

1 PLACE: Dobbs Building, Raleigh, North Carolina

2 DATE: Tuesday, November 12, 2019

3 TIME: 1:30 p.m. - 1:36 p.m.

4 DOCKET NO: E-22, Sub 579

5 BEFORE: Chair Charlotte A. Mitchell, Presiding

6 Commissioner ToNola D. Brown-Bland

7 Commissioner Lyons Gray

8 Commissioner Daniel G. Clodfelter

9

10

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**IN THE MATTER OF:**

12

Application by Virginia Electric and Power Company,

13

d/b/a Dominion Energy North Carolina

14

Pursuant to N.C.G.S. § 62-133.2 and NCUC Rule R8-55

15

Regarding Fuel and Fuel-Related Charge Adjustments for

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Electric Utilities

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1 A P P E A R A N C E S:

2 FOR VIRGINIA ELECTRIC and POWER COMPANY, d/b/a

3 DOMINION ENERGY NORTH CAROLINA:

4 Andrea Kells, Esq.

5 McGuireWoods, LLP

6 434 Fayetteville Street, Suite 2600

7 Raleigh, North Carolina 27601

8  
9 FOR CAROLINA INDUSTRIAL GROUP FOR FAIR UTILITY

10 RATES I:

11 Warren K. Hicks, Esq.

12 Bailey & Dixon, LLP

13 Post Office Box 1351

14 Raleigh, North Carolina 27602

15  
16 FOR THE USING AND CONSUMING PUBLIC:

17 Lucy E. Edmondson, Esq.

18 Public Staff - North Carolina Utilities Commission

19 4326 Mail Service Center

20 Raleigh, North Carolina 27699-4300

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23  
24  
NORTH CAROLINA UTILITIES COMMISSION

## T A B L E O F C O N T E N T S

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## P R O C E E D I N G S

MS. MITCHELL: Good afternoon. Let's come to order and go on the record, please. I'm Charlotte Mitchell. With me this afternoon are Commissioners ToNola D. Brown-Bland, Lyons Gray and Daniel G. Clodfelter.

I now call for hearing Docket Number E-22, Sub 579, which is the Application by Virginia Electric and Power Company, d/b/a Dominion Energy North Carolina pursuant to North Carolina General Statute § 62-133.2 and Commission Rule R8-55 Regarding Fuel and Fuel-Related Cost Adjustments for Electric Utilities.

On August 13th, 2019, Dominion filed its Application to adjust the fuel component of electric rates with supporting testimony and exhibits of Katherine Farmer, Ronnie Campbell, Dale Hinson, Tom Brookmire and George Beasley.

On September 4th, 2019, the Commission issued its Order Scheduling Hearing, Requiring Filing of Testimony, Establishing Discovery Guidelines and Requiring Public Notice.

On October 22nd, 2019, the Public Staff filed the testimony and exhibits of Dustin Metz and

1 Jenny Li.

2           Petitions to Intervene have been filed by  
3 and granted to Carolina Industrial Group for Fair  
4 Utility Rates I and Nucor Steel-Hertford.

5           On November 5th, 2019, the Public Staff and  
6 Dominion filed the joint motion requesting that the  
7 Commission excuse their witnesses from attending this  
8 expert witness hearing. The Public Staff and Dominion  
9 agreed to waive cross examination of the witnesses and  
10 the other two parties to this docket did not object.

11           On November 6th, 2019, the Commission issued  
12 an Order Excusing the Witnesses from attending this  
13 hearing and receiving their testimony and exhibits  
14 into the record.

15           Pursuant to the State Ethics Act, I remind  
16 all members of the Commission of their duty to avoid  
17 conflicts of interest, and inquire at this time as to  
18 whether any Commissioner has a known conflict of  
19 interest with respect to matters coming before us this  
20 afternoon?

21                               (No response)

22           Please let the record reflect that no  
23 conflicts have been identified.

24           So we will proceed with the proceeding and I

1 now call upon counsel to announce their appearances,  
2 beginning with the Applicant.

3 MS. KELLS: Good afternoon, Chair Mitchell,  
4 Commissioners. Andrea Kells with the Law Firm of  
5 McGuireWoods appearing on behalf of Dominion Energy  
6 North Carolina. Also with me here today is Ms. Lauren  
7 Biskie, in-house counsel with the Company.

8 CHAIR MITCHELL: Good afternoon, Ms. Kells.

9 MS. HICKS: Good afternoon, Chair Mitchell,  
10 Commissioners. Warren Hicks with Bailey & Dixon on  
11 behalf of Carolina Industrial Group for Fair Utility  
12 Rates I.

13 CHAIR MITCHELL: Good afternoon, Ms. Hicks.

14 MS. EDMONDSON: Good afternoon, Chair  
15 Mitchell and Commissioners. Lucy Edmondson with the  
16 Public Staff on behalf of The Using and Consuming  
17 Public.

18 CHAIR MITCHELL: Good afternoon,  
19 Ms. Edmondson.

20 Are there any preliminary matters that the  
21 Commission needs to take up prior to moving into the  
22 hearing?

23 MS. KELLS: No.

24 MS. EDMONDSON: No.

1 CHAIR MITCHELL: Has the Public Staff  
2 identified any public witnesses here this afternoon  
3 who would like to present testimony in this  
4 proceeding?

5 MS. EDMONDSON: We haven't.

6 CHAIR MITCHELL: Out of an abundance of  
7 caution, I ask is there anyone in the audience who  
8 would like to come forward and provide public  
9 testimony?

10 (No response)

11 Please let the record reflect that there are  
12 no public witnesses appearing.

13 So we will now move forward with the  
14 proceeding. I call upon the Applicant to introduce  
15 your evidence.

16 MS. KELLS: Thank you, Chair Mitchell. I'd  
17 first identify the Company's Application filed August  
18 13th, 2019, as DENC Exhibit 1, and the information and  
19 workpapers filed with the Application as DENC Exhibit  
20 2, and ask they be included in the record in this case  
21 and received into evidence.

22 CHAIR MITCHELL: Hearing no objection, the  
23 motion is allowed.

24 (WHEREUPON, DENC Exhibits 1 and 2

1                   were marked for identification as  
2                   prefiled and received into  
3                   evidence.)

4                   MS. KELLS: And if it pleases the  
5 Commission, I'll go through the testimony and exhibits  
6 of the Company's witnesses who have been excused from  
7 appearing today and we'll ask they be copied into the  
8 record as if given orally from the stand and that the  
9 exhibits filed in support of the testimony be  
10 identified as -- I will identify them shortly.

11                  CHAIR MITCHELL: Please do so.

12                  MS. KELLS: First, in support of the  
13 Application, on August 13th, the Company prefiled the  
14 direct testimony of Katherine Farmer consisting of 12  
15 pages of questions and answers and an Appendix A and  
16 one exhibit consisting of four schedules.

17                  The Company also prefiled the direct  
18 testimony of Ronnie Campbell consisting of six pages  
19 of questions and answers and an Appendix A and one  
20 exhibit with five schedules.

21                  The Company prefiled the direct testimony of  
22 Dale Hinson with seven pages of questions and answers,  
23 an Appendix A, and one exhibit; the direct testimony  
24 of Tom Brookmire with eight pages of questions and



1 answers and an Appendix A; and the direct testimony of  
2 George Beasley consisting of nine pages of questions  
3 and answers, an Appendix A, and one exhibit consisting  
4 of 10 schedules.

5 I would ask that the Company's letter in  
6 lieu of rebuttal testimony filed on October 31st,  
7 2019, be identified as DENC Exhibit 3 included in the  
8 record and received into evidence.

9 CHAIR MITCHELL: Hearing no objection to  
10 your motion, it is allowed.

11 (WHEREUPON, DENC Exhibit 3 was  
12 marked for identification as  
13 prefiled and received into  
14 evidence.)

15 MS. KELLS: And at this time I'd ask that  
16 the Company's testimony be copied into the record and  
17 all supporting exhibits be accepted into evidence at  
18 this time. And that will conclude the Company's case.

19 CHAIR MITCHELL: Your motion is allowed.

20 MS. KELLS: Thank you.

21 (WHEREUPON, Company Exhibit KEF-1,  
22 Schedules 1-4, is marked for  
23 identification as prefiled and  
24 received into evidence.)

1 (WHEREUPON, the prefiled direct  
2 testimony and Appendix A of  
3 Katherine E. Farmer is copied into  
4 the record as if given orally from  
5 the stand.)  
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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.

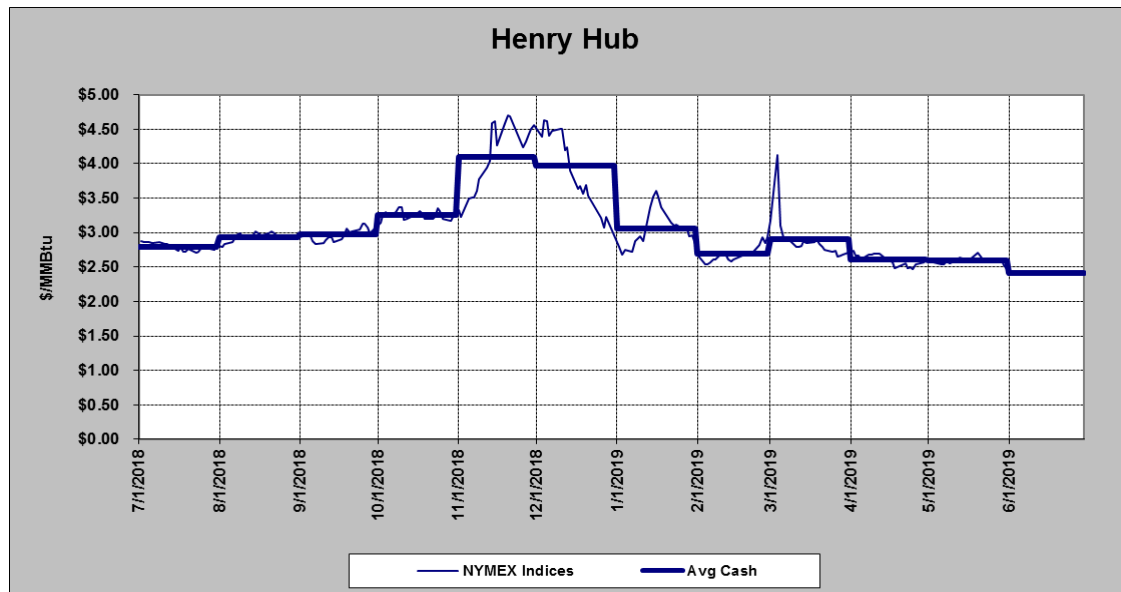
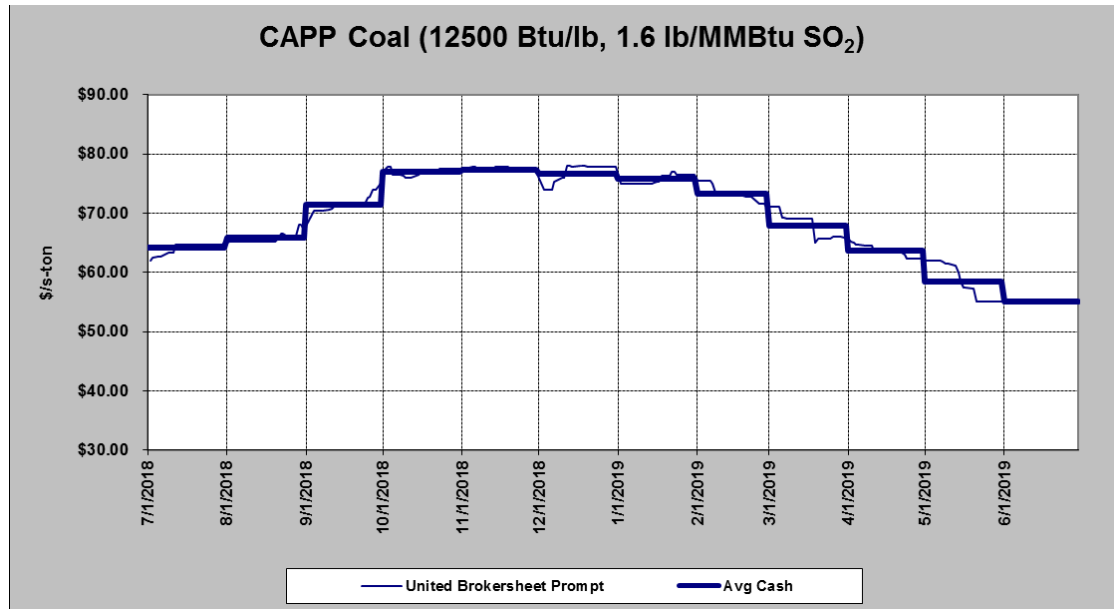
11 **Q. With the interim rate change proposed in the supplemental filing to the**  
12 **base rate case, Docket No. E-22, Sub 562, what is the forecast of the**  
13 **Company's fuel expense recovery position for the period July 1, 2019**  
14 **through December 31, 2019?**

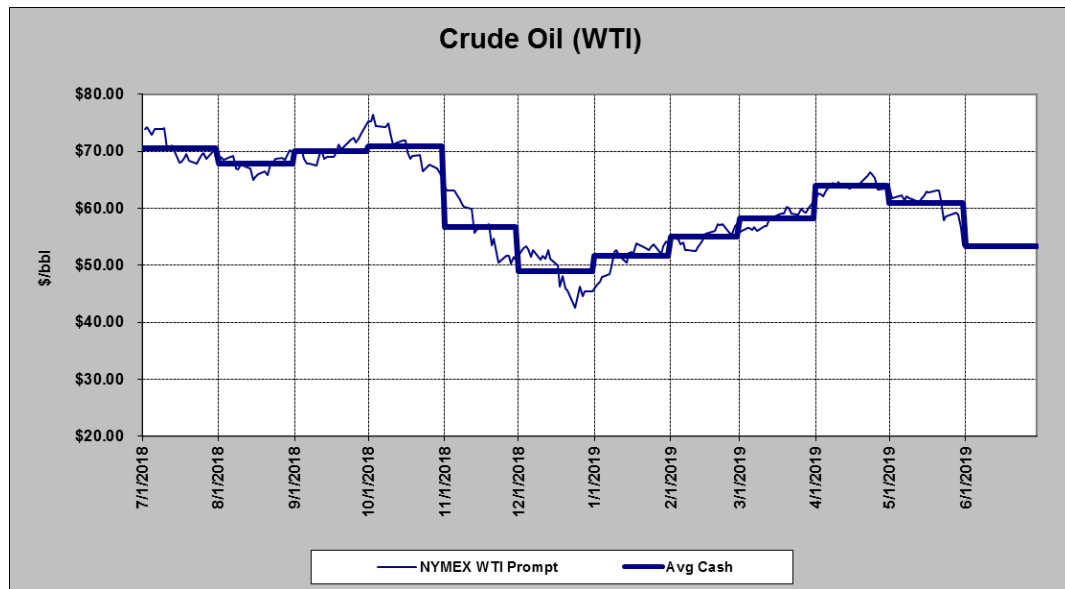
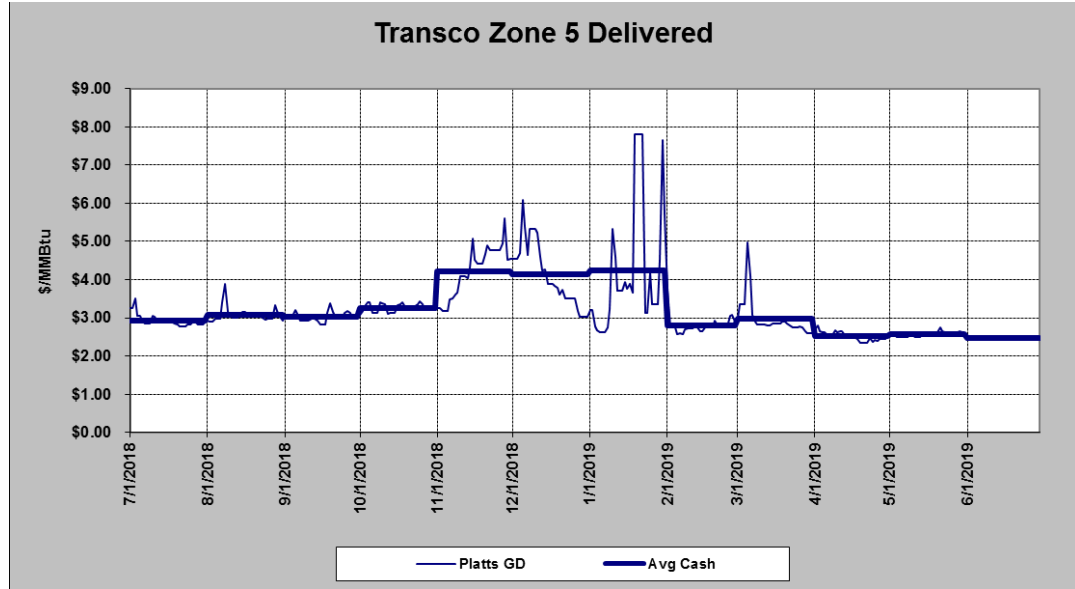
15 A. The tables below show the Company's projected fuel expense rate and  
16 revenue rate by month for the remainder of 2019. Without an interim rate  
17 change on November 1, 2019, the fuel over-recovery at the end of December  
18 2019 is expected to be approximately \$11.8 million. Assuming an 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.

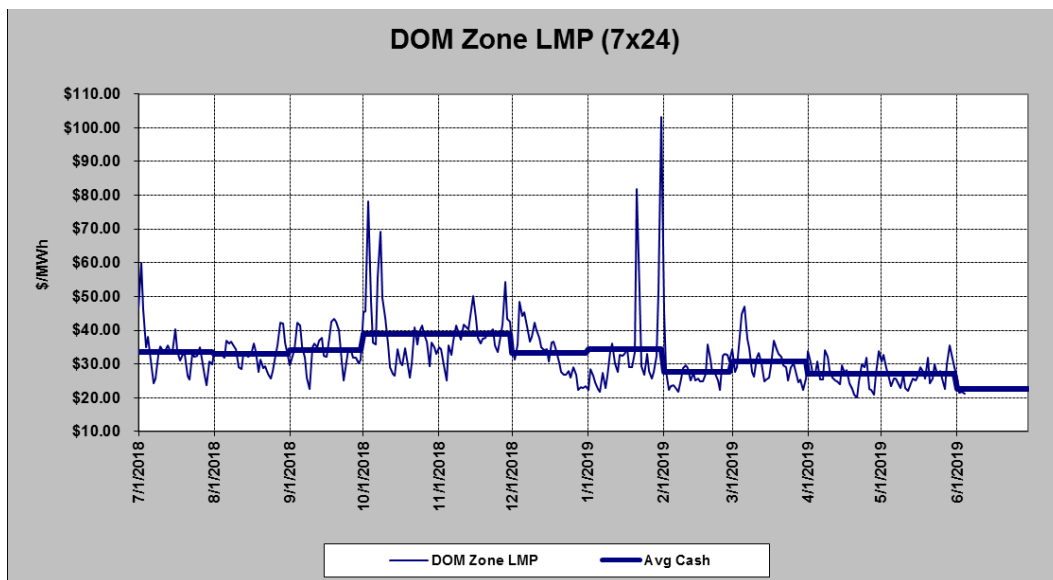
	<u>Jul-19</u>	<u>Aug-19</u>	<u>Sep-19</u>	<u>Oct-19</u>	<u>Nov-19</u>	<u>Dec-19</u>	
NC MWh sales	430,324	401,997	364,787	327,231	318,564	367,234	
NC cost (\$/MWh)	20.28	20.02	18.96	19.65	23.15	21.82	
NC Fuel Cost (\$/MWh)	19.67	19.42	18.39	19.06	22.45	21.17	
NC Recovery rate	25.30	25.30	25.30	25.30	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.

1 (WHEREUPON, Company Exhibit RTC-1,  
2 Schedules 1-5, is marked for  
3 identification as prefiled and  
4 received into evidence.)

5 (WHEREUPON, the prefiled direct  
6 testimony and Appendix A of RONNIE  
7 T. CAMPBELL is copied into the  
8 record as if given orally from the  
9 stand.)



**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**

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NOV 27 2019

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.

1 (WHEREUPON, Company Exhibit DEH-1,  
2 Schedules 1, is marked for  
3 identification as prefiled and  
4 received into evidence.)

5 (WHEREUPON, the prefiled direct  
6 testimony and Appendix A of DALE  
7 E. HINSON is copied into the  
8 record as if given orally from the  
9 stand.)



**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**

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NOV 27 2019

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**

1  
2  
3 **Q. Please discuss the Company's gas procurement practices.**

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

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

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

19 A. The Company continues to utilize more natural gas to serve the electricity  
20 needs of its customers. In fact, during the Test Period, energy production at  
21 the Company's natural gas-fired power stations accounted for about 39.1%, up  
22 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**

- 1
- 2
- 3 **Q. Please discuss the Company's biomass procurement practices.**
- 4 A. The Company has a varied procurement strategy for its biomass stations
- 5 depending on the geographical region of the power station. Hopewell and
- 6 Southampton Power Stations are served by multiple suppliers under both short
- 7 and long-term agreements, enabling the Company to increase the reliability of
- 8 its biomass supply by diversifying its supplier base. The Company purchases
- 9 long-term fuel supply through one primary supplier at its Altavista Power
- 10 Station. Procurement for the Company's biomass needs at its co-fired
- 11 Virginia City Hybrid Energy Center facility is also conducted via short and
- 12 long-term contracts with various suppliers. All four biomass-consuming
- 13 plants receive wood deliveries via truck.

14

15

**SECTION V**  
**OIL PROCUREMENT**

- 16 **Q. Please discuss the Company's oil procurement practices.**
- 17 A. The Company purchases its No. 2 fuel oil and No. 6 fuel oil requirements on
- 18 the spot market and optimizes its inventory, storage, and transportation to
- 19 ensure reliable supply to its power generating facilities. Trucks, vessels,
- 20 barges, and pipelines are employed to transport oil to the Company's stations
- 21 and third-party storage locations, ensuring a reliable supply of oil and
- 22 mitigating the price risk associated with potentially volatile prices for these
- 23 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.



1 (WHEREUPON, the prefiled direct  
2 testimony and Appendix A of TOM A.  
3 BROOKMIRE is copied into the  
4 record as if given orally from the  
5 stand.)  
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**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 **Q. Please briefly describe the Company's nuclear fuel procurement policy.**

2     A.     The Company continues to follow the same procurement practices as it has in  
3     the past in accordance with its procedures, a copy of which has been  
4     previously provided to this Commission in Docket No. E-100, Sub 47A.

5        These procedures not only cover nuclear fuel procurement, but also the  
6        procurement of natural gas, coal, biomass, and oil.

7 **SECTION I**  
8 **NUCLEAR FUEL MARKET AND COMPONENTS**

9 **Q. What are the major components of nuclear fuel expenses?**

A. Nuclear fuel expenses include the amortized value of the cost for uranium, along with required conversion, enrichment, and fabrication services (collectively the “front-end components”). In addition, there is the amortization of the Allowance for Funds Used During Construction (“AFUDC”) and the federal government’s fee for the disposal of spent nuclear fuel. I will discuss the current status of the disposal fee in Section II of my testimony.

17     **Q.**     Please describe any changes in the market conditions for the front-end  
18     components since the last fuel proceeding.

19     A.     The nuclear fuel market has softened considerably in the past seven to eight  
20            years with uranium, conversion, and enrichment markets all showing varying  
21            levels of decreased prices. This is largely due to the devastating Japanese  
22            earthquake and tsunami of March 2011. But there have been other factors  
23            influencing this trend as well such as clear reductions in demand (*e.g.*,

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.

1 (WHEREUPON, Company Exhibit GGB-1,  
2 Schedules 1-10, is marked for  
3 identification as prefiled and  
4 received into evidence.)

5 (WHEREUPON, the prefiled direct  
6 testimony and Appendix A of GEORGE  
7 G. BEASLEY is copied into the  
8 record as if given orally from the  
9 stand.)

**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>	<u>As of</u>	<u>As</u> <u>Proposed</u> <u>For</u>	<u>As</u> <u>Proposed</u> <u>For</u>	<u>As</u> <u>Proposed</u> <u>For</u>
<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.

1 CHAIR MITCHELL: Ms. Edmondson.

2 MS. EDMONDSON: Yes. The Public Staff would  
3 move that the testimony of Dustin R. Metz consisting  
4 of 12 pages and a two-page Appendix, and the Affidavit  
5 of Jenny Li consisting of four pages and a one-page  
6 Appendix, both filed October 22nd be entered into the  
7 record as if given orally from the stand.

8 CHAIR MITCHELL: Hearing no objection, your  
9 motion will be allowed.

10 (WHEREUPON, the prefiled direct  
11 testimony and Appendix A of DUSTIN  
12 R. METZ is copied into the record  
13 as if given orally from the  
14 stand.)  
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## BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-22, SUB 579

In the Matter of  
Application by Virginia Electric and Power  
Company, d/b/a Dominion Energy North  
Carolina Pursuant to N.C.G.S. § 62-133.2  
and Commission Rule R8-55 Regarding  
Fuel and Fuel-Related Costs Adjustments  
for Electric Utilities

) TESTIMONY OF  
) DUSTIN R. METZ  
) PUBLIC STAFF –  
) NORTH CAROLINA  
) UTILITIES  
) COMMISSION

OFFICIAL COPY

Nov 27 2019

1 Q. PLEASE STATE YOUR NAME AND ADDRESS FOR THE  
2 RECORD.

3 A. My name is Dustin R. Metz. My business address is 430 North  
4 Salisbury Street, Raleigh, North Carolina.

5 Q. WHAT IS YOUR POSITION WITH THE PUBLIC STAFF?

6 A. I am an engineer with the Electric Division of the Public Staff,  
7 representing the using and consuming public.

8 Q. PLEASE DISCUSS YOUR EDUCATION AND EXPERIENCE.

9 A. A summary of my education and experience is outlined in detail in  
10 Appendix A of my testimony.

11 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS  
12 PROCEEDING?

13 A. The purpose of my testimony is to present the Public Staff's  
14 recommendations regarding the proposed fuel and fuel-related cost  
15 factors for the Residential, Small General Service and Public  
16 Authority, Large General Service, Schedule NS, Schedule 6VP,  
17 Outdoor Lighting, and Traffic retail customer classes of Virginia  
18 Electric and Power Company, d/b/a Dominion Energy North  
19 Carolina (DENC or the Company), as set forth in the Company's  
20 August 13, 2019, application.



1 Q. WHAT DID YOU REVIEW IN CONDUCTING YOUR  
2 INVESTIGATION OF THE COMPANY'S APPLICATION?

3 A. I reviewed the Company's application, prefiled testimony and  
4 exhibits, fuel and fuel-related costs, and test period baseload power  
5 plant performance reports, as well as the current coal, natural gas,  
6 and nuclear fuel markets, various documents related to test year  
7 power plant outages, and the costs authorized to be recovered by  
8 Session Law 2017-192 (HB 589). I also reviewed the affidavit of  
9 Public Staff witness Jenny X. Li. Additionally, I participated in  
10 teleconferences with the Company.

11 Q. WHAT ARE THE TEST AND BILLING PERIODS FOR THIS  
12 PROCEEDING?

13 A. For this proceeding, the test period is July 1, 2018, through June 30,  
14 2019, and the proposed billing period is February 1, 2020, through  
15 January 31, 2021.

16 Q. DID THE COMPANY MEET THE STANDARDS OF COMMISSION  
17 RULE R8-55(K) FOR THE TEST YEAR?

18 A. For the test year, the Company met the standards of Commission  
19 Rule R8-55(k) by maintaining an actual system-wide nuclear  
20 capacity factor that exceeded the NERC (North American Electric  
21 Reliability Corporation) weighted average nuclear capacity factor.  
22 Additionally, the Company's two-year simple average of its system-

1 wide nuclear capacity factor exceeded the NERC weighted average  
2 nuclear capacity factor.

3 **Q. WHAT ARE THE RESULTS OF YOUR INVESTIGATION OF**  
4 **PROJECTED FUEL PRICES AND THE CALCULATION OF THE**  
5 **TOTAL FUEL FACTOR?**

6 A. Based upon my investigation, I have determined that the projected  
7 fuel prices set forth in the testimony of Company witnesses Beasley,  
8 Campbell, Hinson, and Brookmire are reasonable as used in the  
9 calculation of the total fuel factor. I have also concluded that the total  
10 fuel factor has been calculated in accordance with the requirements  
11 of N.C. Gen. Stat. § 62-133.2.

12 **Q. PLEASE DISCUSS THE PUBLIC STAFF'S INVESTIGATION OF**  
13 **THE TEST PERIOD EXPERIENCE MODIFICATION FACTOR**  
14 **(EMF).**

15 A. Public Staff witness Li describes the Public Staff's review of the test  
16 period EMF in her affidavit, and I have incorporated her  
17 recommendations in Table 2 below.

18 **Q. MR. METZ, YOU STATED PREVIOUSLY THAT YOU REVIEWED**  
19 **TEST YEAR POWER PLANT OUTAGES. ARE THERE ANY**  
20 **PARTICULAR OUTAGES OR EVENTS THAT YOU WOULD LIKE**  
21 **TO BRING TO THE COMMISSION'S ATTENTION?**

1 A. Yes. In previous orders,<sup>1 2</sup> the Commission instructed the Public  
2 Staff to continue investigating and presenting its concerns regarding  
3 utility operations to the Commission on events that take place within  
4 the test year. For the test period in this proceeding, the Public Staff  
5 identified three outages that merited in depth investigations: an  
6 approximate 200-day outage at a Company-owned solar facility,  
7 and two separate approximately one-day outages at North Anna  
8 Power Station.

9 **Q. ARE YOU RECOMMENDING DISALLOWANCE OF**  
10 **REPLACEMENT POWER COSTS FOR THESE THREE**  
11 **OUTAGES?**

12 A. No.

13 **Q. IF YOU ARE NOT RECOMMENDING DISALLOWANCE OF**  
14 **REPLACEMENT POWER COSTS, PLEASE EXPLAIN WHY YOU**  
15 **ARE BRINGING THESE OUTAGES TO THE COMMISSION'S**  
16 **ATTENTION.**

17 A. First, it is important to report to the Commission any concerns  
18 related to the operations or status of the Company's generation  
19 fleet, as well as any trends that merit attention. There is also value  
20 in bringing these issues to the Company's attention to indicate areas

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<sup>1</sup> Docket No. E-22, Sub 546, Order Approving Fuel Charge Adjustment, Evidence and Conclusions for Findings of Fact Nos. 6-9, p. 19, January 25, 2018.

<sup>2</sup> Docket No. E-7, Sub 1163, Order Approving Fuel Charge Adjustment, Evidence and Conclusions for Findings of Fact Nos. 4-6, p. 28, August 20, 2018.



1 of plant operation that are of interest to the Public Staff or the  
2 Commission, and that would be of interest in future proceedings  
3 should the issues continue or recur.

4 Second, the events that contributed to these outages are of  
5 particular concern to the Public Staff. While the Public Staff did not  
6 conclude that there was imprudence or mismanagement on the  
7 Company's part, to the extent it has not already, the Public Staff  
8 believes that Company should implement and continue mitigation  
9 actions to prevent future occurrences of the nature identified by the  
10 investigations.

11 Third, to the extent these issues continue or recur, in future fuel  
12 factor proceedings the Public Staff may likely conclude there is  
13 imprudence or mismanagement on the Company's part that justifies  
14 a disallowance of future power replacement costs.

15 **Q. PLEASE DISCUSS THE SPECIFICS OF THE SOLAR RELATED**  
16 **OUTAGE.**

17 A. Scott Solar I is a Company-owned 17 MW<sub>AC</sub> solar photovoltaic  
18 facility located in Powhatan County, Virginia. It was offline for a total  
19 of 241 days during the test year, with a lightning strike on September  
20 2, 2018, initiating the outage. The facility was repaired, but remained  
21 offline during Hurricane Michael. Following Hurricane Michael, the

1 site was re-energized (i.e., re-connected to the grid and supplied  
2 power); during plant startup, a transformer fire occurred.

3 The repair effort associated with the transformer fire lasted  
4 approximately 207 days. Upon investigation, the Company believed  
5 that the transformer fire was caused by faulty electrical connections  
6 that had been repaired following the lightning event. The  
7 investigation revealed that a total of fifteen electrical connections  
8 were repaired in response to the lightening event. Four of the fifteen  
9 electrical connections were part of the fire and not salvageable for  
10 analysis, but a sample of the remaining eleven was evaluated. The  
11 evaluation revealed that the electrical assemblies were performed  
12 incorrectly or exhibited similar poor workmanship, at least in part by  
13 failing to follow the manufacturer's recommendations.<sup>3</sup> As part of the  
14 investigation, other equivalent electrical connections were  
15 analyzed, and necessary repairs were completed.

16 When the electrical connections were tested after the initial repairs,  
17 the tests did not reveal the embedded failure risks of the incorrectly  
18 installed electrical connections. Post-installation visual inspections  
19 would not have been able to identify the issues listed in the report.

20 It is imperative that the Company ensure that quality workmanship  
21 is used on all generation assets connected to the electrical grid

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<sup>3</sup> Company response to Public Staff Data Request 11-8.

1 regardless of technology. While this event was specific to a solar  
2 facility, this type of event could have occurred at any generating  
3 station. It is also crucial for DENC to ensure that the personnel of its  
4 contractual agents, diligently meet the same, or greater, quality  
5 craftsmanship standards that the Company expects of its own  
6 employees. Part of DENC's supervision and control should include  
7 having policies and procedures in place to provide direction,  
8 documentation, and oversight of such work.

9 **Q. PLEASE DISCUSS YOUR CONCERN(S) ABOUT THE**  
10 **NUCLEAR-RELATED OUTAGES AT NORTH ANNA POWER**  
11 **STATION.**

12 **A.** While the two outages were distinct and occurred at different  
13 physical locations, they had some issues in common. Specifically,  
14 both outages involved: **[BEGIN CONFIDENTIAL]** [REDACTED]

15 [REDACTED]

16 [REDACTED]

17 [REDACTED]

18 [REDACTED]

19 [REDACTED]

20 [REDACTED]

21 [REDACTED]

22 [REDACTED]



1 [REDACTED]  
2 [REDACTED]  
3 [REDACTED]  
4 [REDACTED]  
5 [REDACTED]  
6 [REDACTED]  
7 [REDACTED]  
8 [REDACTED]  
9 [REDACTED]  
10 [REDACTED]  
  
11 [REDACTED]  
12 [REDACTED]  
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20 [REDACTED]  
21 [REDACTED]  
22 [REDACTED]  
23 [REDACTED]

1 [REDACTED]  
2 [REDACTED]  
3 [REDACTED]  
4 [REDACTED]  
5 [REDACTED]  
6 [REDACTED]  
7 [REDACTED]

8 [END CONFIDENTIAL]

9 Q. WILL ANY FUEL COMPONENTS AND TOTAL FUEL FACTORS  
10 CHANGE PRIOR TO FEBRUARY 1, 2020?

11 A. Yes. In Docket No. E-22, Subs 562 and 566, the Company  
12 requested new fuel factors be implemented on November 1, 2019,  
13 to coincide with the effective date of the interim base rates. Because  
14 the Company anticipated an over-recovery of fuel expenses in the  
15 second half of 2019, as stated in its application in this proceeding,  
16 the Company proposed, and the Public Staff agreed to,<sup>5</sup> a  
17 decrement Rider A1 to minimize any over-recovery. Table 1 below  
18 shows the new fuel factors proposed to be effective from November  
19 1, 2019, through January 31, 2020, including Rider A1.

<sup>4</sup> A program deficiency, on its own, does not necessarily indicate that imprudence or mismanagement has occurred.

<sup>5</sup> See Section V of Agreement and Stipulation of Partial Settlement filed on September 17, 2019, in Docket No. E-22, Subs 562 and 566.



**TABLE 1 – Total Proposed Fuel and Fuel-Related Cost  
Factors (\$ per kWh)**

(includes regulatory fee, which currently has a multiplier of 1.0013)

**TO BE EFFECTIVE NOVEMBER 1, 2019 – JANUARY 31, 2020**

<b>Rate Class</b>	<b>Base</b>	<b>Rider A</b>	<b>Rider A1</b>	<b>Rider B</b>	<b>Total<sup>6</sup></b>
Residential	\$0.02118	\$0.00000	(0.00378)	\$0.00392	\$0.02132
Small General Service & Public Authority	\$0.02115	\$0.00000	(0.00378)	\$0.00392	\$0.02129
Large General Service	\$0.02098	\$0.00000	(0.00375)	\$0.00389	\$0.02112
Schedule NS (Nucor Steel)	\$0.02036	\$0.00000	(0.00364)	\$0.00377	\$0.02049
Schedule 6VP (Variable Pricing)	\$0.02065	\$0.00000	(0.00370)	\$0.00383	\$0.02078
Outdoor Lighting	\$0.02118	\$0.00000	(0.00378)	\$0.00392	\$0.02132
Traffic <sup>#</sup>	\$0.02118	\$0.00000	(0.00378)	\$0.00392	\$0.02132

1    **Q.    WHAT FUEL COMPONENTS AND TOTAL FUEL FACTORS**  
2       **DOES THE PUBLIC STAFF RECOMMEND FOR APPROVAL**  
3       **EFFECTIVE FEBRUARY 1, 2020?**

4    **A.**    The Public Staff recommends approval of the fuel components and  
5       total fuel factors (excluding the regulatory fee) shown in Table 2,  
6       effective for the twelve months beginning February 1, 2020:

<sup>6</sup> Calculations reflect the application of the voltage differentiation factors used by the Company in its Application, which the Public Staff accepts.

**TABLE 2 – Total Proposed Fuel and Fuel-Related Cost  
Factors (\$ per kWh)**

(includes regulatory fee, which currently has a multiplier of 1.0013)

**TO BE EFFECTIVE February 1, 2020**

<b>Rate Class</b>	<b>Base</b>	<b>Rider A</b>	<b>Rider A1</b>	<b>Rider B</b>	<b>Total<sup>7</sup></b>
Residential	\$0.02118	\$0.00000	N/A	\$0.00014	\$0.02132
Small General Service & Public Authority	\$0.02115	\$0.00000	N/A	\$0.00014	\$0.02129
Large General Service	\$0.02098	\$0.00000	N/A	\$0.00014	\$0.02112
Schedule NS (Nucor Steel)	\$0.02036	\$0.00000	N/A	\$0.00013	\$0.02049
Schedule 6VP (Variable Pricing)	\$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

1 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

2 A. Yes.

<sup>7</sup> Id.

**APPENDIX A****QUALIFICATIONS AND EXPERIENCE****DUSTIN R. METZ**

Through the Commonwealth of Virginia Board of Contractors, I hold a current Tradesman License certification of Journeyman and Master within the electrical trade, awarded in 2008 and 2009 respectively. I graduated from Central Virginia Community College, receiving Associate of Applied Science degrees in Electronics and Electrical Technology (Magna Cum Laude) in 2011 and 2012 respectively, and an Associate of Arts in Science in General Studies (Cum Laude) in 2013. I graduated from Old Dominion University in 2014, earning a Bachelor of Science degree in Engineering Technology with a major in Electrical Engineering and a minor in Engineering Management. I am currently enrolled at North Carolina State University, working toward a Masters of Engineering degree.

I have over 12 years of combined experience in engineering, electromechanical system design, troubleshooting, repair, installation, commissioning of electrical and electronic control systems in industrial and commercial nuclear facilities, project planning and management, and general construction experience. My general construction experience includes six years of employment with Framatome, where I provided onsite technical support, craft oversight, and engineer design change packages, as well as participated in root cause analysis teams at commercial nuclear



power plants, including plants owned by both Duke and Dominion and an additional six years of employment with an industrial and commercial construction company, where I provided field fabrication and installation of electrical components that ranged from low voltage controls to medium voltage equipment, project planning and coordination with multiple work groups, craft oversight, and safety inspections.

I joined the Public Staff in the fall of 2015. Since that time, I have worked on general rate cases, fuel cases, applications for certificates of public convenience and necessity, service and power quality, customer complaints, North American Electric Reliability Corporation (NERC) Reliability Standards, nuclear decommissioning, National Electric Safety Code (NESC) Subcommittee 3 (Electric Supply Stations), avoided costs and PURPA, interconnection procedures, integrated resource planning, and power plant performance evaluations. I have also participated in multiple technical working groups and been involved in other aspects of utility regulation.

1 (WHEREUPON, the prefiled affidavit  
2 and Appendix A of JENNY LI is  
3 copied into the record as if given  
4 orally from the stand.)  
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**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 Carolina )  
Pursuant to N.C. Gen. Stat. § 62-133.2 and )  
Commission Rule R8-55 Regarding Fuel and Fuel- )  
Related Cost Adjustments for Electric Utilities )

AFFIDAVIT  
OF  
JENNY X. LI

STATE OF NORTH CAROLINA

COUNTY OF WAKE

I, Jenny X. Li, first being duly sworn, do depose and say:

I am a Staff Accountant with the Accounting Division of the Public Staff – North Carolina Utilities Commission. A summary of my education and experience is attached to this affidavit as Appendix A.

The purpose of this affidavit is to present the Public Staff's investigation of the Experience Modification Factor (EMF) rider proposed by Dominion Energy North Carolina (DENC or Company) in this proceeding. The EMF rider is utilized to "true-up" the over- or under-recovery of fuel and fuel-related costs (fuel costs) experienced during the test year, which is determined by comparing the revenues collected during the test year to recover previously estimated fuel costs (fuel revenues) to the actual amount of fuel costs incurred during the test year. DENC's test year in this fuel proceeding is the twelve months ended June 30, 2019.

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Nov 27 2019

In its application filed on August 13, 2019, DENC proposed an EMF increment rider (Rider B) of \$0.00013 per kilowatt-hour (kWh), including the North Carolina regulatory fee (\$0.00013 per kWh, excluding the regulatory fee) for all North Carolina retail customer classes. To calculate the EMF increment rider, DENC took its test year fuel cost under-recovery of \$550,353 and divided it by the Company's pro-forma North Carolina retail sales of 4,308,591,154 kWh. The EMF including the regulatory fee is then produced by grossing up the factor for the effects of the fee. The Company proposes to recover the aggregate EMF increment rider as produced by this calculation before application of class-specific voltage differentiation factors, which the Public Staff accepts.

In addition, the Company estimates that it will over-recover fuel expenses for the period of July 2019 through December 2019. As a result, the Company proposed to implement a three-month decrement rider, Rider A1, for each class to be effective November 1, 2019, through January 31, 2020, to account for and minimize the likely over-recovery of fuel expenses in the second half of 2019. The stipulating parties in Docket No. E-22, Sub 562 (2019 Rate Case), agreed to Rider A1 in the Agreement and Stipulation of Partial Settlement filed on September 17, 2019 (Sub 562 Stipulation). The proposed decrement rider is 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 North Carolina jurisdiction.

The Public Staff's investigation included procedures to evaluate whether the Company properly determined its per books fuel costs and fuel revenues during



the test period. These procedures included review of (1) the Company's filing, prior Commission orders, the Monthly Fuel Reports filed by the Company with the Commission, and other Company data provided to the Public Staff; (2) certain specific types of expenditures affecting the Company's test year fuel costs, payments to non-utility generators (NUGs), and payments for purchases of power from the markets administered by PJM Interconnection, LLC (PJM); (3) source documentation of fuel costs for certain selected Company generation resources; and (4) numerous responses to written and verbal data requests.

During the test year for this proceeding, DENC purchased power through markets administered by PJM and from dispatchable NUGs that did not provide DENC with the actual fuel costs associated with the purchases. Because the Company does not have actual fuel costs for these purchases, a proxy Marketer Percentage was applied to the total energy costs of these purchases to arrive at a fuel cost component. The use of a "proxy" for this purpose has been accepted by this Commission as reasonable in every fuel proceeding for which a proxy was necessary since 1997, when the Public Staff, Duke Energy Carolinas, LLC, the entity now known as Duke Energy Progress, LLC, and DENC agreed on a methodology to determine an appropriate Marketer Percentage to be used to apply to the total energy costs for suppliers that did not provide actual fuel costs.

Effective January 1, 2017, the Company began using a 78% Marketer Percentage, which was approved by the Commission in the Company's 2016 general rate case, Docket No. E-22, Sub 532. The 78% Marketer Percentage remains in effect until a new Marketer Percentage is approved in the 2019 Rate



Case or this proceeding (with rates effective February 1, 2020), whichever occurs first. The Company proposed to use a 71% Marketer Percentage in its 2019 Rate Case, and applied this percentage in this fuel proceeding. The Public Staff does not object to the use of a Marketer Percentage of 71%, subject to the Commission's final order in the Company's 2019 Rate Case.

The Public Staff has two recommendations in this fuel proceeding. First, the Commission should approve DENC's EMF increment rider (Rider B) for each customer class. This EMF increment rider is based on net under-recovery of fuel and fuel related costs of \$550,353 and the Company's pro-forma North Carolina retail sales of 4,308,591,154 kWh. This produces an EMF increment rider (Rider B) of \$0.00013 per kilowatt-hour (kWh), including the North Carolina regulatory fee (\$0.00013 per kWh, excluding the regulatory fee) for all North Carolina retail customer classes. Second, the Commission should approve Rider A1, as set forth in the Sub 562 Stipulation. I have provided the EMF increment Rider B amount to Public Staff witness Metz for incorporation into his recommended final fuel factor.

This completes my affidavit.

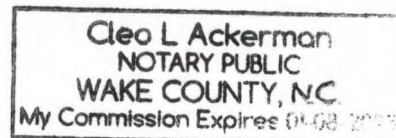
Jenny Li  
Jenny X. Li

Sworn to and subscribed before me

On this the 21<sup>ST</sup> day of October, 2019.

Cleo L. Ackerman  
(Printed Name)

Cleo L. Ackerman  
Notary Public



My Commission Expires: 01-08-2023

## APPENDIX A

## QUALIFICATIONS AND EXPERIENCE

JENNY X. LI

I graduated from North Carolina State University with a Bachelor of Science degree in Accounting.

I joined the Public Staff Accounting Division in August 2016 as a Staff Accountant. I am responsible for the performance of the following activities: (1) the examination and analysis of testimony, exhibits, books and records, and other data presented by utilities and other parties under the jurisdiction of the Commission or involved in Commission proceedings; and (2) the preparation and presentation to the Commission of testimony, exhibits, and other documents in those proceedings.

Since joining the Public Staff, I have filed testimony and affidavits in Duke Energy Progress, LLC (DEP) and Duke Energy Carolina, LLC (DEC) fuel cases and Dominion Energy North Carolina (DENC)'s REPS case. I have also assisted on several electric general rate cases and performed reviews in DEC's Existing DSM Program Rider and BPM/NFPTP Rider; Western Carolina University's PPA Rider, and New River Light and Power Company's PPA Factor.

Prior to joining the Public Staff, I was employed by MDU Enterprises Inc., and Neusoft America Inc. My duties there varied from examining various financial statements to supervising accounting and assisting external audits.

1 CHAIR MITCHELL: Any additional matters for  
2 the Commission's attention?

3 MS. KELLS: No.

4 MS. EDMONDSON: No. Sorry.

5 CHAIR MITCHELL: Okay. We will accept  
6 proposed orders 30 days within the date of the notice  
7 of the availability of the transcript.

8 MS. KELLS: Okay. Thank you.

9 CHAIR MITCHELL: With that, we'll be  
10 adjourned. Thank you.

11 (The proceedings were adjourned)  
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## C E R T I F I C A T E

I, KIM T. MITCHELL, DO HEREBY CERTIFY that  
the Proceedings in the above-captioned matter were  
taken before me, that I did report in stenographic  
shorthand the Proceedings set forth herein, and the  
foregoing pages are a true and correct transcription  
to the best of my ability.

Kim T. Mitchell

Kim T. Mitchell  
Court Reporter