

**NORTH CAROLINA
PUBLIC STAFF
UTILITIES COMMISSION**

October 19, 2022

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

Re: Docket No. E-22, Sub 645 – Application of Virginia Electric and Power Company, d/b/a Dominion Energy of North Carolina, for Approval of Demand-Side Management and Energy Efficiency Cost Recovery Rider Pursuant to N.C. Gen. Stat. § 62-133.9 and Commission Rule R8-69

Dear Ms. Dunston:

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

1. Direct Testimony and Exhibits of Thomas C. Williamson, Jr., Utilities Engineer, Energy Division;
2. Notice of Affidavit of Kuei Fen Sun, Financial Analyst III, Accounting Division; and
3. Affidavit of Kuei Fen Sun, Financial Analyst III, Accounting Division.

By copy of this letter, I am forwarding a copy to all parties of record by electronic delivery.

Sincerely,

Electronically submitted
s/ Anne Keyworth
Staff Attorney
anne.keyworth@psncuc.nc.gov

Attachments

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BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-22, SUB 645

October 19, 2022

In the Matter of
Application by Virginia Electric)
and Power Company, d/b/a)
Dominion Energy North Carolina,) **TESTIMONY OF**
for Approval of Demand-Side) **THOMAS C. WILLIAMSON, JR.**
Management and Energy) **PUBLIC STAFF –**
Efficiency Cost Recovery Rider) **NORTH CAROLINA**
under N.C. Gen. Stat. § 62-133.9) **UTILITIES COMMISSION**
and Commission Rule R8-69)

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

3 A. My name is Thomas C. Williamson, Jr. My business address is 430
4 North Salisbury Street, Dobbs Building, Raleigh, North Carolina. I am
5 a Utilities Engineer with the Energy Division of the Public Staff –
6 North Carolina Utilities Commission.

7 **Q. Briefly state your qualifications and duties.**

8 A. My qualifications and duties are included in Appendix A.

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

10 A. The purpose of my testimony is to offer recommendations
11 concerning: (1) the portfolio of demand side management (DSM) and
12 energy efficiency (EE) programs for which Virginia Electric and
13 Power Company, d/b/a Dominion Energy North Carolina (DENC or
14 the Company) is seeking cost recovery through its annual DSM/EE
15 rider in this proceeding; (2) the cost-effectiveness of the Company's
16 DSM and EE programs; and (3) the evaluation, measurement, and
17 verification (EM&V) support data for the approved DSM and EE
18 programs.

19 **Q. What statutes, Commission rules, or orders have you reviewed**
20 **in your investigation of DENC's proposed DSM/EE rider?**

- 1 A. During my investigation, I reviewed: (1) the application, testimony,
2 and exhibits for approval of cost recovery for DSM and EE measures
3 filed by DENC pursuant to N.C. Gen. Stat. § 62-133.9 and
4 Commission Rule R8-69 on August 9, 2022; (2) the DSM/EE cost
5 recovery mechanism approved by the Commission in Docket No. E-
6 22, Sub 464 on March 22, 2022 (2022 Mechanism); (3) responses to
7 Public Staff data requests and follow-up conference calls with
8 Company personnel; (4) DENC's 2022 EM&V Report filed on June
9 15, 2022, in Docket No. E-22, Sub 604 (2022 EM&V Report), which
10 provides the participation and program savings related to the
11 Company's DSM/EE programs through December 31, 2021; (5) the
12 recently enacted Virginia Clean Economy Act (VCEA),¹ which
13 directly impacts the operation and availability of DSM/EE programs
14 in North Carolina; and (6) previous Commission orders related to the
15 Company's DSM/EE programs and cost recovery rider proceedings.
- 16 **Q. Please identify the DSM and EE programs for which DENC is**
17 **seeking cost recovery through the DSM/EE rider in this**
18 **proceeding.**

¹ The VCEA, House Bill 1526, was signed into law on April 11, 2020, and became effective July 1, 2020. The VCEA is comprehensive energy legislation that, among other things, sets a target of reaching 5% energy efficiency savings (based on 2019 jurisdictional electricity sales) by 2025.

1 A. The Company is seeking recovery of costs incurred and/or utility
2 incentives for the DSM and EE programs shown in Table 1, below.
3 Table 1 includes both active and retired programs. Retired programs
4 remain eligible for cost recovery of amortized costs that were
5 generated while the programs were offered to North Carolina
6 customers.

Table 1 – DSM and EE Programs Seeking Recovery

| Prgm. Sub | Focus | DSM Phase | Program Name |
|-----------|---------|-----------|---|
| 465 | Res | 1 | Residential Air Conditioner Cycling |
| 508 | Non-Res | 3 | Non-Residential Lighting Systems and Controls |
| 523 | Res | 4 | Income and Age Qualifying Home Improvement |
| 538 | Non-Res | 5 | Non-Residential Small Business Improvement |
| 543 | Non-Res | 6 | Non-Residential Prescriptive |
| 567 | Res | 7 | Residential Home Energy Assessment |
| 568 | Res | 7 | Residential Efficient Products Marketplace |
| 569 | Res | 7 | Residential Appliance Recycling |
| 570 | Non-Res | 7 | Non-Residential Window Film |
| 571 | Non-Res | 7 | Non-Residential Small Manufacturing |
| 572 | Non-Res | 7 | Non-Residential Office |
| 573 | Non-Res | 7 | Non-Residential Lighting Systems and Controls |
| 574 | Non-Res | 7 | Non-Residential Heating and Cooling Efficiency |
| 591 | Non-Res | 8 | Non-Residential New Construction |
| 592 | Res | 8 | Residential EE Kits |
| 593 | Res | 8 | Residential Home Retrofit |
| 594 | Res | 8 | Residential Smart Thermostat (DR) |
| 595 | Res | 8 | Residential Smart Thermostat (EE) |
| 596 | Non-Res | 8 | Non-Residential Small Business Improvement Enhanced |
| 608 | Res | 9 | Residential Income and Age Qualifying |
| 614 | Non-Res | 9 | Non-Residential Building Automation |
| 615 | Non-Res | 9 | Non-Residential Building Optimization |
| 616 | Non-Res | 9 | Non-Residential Engagement |
| 617 | Non-Res | 9 | Non-Residential Enhanced Prescriptive |
| 618 | Res | 9 | Residential Smart Home |
| 619 | Res | 9 | Residential Virtual Audit |
| 620 | Res | 9 | Residential Water Savings (DR) |
| 621 | Res | 9 | Residential Water Savings (EE) |

1 **Q. Have any new programs been added to the DENC portfolio since**
2 **the last rider proceeding?**

3 A. Yes. The most recent additions to the Company's EE portfolio are
4 identified in Table 1, above, as Phase 9, which added nine new
5 programs in total: five residential and four non-residential.

6 Additionally, the Company, in its Virginia service territory, has been
7 given recent approval by the Virginia State Corporation Commission
8 (VSCC) for its Phase 10 programs.² These Phase 10 programs are
9 not included in this year's North Carolina rider application; however,
10 if these programs are filed with, and receive approval from, the North
11 Carolina Utilities Commission (Commission), they will be included in
12 future North Carolina DSM/EE rider applications.

13 **Q. Have there been any discontinued programs in the DENC**
14 **portfolio since the last rider proceeding?**

15 A. Yes. In his direct testimony, DENC witness Michael T. Hubbard
16 stated that DENC will close the Phase 1 A/C Cycling Program after
17 the 2022 season concludes in September³; however, DENC has not
18 yet requested closure. According to the Company, affected

² See the VSCC's Final Order entered on August 10, 2022, in Docket No. PUR-2021-00247.

³ Direct Testimony of Michael T. Hubbard, p. 14-15.

1 customers will be offered the option to participate in the Phase 8
2 Residential Smart Thermostat DR Program.

3 **Q. Please discuss the avoided costs used to determine cost-**
4 **effectiveness of the Company's portfolio of programs.**

5 A. The Company attests that the underlying avoided cost sources for
6 the eligible programs are consistent with the 2022 Mechanism.

7 Paragraph 19 of the 2022 Mechanism states that:

8 For purposes of program approval (new programs or
9 modifications of existing programs submitted pursuant
10 to Commission Rule R8-68), the per kW avoided
11 capacity costs used to calculate cost effectiveness of
12 programs and/or measures shall be determined at the
13 time DENC files its petition for annual cost recovery
14 pursuant to Rule R8-69 and this Mechanism, using
15 comparable methodologies to those used in the most
16 recently approved biennial avoided cost proceeding.
17 The per kWh avoided energy costs shall be those from
18 the recommended or preferred plan reflected in or
19 underlying the most recently filed integrated resource
20 plan (IRP).

21 Through discovery, the Company stated that its assumptions
22 associated with resource and supply costs are consistent with the
23 assumptions used in its 2021 IRP filed on September 1, 2021, in
24 Docket No. E-100, Sub 165, for the calculations of its avoided
25 capacity and energy costs. The Public Staff verified this consistency
26 as part of its investigation in this proceeding.

1 **Q. Has the Company changed how it is implementing its forecast**
2 **modeling since the last North Carolina DSM/EE proceeding?**

3 A. The Company has been transitioning from its previous forecasting
4 methodology, Strategist, to a new methodology, PLEXOS. The
5 Company indicated that PLEXOS would provide the capability to
6 evaluate load shapes of DSM/EE programs and portfolios for all
7 8,760 hours in a year. Evaluation of the full 8,760 hours will allow the
8 Company to see the impact of the load shapes during the
9 coincidental peaks, which is a significant improvement from the one-
10 week evaluation window used by Strategist.

11 Since the last DSM/EE rider proceeding, the Company has
12 completed its transition to PLEXOS and, as a result, the forecast
13 modeling used to calculate cost-effectiveness for its portfolio of
14 DSM/EE programs is based on this new methodology. The Public
15 Staff has been reviewing this transition over the last two rider
16 proceedings and is satisfied that the results of the PLEXOS modeling
17 are not materially different from the results of the Strategist modeling.
18 However, a key difference between Strategist and PLEXOS is that
19 the output files that PLEXOS modeling produces are more user
20 friendly to both the Company and potential reviewers, such as the
21 Public Staff.

1 **Q. Please explain how the updated forecast modeling impacts the**
2 **Company's portfolio of North Carolina DSM/EE programs.**

3 A. Through discovery, the Company stated that it updated its modeling
4 inputs to the historical penetrations, kW savings, kWh savings, and
5 revised load shapes for the existing portfolio to forecast cost-
6 effectiveness. The inputs flowing from the Company's updated PJM⁴
7 forecast are: (1) utilization of a winter peak (instead of the traditional
8 summer peak); (2) changes in underlying fuel and energy prices; and
9 (3) the inclusion of VCEA requirements.

10 This shift in modeling is the result of recent VSCC proceedings⁵ in
11 which the VSCC instructed the Company to use an updated PJM
12 forecast that is more focused on the inputs associated with the "DOM
13 zone" of PJM, as opposed to the traditional focus of the PJM system
14 as a whole, which is historically summer peaking.

15 As a result of using a winter peak in the DSM and EE forecasting, it
16 is difficult to achieve cost-effective savings for programs that produce
17 negligible winter peak capacity benefits. However, this shift in
18 seasonal peaking should ultimately produce more winter-focused

⁴ PJM, Interconnection, Inc. is a Regional Transmission Operator. Dominion Energy is a member of PJM. The combined Dominion service territory in Virginia and North Carolina is identified as the "DOM Zone" within the PJM service territory.

⁵ See, e.g., the VSCC's Order entered in Case No. PUR-2018-00065 on December 7, 2018, p. 8, in Virginia Electric and Power Company's Integrated Resource Plan filing pursuant to Va. Code § 56-597 *et seq.*

1 programs in the portfolio that will aid the Company in reducing its
2 winter peak.

3 **Q. Please discuss the cost-effectiveness of the portfolio of**
4 **programs.**

5 A. The testimony and exhibits of DENC witness Edmund J. Hall present
6 the Company's analysis of cost-effectiveness for each program.
7 Company Exhibit EJH-1, Schedule 2, represents the programs
8 eligible for inclusion in the calculation of the Portfolio Performance
9 Incentive (PPI) in the Vintage 2023 rider, and includes the
10 Company's calculations of the Utility Cost Test (UCT) and the Total
11 Resource Cost (TRC) test. These data points provide a snapshot of
12 program performance expected over the rate period, as well as a
13 comparison of the changes in cost-effectiveness from year to year.
14 Schedule 2 also provides the UCT benefits, which are used in the
15 determination of the PPI component of rider rates.

16 In Company Exhibit EJH-1, Schedule 2, eight of the Vintage 2023
17 programs⁶ are projected not to be cost-effective under the UCT.
18 However, the Vintage 2023 Portfolio demonstrates cost-
19 effectiveness under the UCT and TRC.

⁶ Non-Residential Window Film, Non-Residential Small Office, Non-Residential Small Business Improvement, Non-Residential Prescriptive, Non-Residential Engagement, Residential Income and Age Qualifying, Residential EE Kits, and Residential Appliance Recycling.

1 Witness Hall's Exhibit EJJ-1, Schedule 4, in accordance with
2 Ordering Paragraph 41 of the 2022 Mechanism, represents the
3 prospective cost-effectiveness results of DSM and EE programs as
4 modeled by the Company's 2021 IRP over the remaining life of each
5 program. This perspective provides the basis for determining which
6 programs should continue to be offered as DSM or EE programs
7 eligible for cost recovery pursuant to the 2022 Mechanism. The
8 Public Staff's review indicates that eight of the Vintage 2023
9 programs are projected not to be cost-effective under the UCT.
10 However, the Vintage 2023 Portfolio demonstrates cost-
11 effectiveness under the UCT and TRC.

12 My review of witness Hall's calculations of cost-effectiveness
13 indicates that the calculations for the Company's Exhibit EJJ-1,
14 Schedules 2 and 4 have been performed in accordance with the
15 2022 Mechanism.

16 **Q. Do you have any observations based on this recent history of**
17 **the cost-effectiveness tests?**

18 A. Yes. Exhibits 1 and 2 of my testimony show Program and Portfolio
19 UCT results from Schedules 2 and 4, beginning with the Company's
20 2018 DSM/EE Rider proceeding (Docket No. E-22, Sub 545) through
21 the current proceeding. Williamson Exhibits 1 and 2 demonstrate

1 that, with the exception of Vintage 2021, the Company's Portfolio
2 UCT results have been cost-effective since Vintage 2018.

3 The Public Staff notes that, concerning the eight Vintage 2023
4 programs mentioned above, three are Phase 7 Programs
5 (Residential Appliance Recycling, Non-Residential Office, and Non-
6 Residential Window Film) that have not been cost-efficient for at least
7 two years. These three programs are in their last year of program life
8 and the Company has indicated that they will be terminated or
9 reconstituted into future cost-effective programs. Four of the
10 remaining programs are projected as not cost-effective for the first
11 time and one program is a low-income program.

12 **Q. Have you reviewed the 2022 EM&V report filed by DENC?**

13 A. Yes. The Public Staff contracted the services of GDS Associates,
14 Inc. (GDS) to assist with its review of EM&V. With GDS's assistance,
15 I have reviewed the 2022 EM&V Report. This report evaluated the
16 participation and savings for each DENC DSM/EE program
17 approved in both Virginia and North Carolina through December 31,
18 2021. However, for the purposes of this proceeding, GDS focused
19 exclusively on the North Carolina programs.

20 I also reviewed previous Commission orders to determine if DENC
21 complied with provisions regarding EM&V contained in those orders.

1 **Q. Do you have any recommendations regarding the Company's**
2 **2022 EM&V report?**

3 A. No. Based on the Public Staff's review, I do not propose any
4 adjustments to the Company's 2022 EM&V Report filed on June 15,
5 2022, in Docket No. E-22 Sub 604.

6 **Q. Have you confirmed that the Company's calculations**
7 **incorporate the verified savings of the 2022 EM&V report?**

8 A. Yes. As in previous cost recovery proceedings, the 2022 EM&V
9 Report provided gross and net savings from the portfolio of programs
10 for the Virginia and North Carolina jurisdictions, separately.
11 However, the methodologies and assumptions used in the
12 evaluations of the programs were consistently applied to both
13 jurisdictions. I was able, through a meeting with the Company and
14 additional sampling, to confirm that the information contained in the
15 Company's 2022 EM&V Report flows into the PPI calculations of
16 both Riders C and CE, and into the net lost revenue calculations
17 included in Rider CE. Based on this information and my
18 observations, I believe DENC is appropriately incorporating the
19 results of its EM&V efforts into the DSM/EE rider calculations.

20 For purposes of this and previous DSM/EE cost recovery
21 proceedings for DENC, the 2022 EM&V Report data used to true up
22 program savings and participation for Vintage 2020 and earlier

1 Vintages are sufficient to consider those Vintage years to be
2 complete for all programs operating in those years.

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

4 A. Yes.

THOMAS C. WILLIAMSON, JR.

I am an Engineer with the Public Staff's Energy Division. I graduated from North Carolina State University with a Bachelor of Science Degree in Electrical Engineering. I have approximately three years of electrical distribution design and construction experience with Florida Power & Light Company. During that time, I designed distribution circuits for overhead and underground services from the substation through to end users. This was inclusive of, but not limited to: customer load analysis; feeder line loading analysis; facilities construction; and installation. I then served for 11 years as an Engineer with General Electric Company. In this role, I represented General Electric with electrical design engineers, industrial and commercial end customers, and installation contractors to develop technical specifications for the procurement and use of electrical distribution equipment.

Since joining the Public Staff in 2016, I have reviewed electric customer complaints including, but not limited to: quality of service; new service line extensions and vegetation management; electric and gas utility transmission and distribution construction projects; vegetation management procedures; and small generator interconnection applications. I have also filed testimony in electric utility general rate cases, North Carolina Interconnection Procedures, and DSM/EE Rider proceedings.

| Schedule 2 - Vintage Year UCT | | DSM EE Docket / Vintage Year | | | | | | | | | |
|-------------------------------|---------|------------------------------|---|------------|------|------|------|------|------|-------|--|
| Prgm. Sub | Focus | DSM Phase | Program Name | Prgm. Life | 545 | 556 | 577 | 589 | 604 | 645 | |
| | | | | | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | |
| 465 | Res | 1 | Residential Air Conditioner Cycling | 15 | 0.73 | 0.59 | 0.49 | | | | |
| 508 | Non-Res | 3 | Non-Residential Lighting Systems and Controls | 9 | 4.29 | | | | | | |
| 523 | Res | 4 | Income and Age Qualifying Home Improvement | 15 | 0.19 | 0.19 | 0.16 | 0.16 | | | |
| 538 | Non-Res | 5 | Non-Residential Small Business Improvement | 14 | 0.80 | 0.96 | 1.42 | 1.04 | 1.05 | | |
| 543 | Non-Res | 6 | Non-Residential Prescriptive | 6 | 1.97 | 1.98 | 2.00 | 0.09 | 0.31 | | |
| 567 | Res | 7 | Residential Home Energy Assessment | 12 | | 1.45 | 1.98 | 0.83 | 3.46 | | |
| 568 | Res | 7 | Residential Efficient Products Marketplace | 16 | | 4.65 | 0.00 | 3.61 | 4.00 | | |
| 569 | Res | 7 | Residential Appliance Recycling | 8 | | 0.99 | 0.71 | 0.60 | 0.66 | | |
| 570 | Non-Res | 7 | Non-Residential Window Film | 10 | | 2.00 | 1.28 | 0.26 | 0.43 | | |
| 571 | Non-Res | 7 | Non-Residential Small Manufacturing | 12 | | 1.44 | 0.99 | 1.08 | 2.07 | | |
| 572 | Non-Res | 7 | Non-Residential Office | 7 | | 1.12 | 1.50 | 0.17 | 0.18 | | |
| 573 | Non-Res | 7 | Non-Residential Lighting Systems and Controls | 11 | | 4.11 | 2.18 | 1.08 | 2.72 | | |
| 574 | Non-Res | 7 | Non-Residential Heating and Cooling Efficiency | 15 | | 2.26 | 3.11 | 6.24 | 5.03 | 10.23 | |
| 591 | Non-Res | 8 | Non-Residential New Construction | 20 | | | | | 0.84 | 1.27 | |
| 592 | Res | 8 | Residential EE Kits | 15 | | | | | 1.35 | 0.46 | |
| 593 | Res | 8 | Residential Home Retrofit | 24 | | | | | 0.89 | 2.12 | |
| 594 | Res | 8 | Residential Smart Thermostat (DR) | 10 | | | | | 3.77 | 2.55 | |
| 595 | Res | 8 | Residential Smart Thermostat (EE) | 10 | | | | | 0.95 | 2.69 | |
| 596 | Non-Res | 8 | Non-Residential Small Business Improvement Enhanced | 11 | | | | | 1.03 | 0.53 | |
| 608 | Res | 9 | Residential Income and Age Qualifying | 11 | | | | | | 0.05 | |
| 614 | Non-Res | 9 | Non-Residential Building Automation | 20 | | | | | | 3.29 | |
| 615 | Non-Res | 9 | Non-Residential Building Optimization | 7 | | | | | | 1.49 | |
| 616 | Non-Res | 9 | Non-Residential Engagement | 7 | | | | | | 0.88 | |
| 617 | Non-Res | 9 | Non-Residential Enhanced Prescriptive | 6 | | | | | | 0.93 | |
| 618 | Res | 9 | Residential Smart Home | 11 | | | | | | 1.43 | |
| 619 | Res | 9 | Residential Virtual Audit | 17 | | | | | | 2.71 | |
| 620 | Res | 9 | Residential Water Savings (DR) | 12 | | | | | | 1.26 | |
| 621 | Res | 9 | Residential Water Savings (EE) | 12 | | | | | | 2.17 | |
| PORTFOLIO | | | | 20 | 3.96 | 1.19 | 2.42 | 0.33 | 2.05 | 2.01 | |

Public Staff
Williamson, T
Exhibit 1

| Prgm. Sub | | Focus | DSM Phase | Program Name | Prgm. Life | DSM EE Docket / Vintage Year | | | | | | | | | |
|-----------|---------|---------|-----------|---|------------|------------------------------|------|------|------|------|------|--|--|--|--|
| | | | | | | 545 | 556 | 577 | 589 | 604 | 645 | | | | |
| | | | | | | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | | | | |
| 465 | Res | Res | 1 | Residential Air Conditioner Cycling | 15 | 0.72 | 0.60 | 0.70 | 0.01 | | | | | | |
| 508 | Non-Res | Non-Res | 3 | Non-Residential Lighting Systems and Controls | 9 | | | | | | | | | | |
| 523 | Res | Res | 4 | Income and Age Qualifying Home Improvement | 15 | 0.21 | 0.22 | 0.19 | 0.58 | 1.36 | | | | | |
| 538 | Non-Res | Non-Res | 5 | Non-Residential Small Business Improvement | 14 | | 1.05 | 1.43 | 2.08 | 1.62 | | | | | |
| 543 | Non-Res | Non-Res | 6 | Non-Residential Prescriptive | 6 | | | 2.33 | 0.20 | 1.19 | | | | | |
| 567 | Res | Res | 7 | Residential Home Energy Assessment | 12 | | | | | 0.70 | 3.48 | | | | |
| 568 | Res | Res | 7 | Residential Efficient Products Marketplace | 16 | | | | | 4.43 | 5.02 | | | | |
| 569 | Res | Res | 7 | Residential Appliance Recycling | 8 | | | | | | 0.70 | | | | |
| 570 | Non-Res | Non-Res | 7 | Non-Residential Window Film | 10 | | | | | 0.22 | 0.38 | | | | |
| 571 | Non-Res | Non-Res | 7 | Non-Residential Small Manufacturing | 12 | | | | | | 1.89 | | | | |
| 572 | Non-Res | Non-Res | 7 | Non-Residential Office | 7 | | | | | | 0.22 | | | | |
| 573 | Non-Res | Non-Res | 7 | Non-Residential Lighting Systems and Controls | 11 | 3.12 | 4.03 | | | 2.78 | | | | | |
| 574 | Non-Res | Non-Res | 7 | Non-Residential Heating and Cooling Efficiency | 15 | 27.37 | 2.12 | | | | 9.76 | | | | |
| 591 | Non-Res | Non-Res | 8 | Non-Residential New Construction | 20 | | | | | | 1.06 | | | | |
| 592 | Res | Res | 8 | Residential EE Kits | 15 | | | | | | 0.51 | | | | |
| 593 | Res | Res | 8 | Residential Home Retrofit | 24 | | | | | | 1.87 | | | | |
| 594 | Res | Res | 8 | Residential Smart Thermostat (DR) | 10 | | | | | | 1.48 | | | | |
| 595 | Res | Res | 8 | Residential Smart Thermostat (EE) | 10 | | | | | | | | | | |
| 596 | Non-Res | Non-Res | 8 | Non-Residential Small Business Improvement Enhanced | 11 | | | | | | 0.54 | | | | |
| 608 | Res | Res | 9 | Residential Income and Age Qualifying | 11 | | | | | | 0.04 | | | | |
| 614 | Non-Res | Non-Res | 9 | Non-Residential Building Automation | 20 | | | | | | 2.57 | | | | |
| 615 | Non-Res | Non-Res | 9 | Non-Residential Building Optimization | 7 | | | | | | 1.49 | | | | |
| 616 | Non-Res | Non-Res | 9 | Non-Residential Engagement | 7 | | | | | | 0.89 | | | | |
| 617 | Non-Res | Non-Res | 9 | Non-Residential Enhanced Prescriptive | 6 | | | | | | 0.96 | | | | |
| 618 | Res | Res | 9 | Residential Smart Home | 11 | | | | | | 1.67 | | | | |
| 619 | Res | Res | 9 | Residential Virtual Audit | 17 | | | | | | 2.48 | | | | |
| 620 | Res | Res | 9 | Residential Water Savings (DR) | 12 | | | | | | 2.37 | | | | |
| 621 | Res | Res | 9 | Residential Water Savings (EE) | 12 | | | | | | 2.60 | | | | |
| PORTFOLIO | | | | | 20 | 2.86 | 1.15 | 1.16 | 0.98 | 2.47 | 1.63 | | | | |

Public Staff
Williamson, T
Exhibit 2

STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. E-22, SUB 645

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of
Application of Virginia Electric and Power)
Company, d/b/a Dominion Energy of North)
Carolina, for Approval of Demand-Side) **NOTICE OF**
Management and Energy Efficiency Cost) **AFFIDAVIT**
Recovery Rider Pursuant to N.C. Gen. Stat.)
§ 62-133.9 and Commission Rule R8-69)

NOW COMES THE PUBLIC STAFF - North Carolina Utilities Commission,
by and through its Executive Director, Christopher J. Ayers, as constituted by
N.C. Gen. Stat. § 62-15, and gives notice that the Affidavit of:

Kuei Fen Sun, Financial Analyst III, Accounting Division
Public Staff - North Carolina Utilities Commission
430 North Salisbury Street - Dobbs Building
4326 Mail Service Center
Raleigh, North Carolina 27699-4300

will be used in evidence at the hearing in this docket scheduled for November 9,
2022, pursuant to N.C.G.S. § 62-68. The affiant will not be called to testify orally and
will not be subject to cross-examination unless an opposing party or the Commission
demands the right of cross-examination by notice mailed or delivered to the
proponent at least five days prior to the hearing, pursuant to N.C.G.S. § 62-68.

THEREFORE, the Public Staff moves that the Affidavit of Kuei Fen Sun be
admitted into evidence in the absence of notice pursuant to N.C.G.S. § 62-68.

Respectfully submitted this the 19th day of October 2022.

PUBLIC STAFF
Christopher J. Ayers
Executive Director

Lucy E. Edmondson
Chief Counsel

Electronically submitted
/s/ Anne M. Keyworth
Staff Attorney
anne.keyworth@psncuc.nc.gov

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STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. E-22, SUB 645

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of
Application by Virginia Electric and Power)
Company, d/b/a Dominion Energy North)
Carolina, for Approval of Demand-Side)
Management and Energy Efficiency Cost) **AFFIDAVIT OF**
Recovery Rider under N.C. Gen. Stat. § 62-) **KUEI FEN SUN**
133.9 and Commission Rule R8-69)

STATE OF NORTH CAROLINA

COUNTY OF WAKE

I, Kuei Fen Sun, first being duly sworn, do depose and say:

I am a Financial Analyst III 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 my affidavit is to present the results of the Public Staff's investigation of the prospective Demand-Side Management (DSM)/Energy Efficiency (EE) rider (DSM/EE rider or Rider C) and the DSM/EE Experience Modification Factor rider (DSM/EE EMF rider or Rider CE) proposed by Virginia Electric Power Company, d/b/a Dominion Energy North Carolina (DENC or the Company) in this proceeding. These riders allow for the recovery of all reasonable and prudent costs incurred for the implementation of new DSM and EE measures

as well as other allowed incentives to the utility for adopting and implementing new DSM/EE measures. The rate period proposed by DENC for this proceeding is the twelve-month period from February 1, 2023, through January 31, 2024. This is the proposed period over which the DSM/EE and DSM/EE EMF riders set herein will be charged. However, as explained in Company witness Edmund J. Hall's testimony, for purposes of this proceeding the Company has used estimated calendar year 2023 DSM/EE costs and benefits as a proxy for estimated rate period costs and benefits due to the manner in which the Company normally models annual projected costs and benefits.

The test period applicable to this proceeding (the presumptive period for which the under- or over-recoveries of DSM/EE costs and Net Lost Revenues (NLR) are measured) is the twelve-month period ended December 31, 2021.¹

Vintage Years, used for tracking Portfolio Performance Incentive (PPI) and NLR related to DSM/EE measures installed in those years, correspond to calendar years. Thus, in this proceeding, prospective rates are being set based on projections for Vintage Year 2023, while Vintage Year 2021 is being trued up.

In its application filed on August 9, 2022, DENC requested approval of a class-specific prospective DSM/EE rider based on a North Carolina retail revenue requirement of \$3,985,123, excluding regulatory fee, and a class-specific increment DSM/EE EMF rider based on a North Carolina retail true-up revenue

¹ DENC has not requested in this proceeding to incorporate into its DSM/EE EMF rider calculations for the under- or over-recovery of DSM/EE costs experienced up to 30 days prior to the hearing, as would be permitted by Commission Rule R8-69(b)(2).

requirement of \$982,099, excluding regulatory fee. These revenue requirements consist of the following components as set forth in the testimony and exhibits of DENC witness Justin A. Wooldridge:

RIDER C

| | |
|--|---------------------------|
| Program costs (including common costs) | \$3,637,177 |
| PPI | <u>347,946</u> |
| Total Rider C revenue requirement | <u><u>\$3,985,123</u></u> |

RIDER CE

| | |
|---|--------------------------|
| Program costs (including common costs) | \$ 2,665,001 |
| NLR | 451,023 |
| PPI | 300,093 |
| Test period Rider C revenues | <u>(2,482,193)</u> |
| Net rev. req. before carrying costs and int. | 933,924 |
| Carrying costs | 13,278 |
| Interest on EMF refund | <u>34,897</u> |
| Total Rider CE revenue requirement ² | <u><u>\$ 982,099</u></u> |

The components of the Company's proposed North Carolina retail Rider C and Rider CE revenue requirements were assigned or allocated to the various North Carolina retail rate classes consistent with the methodology approved by the North Carolina Utilities Commission's (Commission) January 5, 2022 Order Approving DSM/EE Rider and Requiring Filing of Proposed Customer Notice in the Company's most recent cost recovery proceeding in Docket No. E-22, Sub 604, as well as the updated Cost Recovery and Incentive Mechanism (2022 Mechanism) approved by the Commission in its March 22, 2022 Order Approving Revised DSM/EE Cost Recovery and Incentive Mechanism in Docket No. E-22, Sub 464.

² The immaterial \$1 difference in this amount and the amount set forth in the Company's Exhibits is due to differing rounding conventions.

The Public Staff's investigation of DENC's filing in this proceeding focused on determining whether the proposed DSM/EE and DSM/EE EMF billing rates: (a) were calculated in accordance with the 2022 Mechanism; and (b) otherwise adhered to sound ratemaking concepts and principles. The procedures utilized included a review of the Company's filing, relevant prior Commission proceedings and orders, and workpapers and source documentation used by the Company to develop the proposed billing rates. Performing the investigation required the review of responses to data requests, as well as discussions with Company personnel. The investigation also included a review of the actual DSM/EE program costs incurred by DENC during the twelve-month period ended December 31, 2021. The investigation, including the sampling of source documentation, concentrated primarily on costs and NLR related to the test period, and verified PPIs related to the 2011-2021 period, all of which are to be included in the true-up DSM/EE EMF billing rates approved in this proceeding. The Public Staff also performed a more general review of the prospective billing rates proposed to be charged for the rate period, which are subject to true-up in future proceedings.

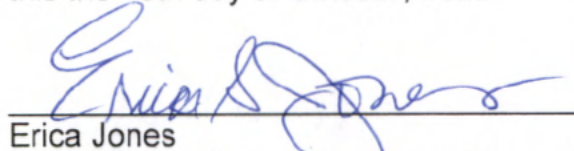
As a result of the Public Staff's investigation, I recommend approval of the Rider C and CE rates as proposed by DENC in its August 9, 2022, Application. The recommended billing rates should be approved subject to any true-ups in future cost recovery proceedings consistent with the 2022 Mechanism, N.C. Gen. Stat. § 62-133.9, Commission Rule R8-69, and future Commission orders. The Public Staff notes that reviewing the calculation of the DSM/EE and DSM/EE EMF riders is a process that involves reviewing numerous assumptions, inputs, and

calculations, and its recommendation with regard to these proposed riders is not intended to indicate that the Public Staff will not raise questions in future proceedings regarding the same or similar assumptions, inputs, and calculations.

This completes my affidavit.

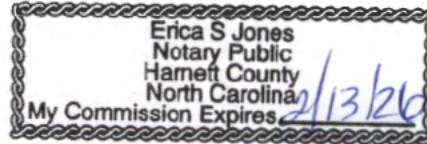

Kuei Fen Sun

Sworn to and subscribed before me
this the 19th day of October, 2022.


Erica Jones

Notary Public for the State of North Carolina

My Commission Expires: ~~December 17, 2022~~ 2/13/2024



QUALIFICATIONS AND EXPERIENCE

Kuei Fen Sun

I graduated from North Carolina State University with a Master of Science in Accountancy (with a concentration in Auditing/ERM) in 2010. Prior to joining the Public Staff, I worked in state government and the private sector for 12 years as an external and internal auditor.

I joined the Public Staff as a Financial Analyst II in September 2021 and was promoted to Financial Analyst III in August 2022. I am responsible for: (1) examining and analyzing the utility company's applications, testimony, exhibits, books and records, and other data presented by utilities and other parties under jurisdiction of the Commission or involved in Commission proceedings; and (2) preparing and presenting testimony, exhibits, and other documents for presentation to the Commission in those proceedings.

Since joining the Public Staff, I have performed several audits and presented testimony and exhibits before the Commission regarding a range of electric and water topics. I have filed testimony and exhibits in the C&P Enterprise, Inc. water and sewer general rate case. Additionally, I have worked on electric rider rate proceedings, particularly in program cost review of demand-side management and energy efficiency programs for DEC and DEP, the Joint Agency Asset Rider proceeding, the Existing Demand Side Management Program Rider, the Bulk

Power Marketing Rider, and the review of New River Light and Power Purchase Power Adjustment.