.     Would you please describe how the Company’s nuclear fuel expense rates**  
21    **are developed?**

22    A.     The calculation of nuclear fuel expense rates, expressed in mills per kilowatt-  
23    hour (“mills/kWh”), is based on expected plant operating cycles and the  
24    overall cost of nuclear fuel. As I stated above, front-end component costs

1 include uranium, conversion, enrichment, and fabrication services. These  
2 costs, along with AFUDC, are amortized over the energy production life of  
3 the nuclear fuel. The federal government's fee, applied to net nuclear  
4 generation sold, would also typically be included in the expense rate. This  
5 cost, applied to all U.S. nuclear generation companies, is intended to cover the  
6 eventual disposal cost of spent nuclear fuel in a federal repository. However,  
7 the fee, which historically has been one mill/kWh of net nuclear generation, is  
8 currently set to zero mills/kWh and is not collected.

9 **Q. Please provide an update regarding the status of this fee.**

10 A. In 2014, following a federal court decision, the U.S. Department of Energy  
11 ("DOE") submitted a proposal to Congress to change this one mill/kWh fee to  
12 zero. This relief is industry-wide and applies to all operating reactors,  
13 including the Company's operating reactors at the Surry and North Anna  
14 Power Stations. As of May 16, 2014, the Company is no longer required to  
15 pay the waste fee.

16 **Q. Can the waste fee collected by the federal government be reinstated?**

17 A. Yes. As I explained in my direct testimony in the Company's 2018 fuel factor  
18 adjustment case, the Nuclear Waste Policy Act allows the Secretary of Energy  
19 to review fee adequacy on an annual basis. It is likely that at some point in  
20 the future when DOE establishes a viable waste disposal program, the  
21 Secretary will develop an adjustment to the waste fee that ensures full cost  
22 recovery for the life cycle of such a program. Any proposed adjustment to the  
23 fee will again need to be submitted to Congress for review. If and when a fee

1 adjustment becomes effective, the Company will again become obligated to  
2 make the fee payment, and will again seek to recover payments for the  
3 assessed fee in its fuel factor.

4 **Q. What was the fuel expense rate for the test period?**

5 A. The fuel expense rate is provided in Exhibit KEF-1 to the Direct Testimony  
6 of Company Witness Katherine E. Farmer.

7 **Q. Does this conclude your direct testimony?**

8 A. Yes, it does.

**BACKGROUND AND QUALIFICATIONS  
OF  
TOM A. BROOKMIRE**

Tom A. Brookmire is a graduate of Virginia Tech with a Bachelor of Science degree in Nuclear Science (1983), and a Master's degree in Engineering in Nuclear Engineering from the University of Virginia (1988). He is a registered professional engineer in the Commonwealth of Virginia.

Mr. Brookmire joined Virginia Electric and Power Company in 1983, and has worked since then in staff and management positions involving nuclear fuel. His current responsibilities include procurement of nuclear fuel and related services, nuclear fuel-related project management, long-term disposal of spent nuclear fuel, and the projection of nuclear prices and related capital costs and expense rates.

**DIRECT TESTIMONY  
OF  
GEORGE G. BEASLEY  
ON BEHALF OF  
DOMINION ENERGY NORTH CAROLINA  
BEFORE THE  
NORTH CAROLINA UTILITIES COMMISSION  
DOCKET NO. E-22, SUB 579**

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

2   A.     My name is George G. Beasley. My business address is 701 East Cary Street,  
3           Richmond, Virginia 23219. My title is Regulatory Specialist for Virginia  
4           Electric and Power Company, which operates in North Carolina as Dominion  
5           Energy North Carolina (“the Company”). A statement of my background and  
6           qualifications is attached as Appendix A.

7   **Q.     Mr. Beasley, what is the purpose of your testimony in this proceeding?**

8   A.     The purpose of my testimony is to: 1) present the Company’s derivation of  
9           the proposed Base Fuel Component, proposed Fuel Cost Rider A and the  
10          proposed Experience Modification Factor (“EMF”) Rider B for the North  
11          Carolina jurisdiction and for each customer class based on the twelve months  
12          ended June 30, 2019 (the “test period”), to become effective on February 1,  
13          2020; 2) sponsor the calculation of the adjustment to total system sales (kWh)  
14          for the twelve months ended June 30, 2019, due to change in usage, weather  
15          normalization, and customer growth; and 3) discuss the Company’s proposal  
16          to implement the proposed Base Fuel Component on November 1, 2019, as  
17          well as present the derivation of a temporary decrement rider also discussed

1 by the Company in its Base Rate Application to be effective November 1,  
2 2019, through and including January 31, 2020.

3 **Q. In the course of your testimony will you introduce an exhibit?**

4 A. Yes. Company Exhibit GGB-1, consisting of ten schedules, was prepared  
5 under my direction and is accurate and complete to the best of my knowledge  
6 and belief.

7 **Q. Do you have a set of schedules that shows the derivation of the Base Fuel**  
8 **Component, Fuel Cost Rider A, and the Experience Modification Factor,**  
9 **Rider B, as proposed by the Company?**

10 A. Yes. Schedules 1 through 4 show the derivation of the total fuel rates as  
11 proposed by the Company to be effective on February 1, 2020.

12 **Q. Mr. Beasley, please explain Schedule 1.**

13 A. Schedule 1 of Company Exhibit GGB-1 provides a summary of jurisdictional  
14 and total system kWh sales for the twelve months ended June 30, 2019,  
15 adjusted for change in usage, weather normalization, and customer growth.  
16 Line 1 of Schedule 1 shows the adjustment to sales for the North Carolina  
17 Jurisdiction of 50,351,846 kWh. The adjustment to total system kWh at sales  
18 level is 1,974,059,206 kWh. This adjustment is consistent with the  
19 methodology used in the Company's last general rate case (Docket No. E-22,  
20 Sub 532) and the last fuel charge adjustment case (Docket No. E-22, Sub  
21 558). The workpapers supporting the change in usage, weather normalization,

1 and customer growth calculation are provided in response to Rule  
2 R8-55 (e)(2).

3 **Q. Have you calculated the proposed Base Fuel Component for the North**  
4 **Carolina jurisdiction and each customer class?**

5 A. Yes. Schedule 2 of Exhibit GGB-1 presents the calculation of the proposed  
6 Base Fuel Component for the North Carolina jurisdiction and for each  
7 customer class. On Schedule 2, Page 1, a system fuel expense level of  
8 \$1,783,381,223 (as provided in Schedule 4 of Exhibit KEF-1) is divided by  
9 system sales of 85,389,162,794 kWh that reflect the normalization  
10 adjustments for change in usage, weather and customer growth, and adjusted  
11 for the North Carolina regulatory fee. The result is a normalized system  
12 average fuel factor of \$0.02092/kWh, applicable to the North Carolina  
13 jurisdiction. The calculations used to differentiate the jurisdictional Base Fuel  
14 Component by voltage to determine the class fuel factors are shown on  
15 Schedule 2, Page 2. They are consistent with the methodology used in the  
16 Company's most recent fuel case (Docket No. E-22, Sub 558). The resulting  
17 Base Fuel Component for each class is shown in Column 7 of Schedule 2,  
18 Page 2.

19 **Q. Mr. Beasley, have you calculated the proposed Fuel Cost Rider A?**

20 A. In the Base Rate Application, the Company will update the Base Fuel  
21 Component for each class to be equal to the system fuel expense rate, adjusted

1 for respective losses, calculated in this case. Therefore, the Fuel Cost Rider A  
2 in this case will be set to \$0.00000/kWh for all classes.

3 **Q. Please describe the Experience Modification Factor, Rider B, applicable**  
4 **to the North Carolina jurisdiction.**

5 A. Schedule 3 of Exhibit GGB-1 presents the calculation of the proposed EMF  
6 Rider B applicable to the North Carolina jurisdiction and the resulting factors  
7 for each customer class. Schedule 3, Page 1, shows the calculation of the  
8 proposed uniform EMF applicable to the North Carolina jurisdiction. The  
9 total under recovered fuel expense for the period July 1, 2018, through June  
10 30, 2019, is \$550,353 (as provided in Schedule 2 of Company Exhibit  
11 RTC-1). The total net balance of \$550,353 was then divided by North  
12 Carolina test year sales of 4,308,591,154 kWh which have been adjusted for  
13 change in usage, weather, and customer growth. After being adjusted for the  
14 North Carolina regulatory fee, the result is a uniform EMF of \$0.00013/kWh,  
15 applicable to the North Carolina jurisdiction. The calculations used to  
16 differentiate the uniform factor by voltage to determine the class factors are  
17 shown on Schedule 3, Page 2. The resulting EMF for each class is shown in  
18 Column 7 of Schedule 3, Page 2.

19 **Q. Please provide a summary of the total fuel factors that the Company is**  
20 **requesting in this case for each class to become effective February 1,**  
21 **2020.**

22 A. The total proposed fuel rates (\$/kWh) for each class are as follows:

<u>Customer Class</u>	<u>Total</u>
Residential	\$0.02132
SGS & PA	\$0.02129
LGS	\$0.02112
Schedule NS	\$0.02049
6VP	\$0.02078
Outdoor Lighting	\$0.02132
Traffic	\$0.02132

1 A comparison of the present and proposed total rates for each class is shown  
2 on my Schedule 4, Pages 1 and 2 of Exhibit GGB-1.

3 **Q. Do you have a schedule that shows the total fuel revenue recovery by**  
4 **class and for the North Carolina jurisdiction for the 2020 fuel year?**

5 A. Yes. Schedule 5 of Exhibit GGB-1 shows the total fuel revenue recovery by  
6 class and for the North Carolina jurisdiction for the 2020 fuel year. For the  
7 North Carolina jurisdiction, the proposed jurisdictional fuel cost levels result  
8 in a total fuel recovery decrease of \$18,311,512.

9 **Q. Have you included in your exhibit a revision to the Fuel Cost Rider A and**  
10 **EMF Rider B which will reflect the Company's proposed total fuel**  
11 **factors, to be effective February 1, 2020?**

12 A. Yes. Schedule 6, Pages 1 and 2 of Exhibit GGB-1 provides the revised Fuel  
13 Charge Rider A and EMF Rider B, that the Company proposes to become  
14 effective on and after February 1, 2020.

1    **Q.     Mr. Beasley, would you explain how these proposed changes in the fuel**  
2           **factor will affect customers' bills? Use bill amounts as of August 1, 2019,**  
3           **as a point of reference.**

4    A.    For Rate Schedule 1 (residential), for a customer using 1,000 kWh per month,  
5           the weighted monthly residential bill (4 summer months and 8 base months)  
6           would decrease by \$4.26 from \$113.13 to \$108.87, or by 3.8%. For Rate  
7           Schedule 5 (small general service), for a customer using 12,500 kWh per  
8           month and 50 kW of demand, the weighted monthly bill (4 summer months  
9           and 8 base months) would decrease by \$53.38 from \$1,134.85 to \$1,081.47, or  
10          by 4.7%. For Rate Schedule 6P (large general service), for a customer using  
11          576,000 kWh (259,200 kWh on-peak and 316,800 kWh off-peak) per month  
12          and 1,000 kW of demand, the monthly bill would decrease by \$2,442.24 from  
13          \$40,909.77 to \$38,467.53, or by 6.0%.

14   **Q.     Does the Company have a proposal to implement the proposed Base Fuel**  
15           **Component for each customer class prior to February 1, 2020?**

16   A.    Yes. The proposed Base Fuel Component for each customer class is lower  
17          than the existing current period fuel recovery rate (Current Base Fuel  
18          Component plus the current Rider A). As the Company is planning to  
19          implement the proposed non-fuel base rate increase in Docket No. E-22 Sub  
20          562 on a temporary basis, subject to refund, on November 1, 2019, the  
21          Company is also proposing to implement the proposed Base Fuel Component  
22          on November 1, 2019, in order to partially offset the base rate increase to

1 customers. Rider A currently approved effective for February 1, 2019,  
2 through January 31, 2020, will be updated to set the Rider A rates equal to  
3 \$0.00000/kWh for all classes as shown on Schedule 7, effective November 1,  
4 2019, through January 31, 2020.

5 **Q. Are there any other adjustments that the Company is proposing to**  
6 **implement on November 1, 2019?**

7 A. Yes, as Company Witness Farmer explains, the Company estimates that it will  
8 over-recover fuel expenses for the period of July 2019 through December  
9 2019, as shown on Witness Farmer's Table 1. In order to further mitigate the  
10 effect of the November 1, 2019 non-fuel base rate increase on customer rates,  
11 the Company proposes to implement a three-month decrement rider, Rider  
12 A1, for each class to be effective November 1, 2019. The proposed decrement  
13 rider is equal to the proposed change between the actual February 1, 2019  
14 customer class EMFs and the proposed February 1, 2020 customer class  
15 EMFs, or (\$0.00375)/kWh, for the North Carolina jurisdiction.

16 As the Table below illustrates, if approved by the Commission, Rider A1 will  
17 allow for a seamless, no impact, transition of total fuel rates (\$/kWh) between  
18 November 1, 2019, and February 1, 2020, based on the Company's proposed  
19 fuel rates in this case.

<u>NC</u>	As of	As Proposed For	As Proposed For	As Proposed For
<u>Jurisdiction</u>	<u>2/1/2019</u>	<u>5/01/2019<sup>1</sup></u>	<u>11/1/2019</u>	<u>2/1/2020</u>
Base Fuel	\$0.02073	\$0.02142	\$0.02092	\$0.02092
Rider A	\$0.00069	\$0.00000	\$0.00000	\$0.00000
Rider A1	\$0.00000	\$0.00000	(\$0.00375)	N/A
Rider B	<u>\$0.00388</u>	<u>\$0.00388</u>	<u>\$0.00388</u>	<u>\$0.00013</u>
Total	\$0.02530	\$0.02530	\$0.02105	\$0.02105

<sup>1</sup> The Company's proposed base rates were suspended by the Commission pursuant to G.S. 62-134.

1 Although Rider A1 is calculated based on the change in the EMFs, it will  
2 reduce the estimated over-recovery of the current period deferral balance for  
3 November 2019 through January 2020.

4 The Company requests that the Commission issue an Order approving Rider  
5 A1 as filed. If the Commission later determines that the calculation of Rider  
6 A1 rates would have been different from what the Company has initially filed  
7 in this case, the Company requests that Rider A1 not be rebilled but any  
8 difference would be reflected in the fuel deferral balance.

9 The derivation of the proposed Rider A1 for each class is shown on Schedule  
10 8 of Exhibit GGB-1.

11 **Q. Do you have a schedule that shows the proposed Rider A1 factors to be**  
12 **effective November 1, 2019, through and including January 31, 2020?**

13 A. Yes. Schedule 9 of Exhibit GGB-1 provides the Rider A1 factors.

1    **Q.    Do you have a schedule that shows the summary of the proposed total**  
2           **fuel rates and their components for the North Carolina jurisdiction and**  
3           **each class to be effective on November 1, 2019, and February 1, 2020?**

4           Yes. Schedule 10, Pages 1 and 2 of Exhibit GGB-1, provides a summary of  
5           the proposed total fuel rates and their components for the North Carolina  
6           jurisdiction and each class to be effective on November 1, 2019, and February  
7           1, 2020.

8    **Q.    How does this filing impact your currently pending Base Rate case,**  
9           **Docket No. E-22, Sub 562?**

10    A.    The Company is filing additional supplemental testimony in the current base  
11           rate case that reflects the proposed Base Fuel Component and Rider A1 as  
12           calculated in this case, proposed to be effective on November 1, 2019.

13    **Q.    Does this conclude your testimony?**

14    A.    Yes, it does.

**BACKGROUND AND QUALIFICATIONS  
OF  
GEORGE G. BEASLEY**

George G. Beasley received a Bachelor of Science degree in Finance from Virginia Commonwealth University in 1996. Mr. Beasley started his career with the Company in 2008 as a Sr. Business Performance Analyst. In 2011, Mr. Beasley was promoted to Supervisor Customer Revenue Management Planning and Analysis where he was responsible for the analytical support of our electric Credit and Billing functions. In 2015, Mr. Beasley took over the Customer Billing Compliance and Quality Control Manager position and was responsible for the auditing and quality control of changes implemented into the Billing system including rate and regulatory changes. In 2017, Mr. Beasley joined the Rate Department as a Regulatory Specialist to work in the Rate Design section, where he assists with regulatory filings, the design of rates, and performing analysis related to the Company's Virginia and North Carolina service territories. Mr. Beasley has previously filed testimony with the North Carolina Utilities Commission and the State Corporation Commission of Virginia.

**SUMMARY OF KWH ATTRIBUTABLE TO  
CHANGE IN USAGE, WEATHER NORMALIZATION, AND CUSTOMER GROWTH  
TWELVE MONTHS ENDED JUNE 30, 2019**

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Aug 13 2019

		SYSTEM			
LINE	JURISDICTION	CHANGE IN USAGE KWH	WEATHER NORM. KWH	CUSTOMER GROWTH KWH	TOTAL KWH
1)	NORTH CAROLINA (A)	11,286,173	(68,080,375)	6,442,356	(50,351,846)
2)	VIRGINIA	366,110,917	(1,941,516,788)	(19,161,626)	(1,594,567,497)
3)	COUNTY	(5,219,731)	(125,934,837)	(6,512,456)	(137,667,024)
4)	STATE	4,153,815	(16,713,886)	(1,272,398)	(13,832,469)
5)	MS - GOVERNMENTAL	(90,431,832)	(36,005,854)	0	(126,437,686)
7)	FERC	0	(51,202,684)	0	(51,202,684)
8)	SYSTEM KWH AT SALES LEVEL	285,899,342	(2,239,454,424)	(20,504,124)	(1,974,059,206)
9)	SUBTOTAL - SYSTEM KWH AT GENERATION LEVEL (LINE 8 x 2018 EXPANSION FACTOR) (B)				(2,064,400,051)

NOTES

( ) DENOTES NEGATIVE VALUE

(A) NORTH CAROLINA BY CLASS	CHANGE IN USAGE KWH	WEATHER NORM. KWH	CUSTOMER GROWTH KWH	TOTAL KWH
RESIDENTIAL	(12,901,450)	(54,078,438)	4,209,742	(62,770,146)
SGS / PA	(5,874,586)	(14,001,937)	2,223,225	(17,653,298)
LGS	9,190,699	0	0	9,190,699
NS	15,386,667	0	0	15,386,667
6VP	5,673,386	0	0	5,673,386
ODL & ST LTS	(177,195)	0	16,037	(161,158)
TRAFFIC	(11,348)	0	(6,648)	(17,996)
TOTAL	11,286,173	(68,080,375)	6,442,356	(50,351,846)

(B) 2018 SYSTEM EXPANSION FACTOR IS 1.045764

**DOMINION ENERGY NORTH CAROLINA**  
**CALCULATION OF SYSTEM AVERAGE FUEL FACTOR**  
**0**  
**TO BE EFFECTIVE FEBRUARY 1, 2020**

EXPENSE: 12 MONTH NORMALIZED SYSTEM FUEL EXPENSE (A) \$1,783,381,223

SALES: 12 MONTHS SYSTEM KWH SALES ADJUSTED  
FOR CHANGE IN USAGE, WEATHER AND CUSTOMER GROWTH (B) 85,389,162,794

FEE: NORTH CAROLINA REGULATORY FEE ADJUSTMENT FACTOR 1.0013

FACTOR =  $\frac{\$1,783,381,223}{85,389,162,794} \times 1.0013$

FACTOR = \$0.02092 / KWH (C) (D)

#### NOTES

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(A) FROM COMPANY EXHIBIT NO. KEF-1 SCHEDULE 4

(B) SYSTEM KWH AT SALES LEVEL [COMPANY EXHIBIT RC-1, SCHEDULE 3]	87,363,222,000
PLUS: SYSTEM KWH USAGE, WEATHER, GROWTH ADJUSTMENT	
[COMPANY EXHIBIT NO. GGB-1, SCHEDULE 1, LINE 8]	<u>(1,974,059,206)</u>
TOTAL SYSTEM SALES	85,389,162,794

(C) THE NORTH CAROLINA JURISDICTIONAL PROPOSED BASE FUEL FACTOR IS \$0.02092/KWH

(D) WITHOUT NC REGULATORY FEE \$0.02089 /KWH

**Aug 13 2019**

**Aug 13 2019**

(A)	CHG IN USAGE, WEATHER		
	TEST YR KWH	CUST GROWTH ADJ	TOTAL*
RESIDENTIAL	1,611,034,000	(62,770,146)	1,548,263,854
SGS & PA	821,795,000	(17,653,298)	804,141,702
LGS	653,433,000	9,190,699	662,623,699
SCHEDULE NS	968,335,000	15,386,667	983,721,667
6VP	279,098,000	5,673,386	284,771,386
OUTDOOR LIGHTING	24,772,000	(161,158)	24,610,842
TRAFFIC	476,000	(17,996)	458,004
<b>TOTAL</b>	<b>4,358,943,000</b>	<b>(50,351,846)</b>	<b>4,308,591,154</b>

(B) IN \$/KWH

**CALCULATION OF EXPERIENCE MODIFICATION FACTOR - RIDER B**

**TO BE EFFECTIVE FEBRUARY 1, 2020**

EXPENSE:	JULY 1, 2018 - JUNE 30, 2019 NC JURISDICTIONAL FUEL EXPENSE UNDER RECOVERY (A)	\$550,353
INTEREST:	18 MONTHS AT 10%	<u>\$0</u>
NET:		\$550,353
SALES:	12 MONTHS JURISDICTIONAL KWH SALES ADJUSTED FOR CHANGE IN USAGE, WEATHER, AND CUSTOMER GROWTH (B)	4,308,591,154
FEE:	NORTH CAROLINA REGULATORY FEE ADJUSTMENT FACTOR	1.0013

$$\text{FACTOR} = \frac{\$550,353}{4,308,591,154} \times 1.0013$$

$$\text{FACTOR} = \$0.00013 \quad / \text{KWH (C)}$$

NOTES

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(A) FROM COMPANY EXHIBIT NO. RC-1 SCHEDULE 2

(B) FROM COMPANY EXHIBIT NO. GGB-1 SCHEDULE 2, PAGE 2

(C) WITHOUT NC REGULATORY FEE      \$0.00013    /KWH

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0  
**CALCULATION OF EXPERIENCE MODIFICATION FACTOR - RIDER B**  
0  
**TO BE EFFECTIVE FEBRUARY 1, 2020**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>CUSTOMER CLASS</u>	<u>KWH SALES</u> (A)	<u>NC JURISDICTIONAL EMF</u> (B)	<u>FUEL REVENUE UNIFORM EMF</u> (1) x (2)	<u>CLASS EXPANSION FACTOR</u>	<u>CLASS KWH @ GENERATION LEVEL</u> (1) x (4)	<u>UNIFORM EMF @ GENERATION LEVEL</u> (3a) / (5a)	<u>VOLTAGE DIFFERENTIATED EMF @ SALES LEVEL</u> (4) x (6)
RESIDENTIAL	1,548,263,854	\$0.00013	\$201,274	1.05139600	1,627,838,423	\$0.00013	\$0.00014
SGS & PA	804,141,702	\$0.00013	\$104,538	1.05029107	844,582,849	\$0.00013	\$0.00014
LGS	662,623,699	\$0.00013	\$86,141	1.04163425	690,211,541	\$0.00013	\$0.00014
SCHEDULE NS	983,721,667	\$0.00013	\$127,884	1.01079000	994,336,024	\$0.00013	\$0.00013
6VP	284,771,386	\$0.00013	\$37,020	1.02531900	291,981,513	\$0.00013	\$0.00013
OUTDOOR LIGHTING	24,610,842	\$0.00013	\$3,199	1.05139600	25,875,741	\$0.00013	\$0.00014
TRAFFIC	458,004	\$0.00013	\$60	1.05139600	481,544	\$0.00013	\$0.00014
TOTAL	4,308,591,154		\$560,117 (3a)		4,475,307,635 (5a)		

NOTES

(A) FROM COMPANY EXHIBIT NO. GGB-1 SCHEDULE 2, PAGE 2

(B) IN \$/KWH

**DOMINION ENERGY NORTH CAROLINA**  
**TOTAL FUEL COST LEVEL - PRESENT AND PROPOSED**  
**TO BE EFFECTIVE FEBRUARY 1, 2020**

	(1)	(2)	(3)	(4)
	BASE FUEL COMPONENT \$/KWH	RIDER A FUEL CHARGE \$/KWH	RIDER B EMF \$/KWH	TOTAL FUEL RATE \$/KWH
<u>NC JURISDICTION</u>				
PRESENT	\$0.02073	\$0.00069	\$0.00388	\$0.02530
PROPOSED	<u>\$0.02092</u>	<u>\$0.00000</u>	<u>\$0.00013</u>	<u>\$0.02105</u>
CHANGE	\$0.00019	(\$0.00069)	(\$0.00375)	(\$0.00425)
 <u>RESIDENTIAL</u>	 BASE FUEL COMPONENT \$/KWH	 RIDER A FUEL CHARGE \$/KWH	 RIDER B EMF \$/KWH	 TOTAL FUEL RATE \$/KWH
PRESENT	\$0.02095	\$0.00071	\$0.00392	\$0.02558
PROPOSED	<u>\$0.02118</u>	<u>\$0.00000</u>	<u>\$0.00014</u>	<u>\$0.02132</u>
CHANGE	\$0.00023	(\$0.00071)	(\$0.00378)	(\$0.00426)
 <u>SGS &amp; PA</u>	 BASE FUEL COMPONENT \$/KWH	 RIDER A FUEL CHARGE \$/KWH	 RIDER B EMF \$/KWH	 TOTAL FUEL RATE \$/KWH
PRESENT	\$0.02093	\$0.00071	\$0.00392	\$0.02556
PROPOSED	<u>\$0.02115</u>	<u>\$0.00000</u>	<u>\$0.00014</u>	<u>\$0.02129</u>
CHANGE	\$0.00022	(\$0.00071)	(\$0.00378)	(\$0.00427)
 <u>LGS</u>	 BASE FUEL COMPONENT \$/KWH	 RIDER A FUEL CHARGE \$/KWH	 RIDER B EMF \$/KWH	 TOTAL FUEL RATE \$/KWH
PRESENT	\$0.02079	\$0.00068	\$0.00389	\$0.02536
PROPOSED	<u>\$0.02098</u>	<u>\$0.00000</u>	<u>\$0.00014</u>	<u>\$0.02112</u>
CHANGE	\$0.00019	(\$0.00068)	(\$0.00375)	(\$0.00424)

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NOTES

( ) DENOTES NEGATIVE VALUE

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**DOMINION NORTH CAROLINA POWER**  
**TOTAL FUEL COST LEVEL - PRESENT AND PROPOSED**  
**TO BE EFFECTIVE FEBRUARY 1, 2020**

	(1)	(2)	(3)	(4)
	BASE FUEL COMPONENT	RIDER A FUEL CHARGE	RIDER B EMF	TOTAL FUEL RATE
<u>SCHEDULE NS</u>	<u>\$/KWH</u>	<u>\$/KWH</u>	<u>\$/KWH</u>	<u>\$/KWH</u>
PRESENT	\$0.02014	\$0.00068	\$0.00377	\$0.02459
PROPOSED	<u>\$0.02036</u>	<u>\$0.00000</u>	<u>\$0.00013</u>	<u>\$0.02049</u>
CHANGE	\$0.00022	(\$0.00068)	(\$0.00364)	(\$0.00410)
	BASE FUEL COMPONENT	RIDER A FUEL CHARGE	RIDER B EMF	TOTAL FUEL RATE
<u>6VP</u>	<u>\$/KWH</u>	<u>\$/KWH</u>	<u>\$/KWH</u>	<u>\$/KWH</u>
PRESENT	\$0.02043	\$0.00069	\$0.00383	\$0.02495
PROPOSED	<u>\$0.02065</u>	<u>\$0.00000</u>	<u>\$0.00013</u>	<u>\$0.02078</u>
CHANGE	\$0.00022	(\$0.00069)	(\$0.00370)	(\$0.00417)
	BASE FUEL COMPONENT	RIDER A FUEL CHARGE	RIDER B EMF	TOTAL FUEL RATE
<u>OUTDOOR LIGHTING</u>	<u>\$/KWH</u>	<u>\$/KWH</u>	<u>\$/KWH</u>	<u>\$/KWH</u>
PRESENT	\$0.02095	\$0.00071	\$0.00392	\$0.02558
PROPOSED	<u>\$0.02118</u>	<u>\$0.00000</u>	<u>\$0.00014</u>	<u>\$0.02132</u>
CHANGE	\$0.00023	(\$0.00071)	(\$0.00378)	(\$0.00426)
	BASE FUEL COMPONENT	RIDER A FUEL CHARGE	RIDER B EMF	TOTAL FUEL RATE
<u>TRAFFIC</u>	<u>\$/KWH</u>	<u>\$/KWH</u>	<u>\$/KWH</u>	<u>\$/KWH</u>
PRESENT	\$0.02095	\$0.00071	\$0.00392	\$0.02558
PROPOSED	<u>\$0.02118</u>	<u>\$0.00000</u>	<u>\$0.00014</u>	<u>\$0.02132</u>
CHANGE	\$0.00023	(\$0.00071)	(\$0.00378)	(\$0.00426)

NOTES

( ) DENOTES NEGATIVE VALUE

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**DOMINION ENERGY NORTH CAROLINA**  
**TOTAL FUEL RECOVERY**  
**0**  
**TO BE EFFECTIVE FEBRUARY 1, 2020**

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Aug 13 2019

	(1)	(2)	(3)	(4)	(5)	(6)
<u>CUSTOMER CLASS</u>	<u>SALES(KWH)</u>	<u>BASE FUEL COMPONENT</u> (A)	<u>FUEL COST RIDER A</u> (B)	<u>EMF RIDER B</u> (C)	<u>TOTAL</u> (2) + (3) + (4)	<u>TOTAL REVENUE</u> (1) x (5)
RESIDENTIAL	1,548,263,854	\$0.02118	\$0.00000	\$0.00014	\$0.02132	\$33,008,985
SGS & PA	804,141,702	\$0.02115	\$0.00000	\$0.00014	\$0.02129	\$17,120,177
LGS	662,623,699	\$0.02098	\$0.00000	\$0.00014	\$0.02112	\$13,994,613
SCHEDULE NS	983,721,667	\$0.02036	\$0.00000	\$0.00013	\$0.02049	\$20,156,457
6VP	284,771,386	\$0.02065	\$0.00000	\$0.00013	\$0.02078	\$5,917,549
OUTDOOR LIGHTING	24,610,842	\$0.02118	\$0.00000	\$0.00014	\$0.02132	\$524,703
TRAFFIC	458,004	\$0.02118	\$0.00000	\$0.00014	\$0.02132	\$9,765
<b>TOTAL</b>	<b>4,308,591,154</b>					<b>\$90,732,249</b>

	<u>SALES(KWH)</u>	<u>BASE FUEL COMPONENT</u>	<u>FUEL COST RIDER A</u>	<u>EMF RIDER B</u>	<u>TOTAL</u> (2) + (3) + (4)	<u>TOTAL REVENUE</u> (1) x (5)
NORTH CAROLINA JURISDICTION	4,308,591,154	\$0.02092	\$0.00000	\$0.00013	\$0.02105	\$90,695,844

	<u>SALES(KWH)</u>	<u>PRESENT TOTAL RATE</u>	<u>PROPOSED TOTAL RATE</u>	<u>TOTAL CHANGE</u> (3) - (2)	<u>TOTAL REVENUE CHANGE</u> (4) x (1)
NORTH CAROLINA JURISDICTION REVENUE CHANGE	4,308,591,154	\$0.02530	\$0.02105	(\$0.00425)	(\$18,311,512)

NOTES

(A) FROM COMPANY EXHIBIT NO. GGB-1 SCHEDULE 2, PAGE 2

(B) FROM COMPANY EXHIBIT NO. GGB-1 SCHEDULE 2, PAGE 2

(C) FROM COMPANY EXHIBIT NO. GGB-1 SCHEDULE 3, PAGE 2

RIDER A

FUEL COST RIDER

The applicable cents per kilowatt-hour charge<sup>1</sup> shall be added to the base fuel cost contained in the energy charges within each of the following Dominion Energy North Carolina filed Rate Schedules.

<b>Rate Schedule</b>	<b>Customer Class</b>	<b>Cents per kWh Charge</b>
Schedule 1	Residential	0.000¢/kWh
Schedule 1DF	Residential	0.000¢/kWh
Schedule 1P	Residential	0.000¢/kWh
Schedule 1T	Residential	0.000¢/kWh
Schedule 1W	Residential	0.000¢/kWh
Schedule 5	SGS & Public Authority	0.000¢/kWh
Schedule 5C	SGS & Public Authority	0.000¢/kWh
Schedule 5P	SGS & Public Authority	0.000¢/kWh
Schedule 7	SGS & Public Authority	0.000¢/kWh
Schedule 30	SGS & Public Authority	0.000¢/kWh
Schedule 42	SGS & Public Authority	0.000¢/kWh
Schedule 6C	Large General Service	0.000¢/kWh
Schedule 6P	Large General Service	0.000¢/kWh
Schedule 6L	Large General Service	0.000¢/kWh
Schedule 10	Large General Service	0.000¢/kWh
Schedule 26	Outdoor Lighting	0.000¢/kWh
Schedule 30T	Traffic Control	0.000¢/kWh
Schedule 6VP	6VP	0.000¢/kWh
Schedule NS Tier 2-Type A and Tier 3 Energy Charges	Schedule NS	0.000¢/kWh
Schedule NS Tier 1 Type A & B, and Tier 2-Type B Energy Charges	Schedule NS	Rider A is Included in the Energy Charges

<sup>1</sup>This charge is not a part of the base fuel cost included in the energy prices stated in the Rate Schedules and should, therefore, be applied in addition to the prices stated in the Rate Schedules.

RIDER B

EXPERIENCE MODIFICATION FACTOR (EMF)

The applicable cents per kilowatt-hour charge<sup>1</sup> shall be added to the energy charges contained within each of the following Dominion Energy North Carolina filed Rate Schedules.

<b>Rate Schedule</b>	<b>Customer Class</b>	<b>Cents per kWh Charge</b>
Schedule 1	Residential	0.014¢/kWh
Schedule 1DF	Residential	0.014¢/kWh
Schedule 1P	Residential	0.014¢/kWh
Schedule 1T	Residential	0.014¢/kWh
Schedule 1W	Residential	0.014¢/kWh
Schedule 5	SGS & Public Authority	0.014¢/kWh
Schedule 5C	SGS & Public Authority	0.014¢/kWh
Schedule 5P	SGS & Public Authority	0.014¢/kWh
Schedule 7	SGS & Public Authority	0.014¢/kWh
Schedule 30	SGS & Public Authority	0.014¢/kWh
Schedule 42	SGS & Public Authority	0.014¢/kWh
Schedule 6C	Large General Service	0.014¢/kWh
Schedule 6P	Large General Service	0.014¢/kWh
Schedule 6L	Large General Service	0.014¢/kWh
Schedule 10	Large General Service	0.014¢/kWh
Schedule 26	Outdoor Lighting	0.014¢/kWh
Schedule 30T	Traffic Control	0.014¢/kWh
Schedule 6VP	6VP	0.013¢/kWh
Schedule NS Tier 2-Type A and Tier 3 Energy Charges	Schedule NS	0.013¢/kWh
Schedule NS Tier 1 Type A & B, and Tier 2-Type B Energy Charges	Schedule NS	Rider B is Included in the Energy Charges

<sup>1</sup>This charge is not a part of the base fuel cost included in the energy prices stated in the Rate Schedules and should, therefore, be applied in addition to the prices stated in the Rate Schedules.

RIDER A

FUEL COST RIDER

The applicable cents per kilowatt-hour charge<sup>1</sup> shall be added to the base fuel cost contained in the energy charges within each of the following Dominion Energy North Carolina filed Rate Schedules.

<b>Rate Schedule</b>	<b>Customer Class</b>	<b>Cents per kWh Charge</b>
Schedule 1	Residential	0.000¢/kWh
Schedule 1DF	Residential	0.000¢/kWh
Schedule 1P	Residential	0.000¢/kWh
Schedule 1T	Residential	0.000¢/kWh
Schedule 1W	Residential	0.000¢/kWh
Schedule 5	SGS & Public Authority	0.000¢/kWh
Schedule 5C	SGS & Public Authority	0.000¢/kWh
Schedule 5P	SGS & Public Authority	0.000¢/kWh
Schedule 7	SGS & Public Authority	0.000¢/kWh
Schedule 30	SGS & Public Authority	0.000¢/kWh
Schedule 42	SGS & Public Authority	0.000¢/kWh
Schedule 6C	Large General Service	0.000¢/kWh
Schedule 6P	Large General Service	0.000¢/kWh
Schedule 6L	Large General Service	0.000¢/kWh
Schedule 10	Large General Service	0.000¢/kWh
Schedule 26	Outdoor Lighting	0.000¢/kWh
Schedule 30T	Traffic Control	0.000¢/kWh
Schedule 6VP	6VP	0.000¢/kWh
Schedule NS Tier 2-Type A and Tier 3 Energy Charges	Schedule NS	0.000¢/kWh
Schedule NS Tier 1 Type A & B, and Tier 2-Type B Energy Charges	Schedule NS	Rider A is Included in the Energy Charges

<sup>1</sup>This charge is not a part of the base fuel cost included in the energy prices stated in the Rate Schedules and should, therefore, be applied in addition to the prices stated in the Rate Schedules.

**DOMINION ENERGY NORTH CAROLINA  
CALCULATION OF RIDER A1 BY CLASS  
TO BE EFFECTIVE NOVEMBER 1, 2019 - JANUARY 31, 2020**

	(1)	(2)	(3)
	PRESENT	PROPOSED	PROPOSED
	EMF RIDER B	EMF RIDER B	RIDER A1
<u>CUSTOMER CLASS</u>	<u>\$/KWH</u>	<u>\$/KWH</u>	<u>\$/KWH</u>
	(A)	(A)	(2) - (1)
NC JURISDICTION	\$0.00388	\$0.00013	(\$0.00375)
RESIDENTIAL	\$0.00392	\$0.00014	(\$0.00378)
SGS & PA	\$0.00392	\$0.00014	(\$0.00378)
LGS	\$0.00389	\$0.00014	(\$0.00375)
SCHEDULE NS	\$0.00377	\$0.00013	(\$0.00364)
6VP	\$0.00383	\$0.00013	(\$0.00370)
OUTDOOR LIGHTING	\$0.00392	\$0.00014	(\$0.00378)
TRAFFIC	\$0.00392	\$0.00014	(\$0.00378)

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(A) FROM EXHIBIT NO. GGB-1 SCHEDULE 4, PAGE 1 AND 2

RIDER A1

FUEL COST RIDER

The applicable cents per kilowatt-hour charge<sup>1</sup> shall be added to the base fuel cost contained in the energy charges within each of the following Dominion Energy North Carolina filed Rate Schedules.

<b>Rate Schedule</b>	<b>Customer Class</b>	<b>Cents per kWh Charge</b>
Schedule 1	Residential	-0.378¢/kWh
Schedule 1DF	Residential	-0.378¢/kWh
Schedule 1P	Residential	-0.378¢/kWh
Schedule 1T	Residential	-0.378¢/kWh
Schedule 1W	Residential	-0.378¢/kWh
Schedule 5	SGS & Public Authority	-0.378¢/kWh
Schedule 5C	SGS & Public Authority	-0.378¢/kWh
Schedule 5P	SGS & Public Authority	-0.378¢/kWh
Schedule 7	SGS & Public Authority	-0.378¢/kWh
Schedule 30	SGS & Public Authority	-0.378¢/kWh
Schedule 42	SGS & Public Authority	-0.378¢/kWh
Schedule 6C	Large General Service	-0.375¢/kWh
Schedule 6P	Large General Service	-0.375¢/kWh
Schedule 6L	Large General Service	-0.375¢/kWh
Schedule 10	Large General Service	-0.375¢/kWh
Schedule 26	Outdoor Lighting	-0.378¢/kWh
Schedule 30T	Traffic Control	-0.378¢/kWh
Schedule 6VP	6VP	-0.370¢/kWh
Schedule NS Tier 2-Type A and Tier 3 Energy Charges	Schedule NS	-0.364¢/kWh
Schedule NS Tier 1 Type A & B, and Tier 2-Type B Energy Charges	Schedule NS	Rider A1 is Included in the Energy Charges

<sup>1</sup>This charge is not a part of the base fuel cost included in the energy prices stated in the Rate Schedules and should, therefore, be applied in addition to the prices stated in the Rate Schedules.

**DOMINION ENERGY NORTH CAROLINA  
SUMMARY OF PROPOSED TOTAL FUEL RATES BY CLASS  
TO BE EFFECTIVE NOVEMBER 1, 2019**

	(1)	(2)	(3)	(4)	(5)
	<b>TO BE EFFECTIVE NOVEMBER 1, 2019</b>				
<u>CUSTOMER CLASS</u>	<u>BASE FUEL COMPONENT \$/KWH</u>	<u>RIDER A FUEL CHARGE \$/KWH</u>	<u>PROPOSED RIDER A1 \$/KWH</u>	<u>RIDER B EMF \$/KWH</u>	<u>TOTAL FUEL RATE \$/KWH</u>
NC JURISDICTION	\$0.02092	\$0.00000	(\$0.00375)	\$0.00388	\$0.02105
RESIDENTIAL	\$0.02118	\$0.00000	(\$0.00378)	\$0.00392	\$0.02132
SGS & PA	\$0.02115	\$0.00000	(\$0.00378)	\$0.00392	\$0.02129
LGS	\$0.02098	\$0.00000	(\$0.00375)	\$0.00389	\$0.02112
SCHEDULE NS	\$0.02036	\$0.00000	(\$0.00364)	\$0.00377	\$0.02049
6VP	\$0.02065	\$0.00000	(\$0.00370)	\$0.00383	\$0.02078
OUTDOOR LIGHTING	\$0.02118	\$0.00000	(\$0.00378)	\$0.00392	\$0.02132
TRAFFIC	\$0.02118	\$0.00000	(\$0.00378)	\$0.00392	\$0.02132

NOTES

( ) DENOTES NEGATIVE VALUE

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**DOMINION ENERGY NORTH CAROLINA**  
**SUMMARY OF PROPOSED TOTAL FUEL RATES BY CLASS**  
**TO BE EFFECTIVE FEBRUARY 1, 2020**

	(1)	(2)	(3)	(4)	(5)
	<b>TO BE EFFECTIVE FEBRUARY 1, 2020</b>				
<u>CUSTOMER CLASS</u>	<u>BASE FUEL COMPONENT \$/KWH</u>	<u>RIDER A FUEL CHARGE \$/KWH</u>	<u>PROPOSED RIDER A1 \$/KWH</u>	<u>RIDER B EMF \$/KWH</u>	<u>TOTAL FUEL RATE \$/KWH</u>
NC JURISDICTION	\$0.02092	\$0.00000	N/A	\$0.00013	\$0.02105
RESIDENTIAL	\$0.02118	\$0.00000	N/A	\$0.00014	\$0.02132
SGS & PA	\$0.02115	\$0.00000	N/A	\$0.00014	\$0.02129
LGS	\$0.02098	\$0.00000	N/A	\$0.00014	\$0.02112
SCHEDULE NS	\$0.02036	\$0.00000	N/A	\$0.00013	\$0.02049
6VP	\$0.02065	\$0.00000	N/A	\$0.00013	\$0.02078
OUTDOOR LIGHTING	\$0.02118	\$0.00000	N/A	\$0.00014	\$0.02132
TRAFFIC	\$0.02118	\$0.00000	N/A	\$0.00014	\$0.02132

NOTES

( ) DENOTES NEGATIVE VALUE

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Aug 13 2019

VERIFICATIONNCUC Docket No. E-22, Sub 579

I, Thomas P. Wohlfarth, Senior Vice President, Regulatory Affairs, for Virginia Electric and Power Company, do solemnly swear that the facts stated in the foregoing *Application for a Change in Fuel Component of Electric Rates*, insofar as they relate to Virginia Electric and Power Company, d/b/a Dominion Energy North Carolina, are true and correct to the best of my knowledge and belief.

Thomas P. Wohlfarth  
Thomas P. Wohlfarth

COMMONWEALTH OF VIRGINIA     )  
  )     to wit:  
City of Richmond                    )

The foregoing instrument was sworn to and acknowledged before me this 8<sup>th</sup> day of August, 2019.

Denise Ann Tunstall  
Notary Public

My registration number is 7707756 and my commission expires:

April 30, 2020

