



**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 577 - Dominion Energy North Carolina

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 David M. Williamson, Utilities Engineer, Electric Division; and
2. Testimony of Michael C. Maness, Director, Accounting Division.

By copy of this letter, we are forwarding copies to all parties of record.

Sincerely,

/s/ Heather D. Fennell  
Staff Attorney  
[heather.fennell@psncuc.nc.gov](mailto:heather.fennell@psncuc.nc.gov)

HDF/cla

Attachments

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

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Oct 22 2019



BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-22, SUB 577

In the Matter of	)	
Application by Virginia Electric and	)	TESTIMONY OF
Power Company, d/b/a Dominion	)	DAVID M. WILLIAMSON
Energy North Carolina, for Approval of	)	On Behalf of the Public
Demand-Side Management and	)	Staff – North Carolina
Energy Efficiency Cost Recovery Rider	)	Utilities Commission
under N.C. Gen. Stat. § 62-133.9 and	)	
Commission Rule R8-69	)	

**October 22, 2019**

1 **Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND**  
2 **PRESENT POSITION.**

3 A. My name is David M. Williamson. My business address is 430 North  
4 Salisbury Street, Dobbs Building, Raleigh, North Carolina. I am a  
5 Utilities Engineer with the Electric Division of the Public Staff, North  
6 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 (VEPCO), d/b/a Dominion Energy North Carolina  
14 (DENC or the Company) is seeking cost recovery through the  
15 DSM/EE rider; (2) the cost effectiveness of each DSM and EE  
16 program; and (3) the evaluation, measurement, and verification  
17 (EM&V) support data for the approved DSM and EE programs.

18 **Q. WHAT STATUTES, COMMISSION RULES, OR ORDERS HAVE**  
19 **YOU REVIEWED IN YOUR INVESTIGATION OF DENC'S**  
20 **PROPOSED DSM/EE RIDER?**

21 A. In preparing my testimony, I reviewed the application, testimony, and  
22 exhibits for approval of cost recovery for DSM and EE measures filed

1 by DENC pursuant to N.C. Gen. Stat. § 62-133.9 and Commission  
2 Rule R8-69 on August 21, 2018, the DSM/EE cost recovery  
3 mechanism approved by the Commission on May 27, 2015 (2015  
4 Mechanism), the DSM/EE cost recovery mechanism approved by  
5 the Commission on May 22, 2017 (2017 Mechanism), and responses  
6 to Public Staff data requests. I also reviewed the 2019 EM&V Report<sup>1</sup>  
7 and previous Commission orders related to the Company's DSM and  
8 EE programs and cost recovery rider proceedings. Additionally, I  
9 assisted Public Staff witness Michael C. Maness with his review of  
10 the rider calculations and inputs underlying the riders proposed by  
11 DENC in this proceeding.

12 **Q. PLEASE IDENTIFY THE DSM AND EE PROGRAMS FOR WHICH**  
13 **DENC IS SEEKING COST RECOVERY THROUGH THE DSM/EE**  
14 **RIDER IN THIS PROCEEDING.**

15 A. The Company is seeking recovery of costs and/or utility incentives  
16 incurred for the following DSM and EE programs:

17 Residential

- 18 • Residential Air Conditioner (AC) Cycling Program (Sub 465)  
19 • Residential Lighting Program (Sub 468)  
20 • Residential Home Energy Check Up Program (Sub 498)  
21 • Residential Duct Testing and Sealing Program (Sub 497)

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<sup>1</sup> "Evaluation, Measurement, and Verification Report for Dominion Virginia Power," dated April 1, 2019, filed in Docket No. E-22, Sub 556 (EM&V Report). The report provides the participation and program savings related to the DSM/EE programs for Dominion Virginia Power (DVP) and DENC through December 31, 2018. DVP and DENC are both business operating names of VEPCO.

- 1 • Residential Heat Pump Tune-Up Program (Sub 499)
- 2 • Residential Heat Pump Upgrade Program (Sub 500)
- 3 • Residential Income and Age Qualifying Program (Sub 523)
- 4 • Residential Retail LED Lighting Program (Sub 539)
- 5 • Residential Home Energy Assessment (Sub 567)\*
- 6 • Residential Efficient Products Marketplace (Sub 568)\*
- 7 • Residential Appliance Recycling (Sub 569)\*

8 Non-Residential:

- 9 • Commercial Lighting Program (Sub 469)
- 10 • Commercial HVAC Upgrade Program (Sub 467)
- 11 • Non-Residential Energy Audit Program (Sub 495)
- 12 • Non-Residential Duct Testing and Sealing Program (Sub 496)
- 13 • Non-Residential Heating and Cooling Efficiency Program (Sub
- 14 507)
- 15 • Non-Residential Lighting Systems and Controls Program (Sub
- 16 508)
- 17 • Non-Residential Window Film Program (Sub 509)
- 18 • Small Business Improvement Program (Sub 538)
- 19 • Non-Residential Prescriptive Program (Sub 543)
- 20 • Non-Residential Window Film (Sub 570)\*
- 21 • Non-Residential Small Manufacturing (Sub 571)\*
- 22 • Non-Residential Office (Sub 572)\*
- 23 • Non-Residential Lighting Systems and Controls (Sub 573)\*
- 24 • Non-Residential Heating and Cooling Efficiency (Sub 574)\*

25 Above programs marked with an asterisk "\*" are currently before the  
26 Commission pending approval.

1 **Q. HAVE THERE BEEN ANY NEW OR DISCONTINUED PROGRAMS**  
2 **IN THE DENC PORTFOLIO SINCE THE LAST RIDER FILING?**

3 A. No, other than the programs currently pending approval from the  
4 Commission, which I discuss in more detail below.

5 **Q. HAS THE COMPANY WORKED WITH THE PUBLIC STAFF TO**  
6 **EVALUATE THE POSSIBILITY OF OFFERING DSM AND EE**  
7 **PROGRAMS ON A NORTH CAROLINA-ONLY BASIS WHEN IT**  
8 **PLANS TO CANCEL THEM IN VIRGINIA?**

9 A. Yes.

10 **Q. HAS THE COMPANY PROPOSED ANY NEW DSM AND EE**  
11 **PROGRAMS?**

12 A. Yes. On July 12, 2019, the Company filed for approval eight new  
13 programs, listed above as Subs 567-574. As of the date of this filing,  
14 these programs have not been approved by the Commission;  
15 however, the Public Staff has reviewed these program applications  
16 and recommended that the Commission approve the programs as  
17 filed. The allocation of the North Carolina costs for these programs  
18 have been included in the revenue requirement for the Vintage 2020  
19 rider calculation (Rider C).

20 **Q. PLEASE DISCUSS THE AVOIDED COSTS USED TO DETERMINE**  
21 **COST EFFECTIVENESS OF THE PORTFOLIO OF PROGRAMS.**

1 A. The Company attests that that underlying avoided cost sources for  
2 the eligible programs are consistent with the most currently approved  
3 cost recovery and incentive mechanism dated May 22, 2017, in  
4 Docket No. E-22, Sub 464 (Mechanism). Paragraph 19 of the  
5 Mechanism states that:

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

19 Through discovery, I was able to identify that the Company used Plan  
20 E – Federal CO<sub>2</sub> from its updated 2018 Integrated Resource Plan  
21 (IRP)<sup>2</sup> and 2016 biennial avoided cost proceeding.<sup>3</sup>

22 The Public Staff also reviewed the avoided cost benefits associated  
23 with the modeling DENC used to evaluate cost-effectiveness of each  
24 program. DENC stated that the inputs related to these avoided  
25 capacity and energy benefits of the Programs are consistent with  
26 DENC’s Compliance 2018 Integrated Resource Plan (IRP filed on

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<sup>2</sup> Docket No. E-100 Sub 157.

<sup>3</sup> Docket No. E-100 Sub 148.



1 March 7, 2019 in Docket No. E-100 Sub 157) and the Mechanism.  
2 However, the Public Staff noted in its review of the new EE programs,  
3 that the Company modeled those programs in a manner that the  
4 Public Staff believes could raise some concern with the inputs used  
5 to value the avoided capacity benefits. DENC's modeling for the  
6 programs included avoided capacity benefits that, in certain years,  
7 are based on the cost per kW of a generic solar unit, a combustion  
8 turbine (CT), and the cost of a Virginia offshore wind unit as outlined  
9 in Plan E of its filed 2018 Compliance IRP. The Public Staff notes  
10 that the Compliance IRP calls for new capacity resources in 2021,  
11 which requires that the next resource to be renewable capacity. The  
12 Public Staff believes that the use of a CT is the appropriate input to  
13 the methodology used to determine the avoided cost rate for  
14 capacity; as compared to, the use of other generation units which  
15 overstate the avoided capacity benefits of the programs. However,  
16 the impact was not material to the calculations of the cost  
17 effectiveness for the new EE programs. The Public Staff intends to  
18 discuss the issue of avoided cost modeling with the Company further  
19 in the context of the upcoming Mechanism review and the next rider  
20 proceeding.

21 **Q. PLEASE DISCUSS THE COST EFFECTIVENESS OF THE**  
22 **PORTFOLIO OF PROGRAMS.**

1 A. The testimony and exhibits of DENC witness Deanna Kesler present  
2 the Company's analysis of cost effectiveness for each program.  
3 Company Exhibit DRK-1, Schedule 2, represents the programs  
4 eligible for inclusion in the calculation of the Portfolio Performance  
5 Incentive (PPI) in the Vintage 2020 rider, and includes the  
6 Company's calculations of the Utility Cost (UC) and the Total  
7 Resource Cost (TRC) tests. These data points provide a snapshot of  
8 program performance that is expected over the rate period. The data  
9 also provide a good comparison of the changes in cost effectiveness  
10 from year to year. Schedule 2 also provides the UC test benefits,  
11 which are used in the determination of the PPI component of rider  
12 rates.

13 Witness Kesler's revised Exhibit DRK-1, Schedule 4, represents the  
14 ongoing cost-effectiveness of DSM and EE programs as modeled in  
15 the 2018 IRP over the remaining life of each program. This  
16 perspective provides the basis for determining which programs  
17 should continue to be offered as DSM or EE programs eligible for  
18 cost recovery pursuant to the Company's DSM/EE Mechanism. The  
19 Company's revised Exhibit DRK-1, Schedule 4, indicates that all  
20 programs except for the Income and Age Qualified Home  
21 Improvement Program and the Air Conditioner Cycling Program are  
22 projected to be cost effective under both the TRC and UC tests.

1 My review of witness Kesler's calculations of cost-effectiveness  
2 indicate that the calculations for Company's revised Exhibit DRK-1,  
3 Schedules 2 and 4, have been performed in accordance with the  
4 Mechanism.

5 **Q. WHY IS THE AIR CONDITIONING CYCLING PROGRAM NOT**  
6 **COST-EFFECTIVE?**

7 A. Witness Kesler's revised calculations for cost-effectiveness show  
8 that the Air Conditioning cycling program is cost-effective under the  
9 TRC test, but not under the UC test. The benefits related to the Air  
10 Conditioning Cycling program are primarily capacity-related benefits.  
11 These benefits have been significantly impacted by the decreases in  
12 the value (dollar per kW) of avoided capacity costs experienced by  
13 the Company and other investor-owned utilities in North Carolina.

14 **Q. HAVE YOU REVIEWED THE 2019 EM&V REPORT FILED BY**  
15 **DENC?**

16 A. Yes. The Public Staff contracted the services of GDS Associates,  
17 Inc. (GDS), to assist it with review of EM&V. With GDS's assistance,  
18 I have reviewed the 2019 EM&V Report. This report evaluated the  
19 participation and savings for each DSM and EE program approved  
20 in both Virginia and North Carolina through December 31, 2018.

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

1 **Q. DID DENC AND ITS EM&V CONSULTANT ADOPT OR**  
2 **INCORPORATE THE PUBLIC STAFF'S PREVIOUS EM&V**  
3 **RECOMMENDATIONS?**

4 A. Yes. In the Sub 556 proceeding, the Public Staff made several  
5 EM&V-related recommendations that the Company should take to  
6 make appropriate changes and corrections to the Vintage 2016  
7 savings for several programs. Those actions were related to the input  
8 data used by the Company's EM&V evaluator to calculate savings.  
9 Once the correct savings are calculated, the Company typically adds  
10 those corrected savings to the next Vintage, which in this case is  
11 Vintage 2017. While the Sub 556 order did not specifically indicate  
12 Commission acceptance of these recommendations, my review of  
13 the savings for Vintage 2017 in this proceeding confirm that the  
14 changes and corrections identified by the Public Staff in the Sub 556  
15 proceeding have been incorporated into the Vintage 2017 savings as  
16 identified in the 2018 EM&V Report.

17 **Q. DO YOU HAVE ANY RECOMMENDATIONS REGARDING THE**  
18 **COMPANY'S 2019 EM&V REPORT?**

19 A. No. Based on our review of the 2019 EM&V Report, I do not propose  
20 any adjustments to the Company's EM&V Report.

1 **Q. HAVE YOU CONFIRMED THAT THE COMPANY'S**  
2 **CALCULATIONS INCORPORATE THE VERIFIED SAVINGS OF**  
3 **THE 2019 EM&V REPORT?**

4 A. Yes. As in previous cost recovery proceedings, the 2019 EM&V  
5 Report provided gross and net savings from the portfolio of programs  
6 for the Virginia and North Carolina jurisdictions separately. However,  
7 the methodologies and assumptions used in the evaluations of the  
8 programs were consistently applied to both jurisdictions. I was able,  
9 through sampling, to confirm that the information in the 2019 EM&V  
10 Report flows into the PPI calculations of both Riders C and CE, and  
11 the net lost revenue calculations included in Rider CE. Based on this  
12 information and my observations I believe DENC is appropriately  
13 incorporating the results of its EM&V efforts into the DSM/EE rider  
14 calculations.

15 For purposes of this and previous DSM/EE cost recovery  
16 proceedings for DENC, the 2019 EM&V Report data used to true up  
17 program savings and participation for Vintage Year 2018 and earlier  
18 Vintages are sufficient to consider those Vintage years to be  
19 complete for all programs operating in those years.

20 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

21 A. Yes.

**QUALIFICATIONS AND EXPERIENCE**

DAVID M. WILLIAMSON

I am a 2014 graduate of North Carolina State University with a Bachelor of Science Degree in Electrical Engineering. I began my employment with the Public Staff's Electric Division in March of 2015. My current responsibilities within the Electric Division include reviewing applications and making recommendations for certificates of public convenience and necessity of small power producers, master meters, and resale of electric service; reviewing applications and making recommendations on transmission proposals for certificates of environmental compatibility and public convenience and necessity; and interpreting and applying utility service rules and regulations.

My primary responsibility within the Public Staff is reviewing and making recommendations on DSM/EE filings for initial program approval, program modifications, EM&V evaluations, and on-going program performance of the portfolio of programs of Duke Energy Carolinas, LLC (DEC), Duke Energy Progress, LLC (DEP), and Dominion Energy North Carolina (DENC). I have filed affidavits and testimony in various DEC, DEP, and DENC's DSM/EE rider proceedings.



BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-22, SUB 577

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 Recovery Rider under )  
N.C.G.S. § 62-133.9 and Commission )  
Rule R8-69

TESTIMONY OF  
MICHAEL C. MANESS -  
PUBLIC STAFF – NORTH  
CAROLINA UTILITIES  
COMMISSION

October 22, 2019



1 **Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND**  
2 **PRESENT POSITION.**

3 A. My name is Michael C. Maness. My business address is 430 North  
4 Salisbury Street, Dobbs Building, Raleigh, North Carolina. I am the  
5 Director of the Accounting Division of the Public Staff – North  
6 Carolina Utilities Commission (Public Staff).

7 **Q. BRIEFLY STATE YOUR QUALIFICATIONS AND DUTIES.**

8 A. A summary of my qualifications and duties is set forth in Appendix B  
9 of this testimony.

10 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

11 A. The purpose of my testimony is to present my recommendations  
12 regarding (1) the prospective Demand-Side Management / Energy  
13 Efficiency rider (DSM/EE rider or Rider C) and (2) the DSM/EE  
14 Experience Modification Factor rider (DSM/EE EMF rider or Rider  
15 CE) proposed by Virginia Electric and Power Company d/b/a  
16 Dominion Energy North Carolina (DENC or the Company) in its  
17 Application filed in this docket on August 13, 2019.<sup>1</sup> The DSM/EE  
18 and DSM/EE EMF Riders are authorized by N.C. Gen. Stat. § 62-  
19 133.9 and implemented pursuant to Commission Rule R8-69. In

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<sup>1</sup> Riders C and CE are each comprised of various class-based billing rates.

1 addition to my filing of this testimony, Public Staff witness David M.  
2 Williamson has also filed testimony in this proceeding.

3 **Q. HOW IS YOUR TESTIMONY ORGANIZED?**

4 A. My testimony begins with a review of the regulatory framework for  
5 DSM/EE cost recovery by electric utilities and the historical  
6 background of DENC's Application in this docket. I then discuss the  
7 Company's proposed billing rates and other aspects of its filing.  
8 Following a summary of my investigation, I present my conclusions  
9 and recommendations regarding approval of the proposed billing  
10 rates making up Riders C and CE.

11 **THE PROCESS FOR SETTING DENC'S DSM/EE REVENUE**  
12 **REQUIREMENTS**

13 **Q. PLEASE DESCRIBE THE BASIS FOR THE COMPANY'S FILING.**

14 A. N.C. Gen. Stat. § 62-133.9(d) allows a utility to petition the  
15 Commission for approval of an annual rider to recover (1) the  
16 reasonable and prudent costs of new DSM and EE measures and  
17 (2) other incentives to the utility (utility incentives) for adopting and  
18 implementing new DSM and EE measures. However, N.C. Gen.  
19 Stat. § 62-133.9(f) allows industrial and certain large commercial  
20 customers to opt out of participating in the power supplier's DSM/EE  
21 programs or paying the DSM/EE rider, if an eligible customer notifies  
22 its electric power supplier that it has implemented or will implement,  
23 at its own expense, alternative DSM and EE measures. Commission

1 Rule R8-69 sets forth the general parameters and procedures  
2 governing approval of the annual rider.

3 In this proceeding, DENC has, for the most part, calculated its  
4 proposed Riders C and CE using the Cost Recovery and Incentive  
5 Mechanism for Demand-Side Management and Energy Efficiency  
6 Programs approved by the Commission in its *Order Approving*  
7 *Revised Cost Recovery and Incentive Mechanism*, issued in Docket  
8 No. E-22, Sub 464, on May 22, 2017 (2017 Mechanism). The 2017  
9 Mechanism became effective as of May 22, 2017, for projected costs  
10 and utility incentives beginning January 1, 2018, and for true-ups of  
11 costs and utility incentives beginning January 1, 2017.<sup>2</sup> The 2017  
12 Mechanism changed the calculation of the bonus incentive approved  
13 for inclusion in its DSM/EE and DSM/EE EMF riders from a Program  
14 Performance Incentive to a Portfolio Performance Incentive (PPI), as  
15 further explained below.

16 **Q. PLEASE DESCRIBE THE 2017 MECHANISM AND ITS MAJOR**  
17 **COMPONENTS.**

18 A. The overall purpose of the 2017 Mechanism is to (1) allow DENC to  
19 recover all reasonable and prudent costs incurred for adopting and

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<sup>2</sup> For the levelization run-out of the trued-up bonus utility incentives for measures installed or implemented prior to 2017, the Company carried forward those incentives as calculated pursuant to mechanisms approved by the Commission in 2015 and 2011. The program cost, common costs, and net lost revenue utility incentive revenue requirements are calculated in the same manner under the 2017 Mechanism as they were under the 2015 and 2011 mechanisms.

1 implementing new DSM and new EE measures; (2) establish the  
2 terms, conditions, and methodology for the recovery of certain utility  
3 incentives – Net Lost Revenues (NLR) and the PPI - to reward DENC  
4 for adopting and implementing DSM and EE measures and  
5 programs; (3) provide for an additional incentive to further encourage  
6 kilowatt-hour (kWh) savings achievements; and (4) establish certain  
7 requirements and guidelines for requests by DENC for approval,  
8 monitoring, and management of DSM and EE programs. The 2017  
9 Mechanism includes many provisions that indirectly influence the  
10 ratemaking process for DSM and EE costs and utility incentives,  
11 including provisions that address program approval and tests of  
12 continuing cost-effectiveness, various procedural matters, reporting  
13 requirements, and future review of the 2017 Mechanism itself.  
14 Additionally, the 2017 Mechanism includes provisions that directly  
15 address the determination of the annual DSM/EE and DSM/EE EMF  
16 riders. A summary of those provisions is set forth in Appendix A of  
17 this testimony.

18 **THE COMPANY'S PROPOSED BILLING RATES**

19 **Q. PLEASE DESCRIBE THE BILLING FACTORS, VINTAGE YEARS,**  
20 **RATE PERIOD, AND TEST PERIOD BEING CONSIDERED IN**  
21 **THIS PROCEEDING.**

1 A. The rate period proposed by DENC for this proceeding is the twelve-  
2 month period from February 1, 2020, through January 31, 2021.  
3 This is the proposed period over which the DSM/EE and DSM/EE  
4 EMF riders set herein will be charged, and follows the practice  
5 approved by the Commission in last year's proceeding. However,  
6 as explained in various Company witnesses' testimonies, for  
7 purposes of this proceeding the Company has used estimated  
8 calendar year 2020 DSM/EE costs and benefits as a proxy for  
9 estimated rate period costs and benefits, because of the manner in  
10 which the Company normally models annual projected amounts.

11 The test period applicable to this proceeding (the presumptive period  
12 for which the under- or overrecoveries of DSM/EE costs and NLR  
13 are measured) is the twelve-month period ended December 31,  
14 2018.<sup>3</sup>

15 Vintage Years, used for tracking PPI and NLR related to DSM/EE  
16 measures installed in those years, correspond to calendar years.  
17 Thus, in this proceeding, prospective rates are being set based on  
18 Vintage Year 2020, while Vintage Year 2018 is being trued up.

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<sup>3</sup> DENC has not requested in this proceeding to incorporate in its DSM/EE EMF rider calculations the under- or overrecovery of DSM/EE costs experienced up to 30 days prior to the hearing, as would be permitted by Commission Rule R8-69(b)(2).

1 In its Application, DENC requested approval of class-specific  
 2 forward-looking DSM/EE billing rates (Rider C) based on a North  
 3 Carolina retail revenue requirement of \$3,470,280 (excluding any  
 4 revenue adder for the North Carolina Regulatory Fee (NCRF)).  
 5 Likewise, the Company requested approval of class-specific  
 6 decrement DSM/EE EMF billing rates (Rider CE) based on a North  
 7 Carolina retail true-up revenue requirement increment of \$464,010,  
 8 excluding the NCRF. These revenue requirements are made up of  
 9 the following components, as set forth in the testimony of the DENC  
 10 witnesses and their accompanying exhibits:

11 **RIDER C**

12	Program costs (including common costs)	\$3,104,949
13	PPI	365,331
14	Total Rider C revenue requirement	<u>\$3,470,280</u>

15 **RIDER CE**

16	Program costs (including common costs)	\$ 3,015,234
17	NLR	646,489
18	PPI	324,148
19	Test period Rider C revenues	<u>( 3,495,984)</u>
20	Net rev. req. before carrying costs and int.	489,887
21	Carrying costs	(25,877)
22	Interest on EMF refund	0
23	Total Rider CE revenue requirement	<u>\$ 464,010</u>

24 As in the 2014-2018 proceedings, DENC did not request NLR as part  
 25 of Rider C. Also, consistent with the 2017 Mechanism, the Company  
 26 calculated the PPI amount included in Rider C using a simplified  
 27 approach. As explained in the testimony of Company witness Bates  
 28 and set forth in his exhibits, the Company calculated the estimated

1 PPI for Vintage Year 2020 by adding (a) the verified levelized  
2 amounts related to Vintage Years 2018 and prior that are due to be  
3 collected in 2020 to (b) a conservative estimate of the levelized PPI  
4 amounts related to Vintage Years 2019 and 2020 (2019 is included  
5 because the evaluation, measurement, and verification (EM&V)  
6 process for that year has not yet been completed). The 2019  
7 estimate is based on the amount calculated by the Company in the  
8 2018 proceeding for the 2019 rate year. The 2020 estimate is based  
9 on 1.00% (the ratio used in the 2018 proceeding) of the Company's  
10 estimates of 2020 DSM/EE operating expenses, with certain  
11 programs excluded altogether.

12 The components of the Company's proposed N.C. retail Rider C and  
13 Rider CE revenue requirements were largely calculated by DENC  
14 witnesses Bates and Moore, using jurisdictional allocation factors  
15 provided by DENC witness Miller in accordance with the 2017  
16 Mechanism. Witness Miller indicated in his testimony that he then  
17 took the jurisdictional revenue requirements and assigned or  
18 allocated them to the various North Carolina retail rate classes  
19 consistent with the 2017 Mechanism.

20 In her testimony, DENC witness Stephens indicated that she took the  
21 class-specific Rider C and Rider CE revenue requirements  
22 developed by witness Miller and converted them into per-kWh billing

1 rates, using projected rate period kWh sales for each customer class,  
2 excluding estimated kWh sales related to opted-out customers. The  
3 specific billing rates proposed by the Company in its Application are  
4 set forth in witness Stephens' exhibits.

5 **INVESTIGATION AND CONCLUSIONS**

6 **Q. PLEASE DESCRIBE YOUR INVESTIGATION OF DENC'S FILING.**

7 A. My investigation of DENC's filing in this proceeding focused on  
8 determining whether the proposed DSM/EE and DSM/EE EMF  
9 billing rates were (a) calculated in accordance with the 2017  
10 Mechanism, and (b) otherwise adhered to sound ratemaking  
11 concepts and principles. The procedures I and other members of the  
12 Public Staff's Accounting Division acting under my supervision  
13 utilized included a review of the Company's filing, relevant prior  
14 Commission proceedings and orders, and workpapers and source  
15 documentation used by the Company to develop the proposed billing  
16 rates. Performing the investigation required the review of responses  
17 to data requests, as well as discussions with Company personnel.  
18 The investigation also included a review of the actual DSM/EE  
19 program costs incurred by DENC during the twelve-month period  
20 ended December 31, 2018. To accomplish this, the Accounting  
21 Division selected and reviewed samples of source documentation for  
22 test year costs included by the Company for recovery through the



1 DSM/EE Rider. Review of these samples, which is still underway as  
2 of the date of pre-filing of this testimony, is intended to test whether  
3 the actual costs included by the Company in the DSM and EE billing  
4 rates are either valid costs of approved DSM and EE programs or  
5 administrative (common) costs supporting those programs.

6 The investigation, including the sampling of source documentation,  
7 concentrated primarily on costs and NLR related to the test period,  
8 and verified PPIs related to the 2011-2018 period, all of which are to  
9 be included in the true-up DSM/EE EMF billing rates approved in this  
10 proceeding. The Public Staff also performed a more general review  
11 of the prospective billing rates proposed to be charged for the rate  
12 period, which are subject to true-up in future proceedings.

13 **Q. WHAT ARE YOUR FINDINGS AND CONCLUSIONS?**

14 A. Based on my investigation, I am of the opinion that the Company has  
15 generally calculated its proposed DSM/EE billing rates (included in  
16 Rider C) and DSM/EE EMF billing rates (included in Rider CE) in a  
17 manner consistent with N.C. Gen. Stat. § 62-133.9, Commission  
18 Rule R8-69, and the 2017 Mechanism. However, this conclusion is  
19 subject to the caveat that the Public Staff is still in the process of  
20 reviewing certain data responses received from the Company in the  
21 last few days, including documentation of costs selected for review  
22 in the Public Staff's sample; once this review is complete, the Public

1 Staff will file the results with the Commission, as it has in certain past  
2 utility DSM/EE rider proceedings.

3 **Q. WHAT IS THE IMPACT OF RECOMMENDATIONS MADE BY**  
4 **PUBLIC STAFF WITNESS WILLIAMSON IN HIS TESTIMONY ON**  
5 **YOUR CONCLUSIONS REGARDING THE DSM/EE REVENUE**  
6 **REQUIREMENTS IN THIS PROCEEDING?**

7 A. Public Staff witness Williamson has filed testimony in this proceeding  
8 regarding DENC's DSM/EE portfolio (including certain new programs  
9 currently filed with the Commission for approval), the cost-  
10 effectiveness of each program, and the 2019 Evaluation,  
11 Measurement, and Verification (EM&V) Report, which reported on  
12 the results of DENC's programs through December 31, 2018. None  
13 of the topics and issues he discusses necessitates an adjustment in  
14 this particular proceeding to the Company's billing factor  
15 calculations.

16 Notwithstanding the above, Mr. Williamson does note in his  
17 testimony that the Public Staff believes that a combustion turbine  
18 (CT) is the appropriate input to use in the determination of avoided  
19 capacity cost benefits, rather than the mixture of generation resource  
20 types used by the Company. He states that the Public Staff intends  
21 to further discuss this matter with the Company. In accordance with  
22 this intent, I recommend that the final determination of Vintage 2020

1 per kW avoided capacity cost benefits for PPI purposes be delayed  
2 until next year's DSM/EE rider proceeding, even though the  
3 Mechanism provides that it would normally be determined in the  
4 current proceeding.

5 **Q. PLEASE SUMMARIZE YOUR CONCLUSIONS REGARDING**  
6 **DENC'S BILLING RATES.**

7 A. In summary, subject to completion of the review of sampled cost  
8 items and other recently received data, the Public Staff has found no  
9 errors or other issues necessitating an adjustment to DENC's  
10 proposed billing rates in this proceeding.

11 **RECOMMENDATION**

12 **Q. WHAT IS YOUR RECOMMENDATION IN THIS PROCEEDING?**

13 A. Based on the results of the Public Staff's investigation, and subject  
14 to the caveat above, I recommend approval of the Rider C and CE  
15 rates as proposed by DENC in its August 13, 2019 Application. The  
16 recommended billing rates should be approved subject to any true-  
17 ups in future cost recovery proceedings consistent with the 2017  
18 Mechanism, N.C. Gen. Stat. § 62-133.9, Commission Rule R8-69,  
19 and future Commission orders. The Public Staff notes that reviewing  
20 the calculation of the DSM/EE and DSM/EE EMF riders is a process  
21 that involves reviewing numerous assumptions, inputs, and  
22 calculations, and its recommendation with regard to this proposed

1 rider is not intended to indicate that the Public Staff will not raise  
2 questions in future proceedings regarding the same or similar  
3 assumptions, inputs, and calculations.

4 I also recommend, as set forth above, that the final determination of  
5 Vintage 2020 per kW avoided capacity cost benefits for PPI purposes  
6 be delayed until next year's DSM/EE rider proceeding.

7 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

8 A. Yes, it does.

**SUMMARY OF CERTAIN PORTIONS OF DENC'S DSM/EE MECHANISM**

1. Special jurisdictional allocation procedures will be evaluated for programs that operate in only either the Virginia or North Carolina retail jurisdictions, or that are limited in their operation in either jurisdiction.
2. In general, DENC shall be allowed to recover, through the DSM/EE and the DSM/EE EMF riders, all reasonable and prudent costs of Commission-approved DSM/EE programs. However, any of the Stipulating Parties may propose a procedure for the deferral and amortization of all or a portion of DENC's non-capital program costs to the extent those costs are intended to produce future benefits. For program costs not deferred for amortization in future DSM/EE riders, the accrual of a return on any under-recoveries or over-recoveries of cost will follow the requirements of Commission Rule R8-69(b), subparagraphs (3) and (6), unless the Commission determines otherwise.
3. DENC shall be allowed to recover NLR as a utility incentive (with the exception of those amounts related to research and development or the promotion of general awareness and education of EE and DSM activities), but shall be limited for each measurement unit installed in a given vintage year to those dollar amounts resulting from kWh sales reductions experienced during the first 36 months after the installation of the measurement unit. NLR related to pilot programs are subject to additional qualifying criteria. Recoverable NLR shall ultimately be based on kWh sales reductions and kilowatt (kW) savings verified through the EM&V process and approved by the Commission.
4. The eligibility of kWh sales reductions to generate recoverable NLR during the applicable 36-month period will cease upon the implementation of a Commission-approved alternative recovery mechanism that accounts for the otherwise eligible NLR, or new rates approved by the Commission in a general rate case or comparable proceeding that account for the NLR.
5. NLR will be reduced by net found revenues, as defined in the 2017 Mechanism, that occur in the same 36-month period. Net found revenues will be determined according to the "Decision Tree" process included in the 2017 Mechanism.
6. Subject to certain exceptions, DENC shall be allowed to collect a portfolio-based bonus utility incentive, the PPI, for each DSM or EE program approved and in effect during a given vintage year. The PPI is based on the net savings of each program or measure as calculated using the Utility

Cost Test, or UCT, and is equal to 9.08% of the present value of net savings for DSM programs and measures and 14.76% of the present value of net savings for EE programs and measures. The 9.08% and 14.76% factors shall be subject to review in each annual rider proceeding to ensure the continued reasonableness of the PPI. The PPI shall be converted into a stream of no more than 10 levelized annual payments. In determining the initial estimate of the PPI to be included in the DSM/EE rider, DENC may utilize a reasonable and appropriate estimation accomplished by a simpler and conservative method.

7. The per kW avoided capacity benefits used to calculate net savings for each Program and Vintage Year shall be determined annually by DENC using comparable methodologies to those used in the most recently approved biennial avoided cost proceeding. The per kWh avoided energy benefits used shall be those reflected in or underlying the most recently filed integrated resource plan (IRP). DENC's assumptions used in these methodologies, as well as the methodologies, are subject to the Public Staff's review and acceptance at the time DENC files its petition for annual cost recovery pursuant to Rule R8-69 and this Mechanism. Unless DENC and the Public Staff agree otherwise, DENC shall not be allowed to update its avoided capacity costs and avoided energy costs after filing its petition for its annual cost recovery proceeding pursuant to Rule R8-69 and this Mechanism and prior to the Commission's order establishing the rider for that rate period for purposes of calculating the PPI.
8. The per kW avoided transmission and avoided distribution (avoided T&D) costs used to calculate net savings for a Vintage Year shall be based on a study updated at least every five years, or as appropriate and agreed to by the Company and the Public Staff.

## QUALIFICATIONS AND EXPERIENCE

MICHAEL C. MANESS

I am a graduate of the University of North Carolina at Chapel Hill with a Bachelor of Science degree in Business Administration with Accounting. I am a Certified Public Accountant and a member of both the North Carolina Association of Certified Public Accountants and the American Institute of Certified Public Accountants.

As Director of the Accounting Division of the Public Staff, I am responsible for the performance, supervision, and management 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. I have been employed by the Public Staff since July 12, 1982.

Since joining the Public Staff, I have filed testimony or affidavits in a number of general, fuel, and demand-side management/energy efficiency rate cases of the utilities currently organized as Duke Energy Carolinas, LLC, Duke Energy Progress, LLC., and Virginia Electric and Power Company (Dominion Energy North Carolina), as well as in several water and sewer general rate cases. I have also filed testimony or affidavits in other proceedings, including

applications for certificates of public convenience and necessity for the construction of generating facilities, approval of self-generation deferral rates, approval of cost and incentive recovery mechanisms for electric utility demand-side management and energy efficiency (DSM/EE) efforts, and approval of cost and incentive recovery pursuant to those mechanisms.

I have also been involved in several other matters that have come before this Commission, including the investigation undertaken by the Public Staff into the operations of the Brunswick Nuclear Plant as part of the 1993 Carolina Power & Light Company fuel rate case (Docket No. E-2, Sub 644), the Public Staff's investigation of Duke Power's relationship with its affiliates (Docket No. E-7, Sub 557), and several applications for business combinations involving electric utilities regulated by this Commission. Additionally, I was responsible for performing an examination of Carolina Power & Light Company's accounting for the cost of Harris Unit 1 in conjunction with the prudence audit performed by the Public Staff and its consultants in 1986 and 1987.

I have had supervisory or management responsibility over the Electric Section of the Accounting Division since 1986, and also was assigned management duties over the Water Section of the Accounting Division during the 2009-2012 time frame. I was promoted to Director of the Accounting Division in late December 2016.