



**NORTH CAROLINA
PUBLIC STAFF
UTILITIES COMMISSION**

October 22, 2019

Ms. Kimberley A. Campbell, Chief Clerk
North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, North Carolina 27699-4300

Re: Docket No. E-22, Sub 579 – Application Pursuant to N.C.G.S. § 62-133.2 and Commission Rule R8-55 Regarding Fuel and Fuel-Related Cost Adjustments for Electric Utilities

Dear Ms. Campbell:

In connection with the above-referenced docket, I transmit herewith for filing on behalf of the Public Staff the following:

1. Testimony of Dustin R. Metz, Utilities Engineer, Electric Division (contains confidential information); and
2. Affidavit of Jenny X. Li, Staff Accountant, Accounting Division.

By copy of this letter, I am forwarding a copy of the public versions to all parties of record by electronic delivery. The confidential pages will be provided to those parties that have entered into a confidentiality agreement.

Sincerely,

/s/ Lucy E. Edmondson
Staff Attorney
lucy.edmondson@psncuc.nc.gov

LEE/cla

Attachments

Executive Director (919) 733-2435	Communications (919) 733-5610	Economic Research (919) 733-2267	Legal (919) 733-6110	Transportation (919) 733-7766
Accounting (919) 733-4279	Consumer Services (919) 733-9277	Electric (919) 733-2267	Natural Gas (919) 733-4326	Water (919) 733-5610

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Oct 22 2019

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

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,^{1 2} 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

¹ 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.

² 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_{AC} 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.³ 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

³ 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]
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10 [REDACTED]

11 [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,⁵ 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.

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

⁵ 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

Rate Class	Base	Rider A	Rider A1	Rider B	Total⁶
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 *	\$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:

⁶ 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

Rate Class	Base	Rider A	Rider A1	Rider B	Total⁷
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.

⁷ 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.

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.

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.

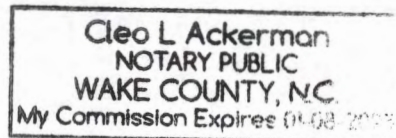
Jenny Li
Jenny X. Li

Sworn to and subscribed before me

On this the 21ST 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.