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Aug 21 2018

August 21, 2018

**VIA ELECTRONIC FILING**

Ms. M. Lynn Jarvis, Chief Clerk  
North Carolina Utilities Commission  
Dobbs Building  
430 North Salisbury Street  
Raleigh, North Carolina 27603

Re: *Application of Dominion Energy North Carolina for Approval of Cost Recovery for Demand-side Management Programs and Energy Efficiency Measures*  
Docket No. E-22, Sub 556

Dear Ms. Jarvis:

Pursuant to North Carolina General Statutes (“N.C.G.S.”) § 62-133.9 and Rule R8-69 of the Rules and Regulations of the North Carolina Utilities Commission (“Commission”), Virginia Electric and Power Company, d/b/a Dominion Energy North Carolina (the “Company”), hereby files its Application for approval of cost recovery for the Company’s approved and proposed demand-side management and energy efficiency measures (“Application”).

Portions of the Application contain confidential information related to program or vendor costs, including Company Exhibit DRK-1, Schedule 5, Company Exhibit JEB-1, Schedules 1, 2, 3, 4, 5, 6, and 7, Company Exhibit AJM-1, Schedules 1 and 2, and Company Exhibit JCC-1, Schedules 1 and 3. Information designated by the Company as confidential qualifies as “trade secrets” under N.C.G.S. § 66-152(3). Public disclosure of this information would allow access by external vendors to the projected or actual costs for services that will be or have been competitively bid, which may provide commercial value to such external vendors and may ultimately result in harm to ratepayers. Pursuant to N.C.G.S. § 132-1.2, the Company has redacted this confidential information from this public version of the Company’s Application and is contemporaneously filing these confidential pages under seal. The Company will make this information available to other interested parties pursuant to an appropriate nondisclosure agreement.

Ms. M. Lynn Jarvis, Chief Clerk  
August 21, 2018  
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Please do not hesitate to contact me if you have any questions. Thank you for your assistance in this matter.

Very truly yours,

/s/E. Brett Breitschwerdt

Enclosures

cc: David T. Drooz



**Dominion  
Energy®**

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

**Before the North Carolina  
Utilities Commission**

**In the Matter of  
Application of Virginia Electric  
and Power Company, d/b/a  
Dominion Energy North Carolina,  
for Authority to Adjust its Electric  
Rates and Charges Pursuant to  
N.C.G.S. § 62-133.9 and NCUC  
Rule R8-69**

**Docket No. E-22, Sub 556**

**Filed: August 21, 2018**

**PUBLIC VERSION**

**Dominion Energy North Carolina  
Application for Approval of Cost Recovery for Demand-Side  
Management and Energy Efficiency Measures**

**DOCKET NO. E-22, SUB 556**

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**STATE OF NORTH CAROLINA  
UTILITIES COMMISSION  
RALEIGH**

DOCKET NO. E-22, SUB 556

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of	)	
Application of Virginia Electric and Power Company, d/b/a Dominion Energy North Carolina, for Authority to Adjust its Electric Rates and Charges Pursuant to N.C.G.S § 62-133.9 and Commission Rule R8-69	)	APPLICATION FOR APPROVAL OF DEMAND-SIDE MANAGEMENT AND ENERGY EFFICIENCY COST RECOVERY RIDER

Pursuant to North Carolina General Statutes (“N.C.G.S.”) § 62-133.9 and Rule R8-69 of the Rules and Regulations of the North Carolina Utilities Commission (“NCUC” or the “Commission”), Virginia Electric and Power Company, d/b/a Dominion Energy North Carolina (“Dominion Energy North Carolina” or the “Company”), by counsel, hereby applies to the Commission to establish an updated rider to allow the Company to recover its reasonable and prudent demand-side management (“DSM”) and energy efficiency (“EE”) costs, net lost revenues, and Portfolio Performance Incentive (“PPI”) (the “Application”). In support thereof, the Company respectfully asserts as follows:

1. The Company is a public utility operating in the State of North Carolina as Dominion Energy North Carolina and is engaged in the business of generating, transmitting, distributing, and selling electric power and energy to the public for compensation. As such, the Company’s operations in the State are subject to the jurisdiction of the Commission. The Company is also a public utility under the Federal Power Act, and certain of its operations are subject to the jurisdiction of the Federal Energy Regulatory Commission (“FERC”). The Company is a wholly-owned subsidiary

of Dominion Energy, Inc. Dominion Energy North Carolina serves approximately 120,000 customers in North Carolina, with a service territory of about 2,600 square miles in northeastern North Carolina, including Roanoke Rapids, Albemarle, Ahoskie, Elizabeth City, and the Outer Banks. Dominion Energy North Carolina serves major industrial facilities, as well as commercial, governmental, and residential customers. The post office address of Dominion Energy North Carolina is P.O. Box 26666, Richmond, Virginia 23261.

2. The attorneys for the Company are:

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

3. N.C.G.S. § 62-133.9(d) authorizes the Commission to approve an annual rider to the rates of electric public utilities to recover all reasonable and prudent costs



incurred for the adoption and implementation of new demand-side management and energy efficiency (collectively “DSM/EE”) measures (“DSM/EE Programs”), including, but not limited to, all capital costs, administrative costs, implementation costs, incentive payments to program participants, and operating costs. The annual rider shall recover the utility’s forecasted costs during the February 1, 2019, through January 31, 2020, rate period (“Rate Period”), and an experience modification factor (“EMF”) rider shall recover the difference between the utility’s actual reasonable and prudent costs incurred and actual revenues realized during the January 1, 2017, through December 31, 2017, test period (“Test Period”). The Commission is also authorized, pursuant to N.C.G.S. § 62.133.9(d)(2), to approve incentives to utilities for the adoption and implementation of new DSM/EE Programs.

4. Commission Rule R8-69(b) provides that the Commission will annually conduct a proceeding for each electric public utility to establish a DSM/EE rider to recover DSM/EE related costs. On October 14, 2011, the Commission issued an Order approving the Company’s proposed cost recovery mechanism, Rider C (“2010 Cost Recovery Order”).<sup>1</sup> The 2010 Cost Recovery Order also approved the Agreement and Stipulation of Settlement (“Stipulation”) agreed to between the Public Staff and the Company, as well as a cost recovery and incentive mechanism attached as Stipulation Exhibit 1 to the Stipulation. The Commission issued an Order on December 13, 2011, in the Company’s 2011 cost recovery proceeding approving an updated Rider C as well as an Addendum to the Stipulation, establishing a jurisdictional allocation methodology for

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<sup>1</sup> *Order Approving Agreement and Stipulation of Settlement, Approving DSM/EE Rider, and Requiring Compliance Filing*, Docket No. E-22, Sub 464 (Oct. 14, 2011).

the allocation of DSM/EE Program costs between the Company's North Carolina and Virginia jurisdictions.<sup>2</sup>

5. On December 14, 2012, in the Company's 2012 cost recovery proceeding, the Commission again approved an updated Rider C along with the Company's initial EMF, Rider CE.<sup>3</sup> On December 18, 2013, the Commission approved updated Riders C and CE, as well as a second Addendum to the Stipulation addressing assignment of costs for the Company's North Carolina-only Programs.<sup>4</sup> On December 19, 2014, the Commission approved Riders C and CE presented in the Company's 2014 cost recovery proceeding.<sup>5</sup> On December 14, 2015, the Commission approved Riders C and CE presented in the Company's 2015 cost recovery proceeding.<sup>6</sup> On December 19, 2016, the Commission approved Riders C and CE presented in the Company's 2016 cost recovery proceeding.<sup>7</sup> On December 21, 2017, in the Company's most recent cost recovery proceeding, the Commission approved the currently-effective updated Riders C and CE.<sup>8</sup>

6. On May 22, 2017, the Commission approved a revised cost recovery and incentive mechanism ("Mechanism"), addressing the manner in which the Company would develop its future Rule R8-69 applications for DSM/EE cost recovery.<sup>9</sup> The

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<sup>2</sup> *Order Approving DSM/EE Rider and Requiring Customer Notice*, Docket No. E-22, Sub 473 (Dec. 13, 2011).

<sup>3</sup> *Order Approving DSM/EE Rider and DSM/EE EMF Riders and Requiring Customer Notice*, Docket No. E-22, Sub 486 (Dec. 14, 2012).

<sup>4</sup> *Order Approving DSM/EE and DSM/EE EMF Riders and Requiring Customer Notice*, Docket No. E-22, Sub 494 (Dec. 18, 2013).

<sup>5</sup> *Order Approving DSM/EE and DSM/EE EMF Riders and Requiring Filing of Proposed Customer Notice*, Docket No. E-22, Sub 513 (Dec. 19, 2014).

<sup>6</sup> *Order Approving DSM/EE and DSM/EE EMF Riders and Requiring Filing of Proposed Customer Notice*, Docket No. E-22, Sub 524 (Dec. 14, 2015).

<sup>7</sup> *Order Approving DSM/EE Rider and Requiring Filing of Proposed Customer Notice*, Docket No. E-22, Sub 536 (Dec. 19, 2016).

<sup>8</sup> *Order Approving DSM/EE Rider and Requiring Filing of Proposed Customer Notice*, Docket No. E-22, Sub 545 (Dec. 21, 2017).

<sup>9</sup> *Order Approving Revised Cost Recovery and Incentive Mechanism*, Docket No. E-22, Sub 464 (May 22, 2017).

Company has developed this Application in accordance with the provisions of the revised Mechanism.

7. Pursuant to the provisions of N.C.G.S. § 62-133.9 and Commission Rule R8-69, the Company requests approval of an updated Rider C to recover its reasonable and prudent costs projected to be incurred for adoption and implementation of the Company's portfolio of DSM/EE Programs, including certain "Common Costs," which are projected costs for items such as program marketing and internal labor that are shared across the Company's DSM/EE Programs. The Company's portfolio of DSM/EE Programs for which Rate Period cost recovery is sought in this proceeding includes:

a) the previously-approved Phase I Air Conditioner Cycling Program;<sup>10</sup> (b) the previously-approved Phase III DSM/EE programs: Non-residential Lighting Systems & Controls Program, Non-residential Heating & Cooling Efficiency Program, and Non-residential Window Film Program;<sup>11</sup> (c) the previously-approved Phase IV Residential Income and Age Qualifying Home Improvement Program;<sup>12</sup> (d) the previously-approved Phase V Small Business Improvement Program;<sup>13</sup> (e) the previously-approved Residential Retail LED Lighting program;<sup>14</sup> and (f) the previously-approved Phase VI Non-Residential Prescriptive Program.<sup>15</sup> Dominion Energy North Carolina has also filed for Commission approval to prospectively offer two of the Phase III Programs, the Non-residential Heating and Cooling Efficiency Program and the Non-residential Lighting

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<sup>10</sup> Docket No. E-22, Sub 465. All other Phase I programs except the Residential Air Conditioner Cycling Program have previously been concluded.

<sup>11</sup> Docket No. E-22, Subs 507, 508, and 509. On August 16, 2018, the Company filed a motion in Docket No. E-22, Sub 509 requesting Commission approval to close the Non-residential Window Film Program.

<sup>12</sup> Docket No. E-22, Sub 523.

<sup>13</sup> Docket No. E-22, Sub 538.

<sup>14</sup> Docket No. E-22, Sub 539. On August 16, 2018, the Company filed a motion in Docket No. E-22, Sub 539 requesting Commission approval to close the Residential Retail LED Lighting Program.

<sup>15</sup> Docket No. E-22, Sub 543.

Systems and Controls Program, on a North Carolina-only basis beginning on January 1, 2019.<sup>16</sup>

8. Pursuant to N.C.G.S. § 62-133.9(d)(2) and Commission Rule R8-69(c), the Company also requests recovery of net lost revenues and a PPI for the adoption and implementation of the DSM/EE Programs. However, consistent with the Company's 2015, 2016, and 2017 DSM/EE cost recovery applications, the Company has not projected net lost revenues for the Rate Period; instead, the Company intends to true up net lost revenues through its annual EMF in future proceedings. The Company is also requesting to true up its Test Period recovery of PPI and net lost revenues in accordance with the Mechanism.

9. Consistent with Paragraph 40 of the Mechanism, the Company has developed its revenue requirement using the capital structure and cost of capital as specified by the Company's Treasury Department for use in the Company's June 30, 2018 NCUC ES-1 Report, incorporating a cost of common equity of 9.90%, as approved in the Company's most recent general rate case on December 22, 2016, in Docket No. E-22, Sub 532.<sup>17</sup>

10. The Company's Application and prefiled direct testimony are consistent with the terms and conditions of the Mechanism, as approved by the Commission. Updated Rider C and the EMF rider, Rider CE, are intended to allow the Company to recover \$4,350,223 of DSM/EE expenses and incentives during the Rate Period. This

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<sup>16</sup> See Applications for approval of transition of Non-Residential Heating and Cooling Efficiency Program and Non-residential Lighting Systems and Controls Program to North Carolina-only basis, Docket No. E-22, Subs 507, 508 (Aug. 16, 2018).

<sup>17</sup> See *Order Granting General Rate Increase*, Docket No. E-22, Sub 532 (Dec. 22, 2016).

amount includes an under-collection of \$1,839,922 during the Test Period and \$2,510,301 for expenses and incentives projected to be incurred during the Rate Period.

11. Pursuant to N.C.G.S. § 62-133.9, the Company requests Commission approval of annual Rider C and CE billing adjustments as follows (all shown on a dollars per kWh basis):

<u>Customer Class</u>	<u>Rider C</u> DSM/EE Customer Class Rate (¢/kWh)	<u>Rider CE</u> DSM/EE EMF Customer Class Rate (¢/kWh)	<u>Total Riders C &amp; CE</u> Customer Class Rate (¢/kWh)
Residential	0.062 ¢/kWh	0.059 ¢/kWh	0.121 ¢/kWh
Small General Service & Public Authority	0.140 ¢/kWh	0.082 ¢/kWh	0.222 ¢/kWh
Large General Service	0.147 ¢/kWh	0.086 ¢/kWh	0.233 ¢/kWh
6VP	0.000 ¢/kWh	0.000 ¢/kWh	0.000 ¢/kWh
NS	0.000 ¢/kWh	0.000 ¢/kWh	0.000 ¢/kWh
Outdoor Lighting	0.000 ¢/kWh	0.000 ¢/kWh	0.000 ¢/kWh
Traffic Lighting	0.000 ¢/kWh	0.000 ¢/kWh	0.000 ¢/kWh

12. Updated Rider C and Rider CE will be in effect for the 12-month period from February 1, 2019, through January 31, 2020, the proposed Rate Period. As noted in Company Witness Alan J. Moore's direct testimony, Commission Rule R8-69(a) provides that the Rate Period for DSM/EE cost recovery is the same as the period during which the rider established under Commission Rule R8-55, the Company's fuel factor, is in effect. Therefore, and as discussed in Company Witness Michael T. Hubbard's direct testimony, in previous years, the Company has proposed Rider C rates to be effective for a calendar year Rate Period, consistent with the rate period previously used for fuel factor riders under Rule R8-55. Based on discussions with the Public Staff following the conclusion of the Company's 2017 rider proceedings, the Company is proposing for updated Riders C and CE to be effective for a February 1, 2019, through

January 31, 2020, Rate Period, and is proposing the same adjustment in its cost recovery rider applications filed pursuant to Rules R8-55 and R8-67. The Company is requesting this adjustment to the annual Rate Period in order to extend the time for the Commission to issue orders in the Company's three annual rider proceedings filed pursuant to NCUC Rules R8-55, R8-67, and R8-69, respectively, and to then allow the Company additional time to finalize rates and customer notices (including allowing reasonable time for Public Staff review) prior to the updated annual riders' effective date. The Company intends to continue to use a February 1 through January 31 rate period in future rider cases.

13. Pursuant to Commission Rules R8-69(b) and R8-27, the Company requests approval to defer prudently incurred costs to FERC Account 182.3, "Other Regulatory Assets," until recovered. Pursuant to Commission Rule R8-69(b)(6), the Company requests approval to defer the difference between actual reasonable and prudently incurred incremental costs and the related revenues realized under rates in effect. The Company also requests approval as required under Commission Rule R8-69(b)(6) to defer any Common Costs, including any administrative, general, or other costs not directly related to new DSM/EE Programs. Finally, the Company requests approval to defer costs that the Company incurs in adopting and implementing new DSM/EE measures up to six months prior to the Company filing for Commission approval of such measures in accordance with Commission Rule R8-68.

14. In support of the requested change in rates, the Company has attached hereto, as required by Commission Rule R8-69, the prefiled direct testimony and exhibits of Michael T. Hubbard, Deanna R. Kesler, Jarvis E. Bates, Alan J. Moore, J. Clayton Crouch, and Debra A. Stephens.

WHEREFORE, Dominion Energy North Carolina respectfully requests that the Commission approve the changes to its rates as set forth in Paragraph eleven (11) above, finding them just and reasonable.

Respectfully submitted, this the 21<sup>st</sup> day of August, 2018.

DOMINION ENERGY NORTH CAROLINA

By: /s/E. Brett Breitschwerdt  
Counsel

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

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**DIRECT TESTIMONY  
OF  
MICHAEL T. HUBBARD  
ON BEHALF OF  
DOMINION ENERGY NORTH CAROLINA  
BEFORE THE  
NORTH CAROLINA UTILITIES COMMISSION  
DOCKET NO. E-22, SUB 556**

1 **Q. Please state your name, business address, and position with Virginia**  
2 **Electric and Power Company (“Dominion Energy North Carolina” or the**  
3 **“Company”).**

4 A. My name is Michael T. Hubbard, and I am Manager-Energy Conservation for  
5 the Company. My business address is 701 East Cary Street, Richmond,  
6 Virginia 23219. A statement of my background and qualifications is attached  
7 as Appendix A.

8 **Q. Please describe your area of responsibility with the Company.**

9 A. I am responsible for overseeing the Company’s Energy Conservation (“EC”)  
10 department, which manages the Company’s demand-side management  
11 (“DSM”) and energy efficiency (“EE”) programs (“DSM/EE Programs” or  
12 “Programs”).

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

14 A. My testimony supports the Company’s request to recover all reasonable and  
15 prudent costs incurred in adopting and implementing the Company’s  
16 authorized portfolio of North Carolina DSM/EE programs, as well as utility  
17 incentives, through updated Rider C and the test period experience  
18 modification factor (“EMF”) rider, Rider CE (“Application”). The purpose of

1 my testimony is to: (1) provide an update on the status of the Company's  
2 current DSM/EE Programs in North Carolina; and (2) present the Company's  
3 cost recovery request in this proceeding to the North Carolina Utilities  
4 Commission ("NCUC" or "Commission").

5 **I. UPDATE ON DSM/EE PROGRAMS**

6 **Q. Please provide a brief overview of the Company's approved DSM/EE**  
7 **Programs in North Carolina.**

8 A. In February 2011, the Commission approved five DSM/EE Programs, which  
9 the Company began offering to customers in the spring of 2011.<sup>1</sup> These  
10 "Phase I" DSM/EE Programs included the Company's:

- 11 • Residential Low Income Program;
- 12 • Residential Air Conditioner Cycling Program;
- 13 • Residential Lighting Program;
- 14 • Commercial HVAC Upgrade Program; and
- 15 • Commercial Lighting Program.

16 On December 31, 2011, the Company concluded the implementation phase of  
17 its Residential Lighting Program. Further, the Company concluded its  
18 Commercial Lighting Program and Commercial HVAC Upgrade Program on  
19 December 31, 2014.<sup>2</sup>

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<sup>1</sup> Orders approving these Programs were issued on February 22, 2011, in Docket Nos. E-22, Sub 463 (Low Income Program), Sub 465 (Air Conditioner Cycling Program), Sub 467 (Commercial HVAC Upgrade Program), Sub 468 (Residential Lighting Program), and Sub 469 (Commercial Lighting Program).

<sup>2</sup> On December 16, 2013, the Commission approved the Company's request to transition the Phase I Commercial HVAC Upgrade Program (Sub 467) and the Commercial Lighting Program (Sub 469) from system-wide Programs to North Carolina-only Programs. By Order issued August 8, 2014, the

1 In August 2013, the Company requested Commission approval to implement  
2 the following “Phase II” DSM/EE Programs:

- 3 • Non-residential Energy Audit Program;
- 4 • Non-residential Duct Testing and Sealing Program;
- 5 • Residential Home Energy Check-Up Program;
- 6 • Residential Duct Sealing Program;
- 7 • Residential Heat Pump Tune-Up Program; and
- 8 • Residential Heat Pump Upgrade Program.

9 The Commission approved the six Phase II Programs in December 2013, and  
10 the Company began accepting new customers in these Programs beginning on  
11 January 1, 2014.<sup>3</sup> On August 16, 2016, as amended on October 19, 2016, the  
12 Company filed a Motion for Commission Approval to close the Phase II  
13 programs to new applications as of February 7, 2017, contemporaneous with  
14 their closure to new participants in Virginia, with the exception of the  
15 Residential Heat Pump Upgrade Program, which the Company asked to  
16 suspend as of February 7, 2017. The Commission granted those requests by  
17 order issued on November 29, 2016.<sup>4</sup> On July 28, 2017, the Company filed a  
18 Motion to close the Residential Heat Pump Upgrade Program, which the  
19 Commission approved by order issued on September 5, 2017.<sup>5</sup>

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Commission subsequently approved the Company’s request to close these North Carolina-only Programs as of December 31, 2014.

<sup>3</sup> Orders approving these Programs were issued on December 16, 2013, in Docket Nos. E-22, Sub 495 (Non-Residential Energy Audit Program), Sub 496 (Non-Residential Duct Testing and Sealing Program), Sub 497 (Residential Duct Testing and Sealing Program), Sub 498 (Residential Home Energy Check Up Program), Sub 499 (Residential Heat Pump Tune Up Program), and Sub 500 (Residential Heat Pump Upgrade Program).

<sup>4</sup> *Order on Motion to Close or Suspend Programs*, Docket No. E-22, Subs 495, 496, 497, 498, 499, and 500 (Nov. 29, 2016).

<sup>5</sup> *Order Cancelling Program*, Docket No. E-22, Sub 500 (Sept. 5, 2017).

1 In June 2014, the Company requested Commission approval to implement the  
2 following “Phase III” DSM/EE Programs:

- 3 • Non-residential Heating and Cooling Efficiency Program;
- 4 • Non-residential Lighting Systems and Controls Program; and
- 5 • Non-residential Window Film Program.

6 The Commission approved the three Phase III Programs in October 2014, and  
7 the Company began accepting new customers in these Programs beginning on  
8 January 1, 2015.<sup>6</sup> On August 16, 2018, the Company filed a Motion to close  
9 the Phase III Non-Residential Window Film Program to new participants as  
10 of December 31, 2018.<sup>7</sup> Also on August 16, 2018, the Company requested  
11 Commission approval to transition the Phase III Non-residential Heating and  
12 Cooling Efficiency Program and the Non-residential Lighting Systems and  
13 Controls Program to be offered on a North Carolina-only basis.<sup>8</sup>

14 In July 2015, the Company requested Commission approval to implement the  
15 “Phase IV” Residential Income and Age Qualifying Home Improvement  
16 (RIAQHI) Program. After Commission approval in October 2015, this new  
17 Program opened to North Carolina customers on January 1, 2016.<sup>9</sup> The Phase  
18 IV RIAQHI Program replaced the Phase I North Carolina-only Low Income

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<sup>6</sup> Orders approving these Programs were issued on October 27, 2014, in Docket Nos. E-22, Sub 507 (Non-Residential Heating and Cooling Efficiency Program), Sub 508 (Non-Residential Lighting Systems and Controls Program), and Sub 509 (Non-Residential Window Film Program).

<sup>7</sup> Motion to Close Non-Residential Window Film Program and Residential Retail LED Lighting Program, Docket No. E-22, Subs 509, 539 (Aug. 16, 2018) (“Motion to Close”).

<sup>8</sup> Application of Dominion Energy North Carolina for Approval of Non-Residential Heating and Cooling Efficiency Program, Docket No. E-22, Sub 507 (Aug. 16, 2018); Application of Dominion Energy North Carolina for Approval of Non-residential Lighting Systems and Controls Program, Docket No. E-22, Sub 508 (Aug. 16, 2018).

<sup>9</sup> *Order Approving Program*, Docket No. E-22, Sub 523 (Oct. 6, 2015).

1 Program, which concluded on December 31, 2015.<sup>10</sup> On November 6, 2017,  
2 the Commission approved the Company's request to suspend the RIAQHI  
3 Program since the Program was set to expire in Virginia in early 2018.<sup>11</sup> The  
4 Company stated that if the Virginia State Corporation Commission ("VSCC")  
5 granted an extension, it would file a request seeking to reopen the Program in  
6 North Carolina in accordance with the Program's system-wide design. On  
7 May 31, 2018, the Company filed a motion with the Commission to reopen  
8 the RIAQHI Program to customer participation beginning July 1, 2018.<sup>12</sup> On  
9 June 26, 2018, the Commission approved reopening the RIAQHI Program.<sup>13</sup>

10 In July 2016, the Company requested Commission approval to implement the  
11 "Phase V" Non-residential Small Business Improvement Program. After  
12 Commission approval in October 2016,<sup>14</sup> the Company launched the Program  
13 beginning on January 1, 2017.

14 In October 2016, the Company requested Commission approval to implement  
15 an instant discount type of Residential Retail LED Lighting Program on a  
16 North Carolina-only basis during 2017 and 2018. The Commission approved  
17 the Residential Retail LED Lighting Program in December 2016.<sup>15</sup> On

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<sup>10</sup> On September 9, 2014, the Commission approved the Company's request to transition the Phase I Residential Low Income Program from a system-wide Program to a North Carolina-only Program. *Order Granting Motion to Offer North Carolina-only Low Income Program*, Docket No. E-22, Sub 463 (Sept. 9, 2014).

<sup>11</sup> *Order Suspending Program*, Docket No. E-22, Sub 523 (Nov. 6, 2017).

<sup>12</sup> *Motion to Reopen Program*, Docket No. E-22, Sub 523 (May 31, 2018).

<sup>13</sup> *Order Approving Reopening Program*, Docket No. E-22, Sub 523 (June 26, 2018).

<sup>14</sup> *Order Approving Program*, Docket No. E-22, Sub 538 (Oct. 26, 2016).

<sup>15</sup> *Order Approving Program*, Docket No. E-22, Sub 539 (Dec. 20, 2016).

1 August 16, 2018, the Company filed a Motion to close the Program effective  
2 with the end of its contemplated two-year duration.<sup>16</sup>

3 In July 2017, the Company requested Commission approval to implement the  
4 “Phase VI” Non-residential Prescriptive Program. After Commission  
5 approval in October 2017,<sup>17</sup> the Company launched the Program in North  
6 Carolina beginning on January 1, 2018.

7 **Q. Please provide a brief update on the Company’s implementation of the**  
8 **approved DSM/EE Programs in North Carolina.**

9 A. The approved DSM/EE Programs have been successful in North Carolina.  
10 The Company launched the Phase I Residential Lighting Program in May  
11 2011, and over 37,000 bulbs were sold through December 31, 2011, when the  
12 program was completed. Through the Low Income Program, the Company  
13 has performed approximately 930 low income audits and repairs in North  
14 Carolina during the period June 2011 through June 30, 2015. Through the Air  
15 Conditioner Cycling Program, the Company began installing air conditioner  
16 cycling devices in August 2011, and approximately 3,407 customers are  
17 participating in the Program as of June 30, 2018.

18 The Phase II Programs launched in North Carolina in January 2014. Since  
19 Program launch through suspension and closure of the Phase II Programs in  
20 February 2017, approximately 5,294 units have been serviced as part of the

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<sup>16</sup> See Motion to Close, *supra* n. 7.

<sup>17</sup> Order Approving Program, Docket No. E-22, Sub 543 (Oct. 16, 2017).

1 Residential Heat Pump Tune-Up Program and 1,349 units have been upgraded  
2 in North Carolina to more efficient models as part of the Residential Heat  
3 Pump Upgrade Program. The Residential Duct Testing and Sealing Program  
4 has resulted in testing and repair of duct work associated with approximately  
5 554 heat pump units. Approximately 1,049 residential customers have  
6 received customized energy audit reports and direct install measures as part of  
7 the Residential Home Energy Check-Up Program.

8 Examples of direct install measures include installing compact fluorescent  
9 light bulbs, faucet aerators, and door weather-stripping. The Non-residential  
10 Energy Audit Program has provided approximately 115 audits to North  
11 Carolina customers since Program launch through Program closure in  
12 February 2017. Of these 115 audits, 108 customers have installed approved  
13 measures and obtained a rebate as part of the Program. The Non-residential  
14 Duct Testing and Sealing Program has had approximately 250 participants in  
15 North Carolina since Program launch.

16 The Non-residential Phase III Programs launched in North Carolina in January  
17 2015. As of June 30, 2018, 186 customers have participated in the  
18 Company's Phase III Programs.

19 The Phase IV Residential Income and Age Qualifying Home Improvement  
20 Program launched in North Carolina in January 2016. As of June 30, 2018,  
21 289 customers have participated in the Company's Phase IV Program.

1 The Phase V Non-residential Small Business Improvement Program became  
2 available to qualifying customers in January 2017. As of June 30, 2018, 28  
3 customers have participated in the Company's Phase V Program.

4 The Phase VI Non-residential Prescriptive Program became available to  
5 qualifying customers in January 2018. The Company's implementation  
6 vendor has been working diligently with trade allies promoting the Program  
7 and building customer pipelines for future Program participants, as well as  
8 installing new program management software. The implementation vendor  
9 has participating contractors on board and these contractors are actively  
10 reaching out to customers. Based on the strong program activity thus far in  
11 Virginia for this Program, we remain confident that the 2018 annual goal of  
12 29 participants and \$292,000 of incentives will be achieved.

13 The Company's Residential Retail LED Lighting Program became available  
14 in 2017. As of June 30, 2018, there are 82 active stores that have sold over  
15 172,000 bulbs as part of this Program.

16 As of June 30, 2018, the Company has 68 participating contractors for its  
17 North Carolina customers.

18 **Q. Has the Company proposed additional Programs for Commission**  
19 **approval in North Carolina?**

20 A. No. At this time, the Company is not requesting Commission approval for  
21 any new DSM programs in North Carolina.



- 1 **Q. Has the Company evaluated extending the DSM Phase III Non-**  
2 **residential Programs on a North Carolina-only basis?**
- 3 A. Yes. Consistent with prior direction by this Commission, the Company  
4 recently evaluated the possibility of implementing the DSM Phase III  
5 Programs on a North Carolina-only basis. After receiving input from the  
6 Company’s program design consultant regarding the feasibility of North  
7 Carolina-only versions of these Program designs and evaluating their cost-  
8 effectiveness, the Company has determined that continuing to offer two of the  
9 Phase III Programs, the Non-residential Heating and Cooling Efficiency and  
10 Lighting Systems and Controls Programs, only in North Carolina would be  
11 reasonably cost-effective under the Mechanism and beneficial to the  
12 Companies’ North Carolina non-residential customers. As noted above, the  
13 Company has requested Commission approval to close the Phase III Non-  
14 residential Window Film Program, as the Company determined that extremely  
15 limited past North Carolina customer participation did not support continuing  
16 to offer that Program.
- 17 **Q. Does the Company have any additional plans to evaluate future DSM**  
18 **Programs?**
- 19 A. Yes. The EC group is currently evaluating bids submitted in response to a  
20 request for proposals (“RFP”) issued in March 2018 for new DSM program  
21 design ideas for development into potential future system-wide Programs. As  
22 the Commission is aware, the Company’s EC group develops the Company’s  
23 DSM/EE program portfolio to be deployed in “phases,” with program

1 approval first being sought in Virginia and, if approved in Virginia, then  
2 sought in North Carolina. The Company is currently evaluating the results of  
3 the 2018 Program design RFP, and anticipates seeking approval by the VSCC  
4 of a number of new residential and non-residential DSM/EE Program designs,  
5 which, if approved in Virginia, would then be brought to North Carolina to be  
6 offered on a system-wide basis.

7 **II. OVERVIEW OF APPLICATION**

8 **Q. What is the purpose of the Company's Application in this proceeding?**

9 A. In this Application, the Company is filing its annual update and requesting  
10 approval of an updated Rider C revenue requirement to be recovered during  
11 February 1, 2019, through January 31, 2020, the proposed rate period ("Rate  
12 Period"), as well as seeking true-up of January 1, 2017, through December  
13 31, 2017 ("Test Period"), costs through the Company's EMF rider, Rider CE.

14 **Q. Why is the Rate Period being used for this proceeding different than in  
15 previous years?**

16 A. As addressed in the Application and further explained by Company Witness  
17 Alan J. Moore, Commission Rule R8-69(a) provides that the Rate Period for  
18 DSM/EE cost recovery is the same as the period during which the rider  
19 established under Commission Rule R8-55, the Company's fuel factor, is in  
20 effect. In previous years, the Company has proposed Rider C rates to be  
21 effective for a calendar year Rate Period, consistent with the rate period  
22 previously used for fuel factor riders under Rule R8-55. Based on discussions

1 with the Public Staff following the conclusion of the Company's 2017 rider  
2 proceedings, the Company is proposing that updated Rider C be effective for a  
3 February 1, 2019, through January 31, 2020, Rate Period, and is proposing the  
4 same adjustment in its cost recovery rider applications filed pursuant to Rules  
5 R8-55 and R8-67. The Company is requesting this adjustment to the annual  
6 Rate Period in order to extend the time for the Commission to issue orders in  
7 the Company's three annual rider proceedings filed pursuant to NCUC Rules  
8 R8-55, R8-67, and R8-69, respectively, and to then allow the Company  
9 additional time to finalize rates and customer notices (including allowing  
10 reasonable time for Public Staff review) prior to the updated annual riders'  
11 effective date. The Company intends to continue to use a February 1 through  
12 January 31 rate period in future rider cases. As discussed further by Company  
13 Witness Deanna R. Kesler, because the Company's system for modeling  
14 projected costs and benefits is based on the calendar year, in this proceeding  
15 the Company is applying the projected costs for calendar year 2019 to the  
16 proposed February 1, 2019 – January 31, 2020 Rate Period.

17 **Q. What rates does the Company propose to charge for the month of**  
18 **January 2019?**

19 A. For the month of January 2019, the Company proposes to maintain Rider C as  
20 approved by the Commission in the Company's previous DSM/EE cost  
21 recovery proceeding, and to reduce Rider CE for all classes to zero. Company  
22 Witness Debra A. Stephens provides additional detail regarding this proposed  
23 one-time interim adjustment to Rider CE for the month of January 2019.

1 **Q. Please provide a brief overview of the Company’s approach to cost**  
2 **recovery for its North Carolina DSM/EE Programs as set forth in the**  
3 **Application.**

4 A. The costs of the Company’s approved DSM/EE Programs have been  
5 recovered during each annual Rule R8-69 cost recovery proceeding in  
6 accordance with the Agreement and Stipulation of Settlement agreed to  
7 between the Public Staff and the Company in the Company’s initial 2010 cost  
8 recovery proceeding (“Stipulation”), as well as the Cost Recovery and  
9 Incentive Mechanism attached as Stipulation Exhibit 1 to the Stipulation.<sup>18</sup> In  
10 the fall of 2014, in accordance with provisions of the original Stipulation, the  
11 Commission undertook a review of the Stipulation and Cost Recovery and  
12 Incentive Mechanism. On May 7, 2015, after receiving comments from the  
13 Company and the Public Staff, the Commission approved a revised Cost  
14 Recovery and Incentive Mechanism that governed cost recovery in the 2015  
15 and 2016 annual proceedings.<sup>19</sup> The 2015 Mechanism Order also required the  
16 Company and the Public Staff to file by March 1, 2017, as extended, an  
17 updated performance incentive proposal for Commission review and  
18 approval. On April 20, 2017, the Company and the Public Staff filed a Joint  
19 Proposal for New PPI, with a revised Mechanism attached as Appendix A  
20 (the “Mechanism”). The Commission issued an Order approving the revised  
21 Mechanism on May 22, 2017, which governs cost recovery for the instant

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<sup>18</sup> *Order Approving Agreement and Stipulation of Settlement, Approving DSM/EE Rider, and Requiring Compliance Filing*, Docket No. E-22, Sub 464 (Oct. 14, 2011).

<sup>19</sup> *Order Approving Revised Cost Recovery and Incentive Mechanism and Granting Waiver*, Docket No. E-22, Sub 464 (May 7, 2015) (“2015 Mechanism Order”).

1 Application.<sup>20</sup> The revised Mechanism amends the PPI to a “portfolio  
2 performance incentive” applicable to measures installed beginning with  
3 Vintage Year 2017. The Company has developed its Application and pre-  
4 filed testimony in accordance with the procedures set forth in the Mechanism.

5 **Q. Will the Company present other witnesses in this proceeding?**

6 A. Yes. Deanna R. Kesler, Regulatory Consultant, Demand-Side Planning, will  
7 provide certain information required by NCUC Rule R8-69(f)(1)(ii)(a), (b),  
8 (d), and (e), as well as the Utility Cost Test (“UCT”), and supporting  
9 documentation for the PPI Test Period and projected Vintage Year  
10 calculations made pursuant to the Mechanism. Company Witness Kesler will  
11 also present the Company’s evaluation, measurement and verification  
12 (“EM&V”) cost projections, and lost energy sales from EE Programs during  
13 the EMF Test Period. Jarvis E. Bates, Energy Conservation Compliance  
14 Manager, will support the projected calendar year 2019 costs associated with  
15 the Company’s DSM/EE Programs to be recovered during the Rate Period,  
16 actual costs associated with the Company’s DSM/EE Programs during the  
17 Test Period, as well as provide information on the Company’s event  
18 sponsorship and consumer education initiatives during the Test Period and  
19 customer opt-outs pursuant to Commission Rule R8-69(d)(2). Alan J. Moore,  
20 Regulatory Analyst III, will present the revenue requirements associated with  
21 the DSM/EE Programs for the Rate Period as well as the EMF revenue

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<sup>20</sup> *Order Approving Revised Cost Recovery and Incentive Mechanism*, Docket No. E-22, Sub 464 (May 22, 2017).

1 requirements associated with the DSM/EE Programs to be recovered during  
2 the Test Period. J. Clayton Crouch, Regulatory Performance Consultant, will  
3 explain the proposed assignment and allocation of costs to the North Carolina  
4 jurisdiction for the DSM/EE Programs. Debra A. Stephens, Regulatory  
5 Advisor, will present the calculation of the proposed updated Rider C and  
6 EMF Rider CE.

7 **Q. Are the Company's North Carolina DSM/EE Programs consistent with**  
8 **the Company's system-wide integrated resource plan ("Plan")?**

9 A. Yes. The Company has developed its Plan using a least cost modeling  
10 methodology of reliable supply-side and demand-side options, pursuant to  
11 North Carolina statutory and Commission policies. The Company's  
12 operational DSM/EE Programs were included in the Company's 2018 Plan, as  
13 filed on May 1, 2018, in Docket No. E-100, Sub 157.

14 **Q. Please discuss the utility incentive the Company proposes for inclusion in**  
15 **the DSM/EE Rider.**

16 A. The Company requests to recover a Rate Period PPI representing, as  
17 introduced above, a projected portfolio performance incentive as approved in  
18 the revised Mechanism. The Company also requests recovery of the Test  
19 Period PPI for Vintage Year 2017 and prior years. The Vintage Year 2017  
20 PPI has been calculated under the new portfolio performance incentive  
21 approach, while the PPI for prior Vintage Years has been derived based upon  
22 the traditional individualized program-based approach, and is being calculated  
23 consistent with the 2015 Mechanism Order and the methodology approved by

1 the Commission in the Company's previous annual cost recovery proceedings.  
2 Company Witness Bates supports calculation of a streamlined projected PPI,  
3 as allowed in Paragraph 56 of the Mechanism, as well as the true up of the PPI  
4 based upon actual installed measurement units during Vintage Year 2017, as  
5 required by Paragraph 60 of the Mechanism.

6 **Q. Has the Company projected Rate Period net lost revenues in the utility**  
7 **incentives to be recovered during the Rate Period?**

8 A. Not at this time in this proceeding. Consistent with the approach taken in the  
9 Company's 2014, 2015, 2016, and 2017 cost recovery applications, the  
10 Company has not projected lost revenues and proposes to include \$0 as the  
11 projected Rate Period net lost revenue utility incentive for this proceeding.

12 The current Rider CE will true up the Company's recovery of net lost  
13 revenues during the Test Period, as supported by Company Witness Moore's  
14 testimony.<sup>21</sup>

15 **Q. Has the Company identified any found revenues to offset its request to**  
16 **recover net lost revenues?**

17 A. No. Consistent with Paragraph 47 of the Mechanism, the Company has  
18 evaluated its North Carolina activities for potential found revenues using the  
19 decision tree set forth in Attachment A of the Mechanism. Specifically, the  
20 Company's EC, Rates, and Customer Solutions departments (which

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<sup>21</sup> Should the Company's projection of net lost revenues again become significant, it could choose to request projected cost recovery in a future proceeding, as provided for in the Mechanism.

1 collectively oversee Dominion Energy North Carolina's tariffs, Programs, and  
2 utility-funded activities) evaluated the Company's North Carolina activities  
3 during the Test Period to determine whether its activities may be causing  
4 customers to increase demand or energy consumption, resulting in found  
5 revenues. The Company's review of its North Carolina activities under the  
6 decision tree has not identified any activities that resulted in found revenues  
7 during the Test Period and has not identified any activities that would result in  
8 projected found revenues during the Rate Period.

9 **III. OVERVIEW OF COST RECOVERY REQUEST**

10 **Q. Please summarize the components of updated Rider C and Rider CE and**  
11 **resulting revenue requirements proposed to be recovered in this**  
12 **proceeding.**

13 A. In accordance with Rule R8-69 and the Mechanism, updated Rider C will  
14 recover the Company's North Carolina allocated share (including 100%  
15 assigned cost of the North Carolina-only Programs) of the following  
16 components during the Rate Period: (i) the Company's projected costs of  
17 implementing the approved DSM/EE Programs during the February 1, 2019 –  
18 January 31, 2020 Rate Period; (ii) the Company's projected Common Costs to  
19 be incurred during the Rate Period; and (iii) the Company's streamlined  
20 projected PPI. The Company's updated Rider C revenue requirement for the  
21 Rate Period is \$2,510,301, as further detailed in Schedule 1 of Company  
22 Witness Moore's testimony.



1 In accordance with Rule R8-69 and the Mechanism, the Company's EMF  
2 Rider CE will true up and recover any under-recovery or refund any over-  
3 recovery of the Company's North Carolina allocated share (including 100%  
4 assigned cost of the North Carolina-only Programs) of the following  
5 components: (i) the Company's Test Period costs of implementing the  
6 approved DSM/EE Programs; (ii) the Company's Test Period Common Costs;  
7 (iii) the Company's Test Period Net Lost Revenues; and (iv) the Company's  
8 Test Period PPI. The Company's Rider CE revenue requirement for the Rate  
9 Period is \$1,839,922 as further detailed in Schedule 2 of Company Witness  
10 Moore's testimony.

11 **Q. Does that conclude your prefiled direct testimony?**

12 A. Yes, it does.

**BACKGROUND AND QUALIFICATIONS  
OF  
MICHAEL T. HUBBARD**

Michael T. Hubbard is Manager – Energy Conservation for Dominion Energy North Carolina. Since 2008, his responsibilities have included oversight of the design and implementation of new Demand Side Management programs, including vendor retention and oversight. In 2010, he served on the Virginia Governor’s Operational Review Taskforce to reduce costs and improve efficiencies for state government and also served on the board of the Richmond Region Energy Alliance, working with stakeholders on key energy efficiency issues. He is a certified Six Sigma Green Belt.

Mr. Hubbard joined Dominion Virginia Power in 1996 and has served in a number of regulatory and customer service-related leadership roles in the Delivery and Service Company organizations.

While in the position of Underground Damage Prevention Manager, he was appointed to serve on the State Corporation Commission of Virginia’s Advisory Committee for matters concerning the enforcement of the Virginia Underground Utility Line Damage Prevention Act, and also served on the board of directors that formed a new statewide Miss Utility call center.

Mr. Hubbard has a B.S. in History from Hampden-Sydney College and M.S.L.S. (Masters in Library Sciences) from the University of Kentucky, and is a member of the Phi Beta Kappa National Honor Society.

Mr. Hubbard has previously presented testimony before the North Carolina Utilities Commission and the State Corporation Commission of Virginia.

**DIRECT TESTIMONY  
OF  
DEANNA R. KESLER  
ON BEHALF OF  
DOMINION ENERGY NORTH CAROLINA  
BEFORE THE  
NORTH CAROLINA UTILITIES COMMISSION  
DOCKET NO. E-22, SUB 556**

1 **Q. Please state your name, business address, and position with Virginia**  
2 **Electric and Power Company (“Dominion Energy North Carolina” or the**  
3 **“Company”).**

4 A. My name is Deanna R. Kesler and I am a Regulatory Consultant in Demand-  
5 Side Planning, which is part of the Company’s Integrated Resource Planning  
6 organization. My business address is 120 Tredegar Street, Richmond,  
7 Virginia 23219. A statement of my background and qualifications is attached  
8 as Appendix A.

9 **Q. Please describe your area of responsibility with the Company.**

10 A. I am responsible for the evaluation of Dominion Energy North Carolina’s  
11 demand-side management (“DSM”) and energy efficiency (“EE”) programs  
12 (“DSM/EE Programs” or “Programs”). This includes detailed analyses of  
13 approved and proposed DSM/EE Programs and the incorporation of DSM and  
14 EE measures into the Company’s integrated resource planning (“IRP”)  
15 process and long-term integrated resource plan (the “Plan”). My  
16 responsibilities also include planning, organizing, and coordinating  
17 evaluation, measurement, and verification (“EM&V”) work for all DSM/EE  
18 Programs through an independent third-party EM&V contractor, DNV GL.

1 This responsibility includes ensuring EM&V data is collected and made  
2 available to DNV GL for review and analysis, reviewing EM&V processes  
3 and reports, and coordinating all pertinent EM&V activities.

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

5 A. My testimony supports Dominion Energy North Carolina's request to recover  
6 all reasonable and prudent costs incurred in adopting and implementing the  
7 Company's portfolio of DSM/EE Programs as well as utility incentives,  
8 through its updated Rider C, as well as the Company's experience  
9 modification factor ("EMF") rider, Rider CE ("Application"). The purpose of  
10 my testimony is to support the true up of lost revenues and the Company's  
11 EM&V cost projections, as well as to provide certain information required by  
12 North Carolina Utilities Commission ("NCUC" or "Commission") Rule  
13 R8-69(f)(1)(ii)(a), (b), (d), and (e), with respect to the Company's DSM/EE  
14 Programs. Regarding EM&V, my testimony will: (i) show the energy  
15 savings for the previously-approved EE Programs over the EMF period  
16 January 1, 2017, through December 31, 2017 ("Test Period"), for purposes of  
17 calculating the Company's EMF; (ii) support the Company's EM&V costs  
18 over the January 1, 2019, through December 31, 2019, calendar year  
19 ("Calendar Year 2019") for the North Carolina jurisdiction, as well as the Test  
20 Period; and (iii) provide information on Air Conditioner Cycling Program  
21 activation events that occurred during the Test Period as required by Rule  
22 R8-69(f)(1)(iii)(g). My testimony will also provide the Utility Cost Test  
23 ("UCT") and supporting documentation for the Portfolio Performance

1 Incentive (“PPI”) calculations for the Test Period and the upcoming Calendar  
2 Year 2019.

3 My testimony has been developed in accordance with the revised Cost  
4 Recovery and Incentive Mechanism (“Mechanism”) approved by the  
5 Commission on May 22, 2017, in Docket No. E-22, Sub 464.

6 **Q. Ms. Kesler, are you sponsoring any exhibits or schedules in connection**  
7 **with your testimony?**

8 A. Yes. Company Exhibit DRK-1, consisting of Schedules 1-7 (Schedule 5  
9 provided in public and confidential versions filed under seal), was prepared  
10 under my supervision and is accurate and complete to the best of my  
11 knowledge and belief. The Schedules I am sponsoring provide the following  
12 information in support of the Company’s Application:

- 13 1. Schedule 1 of my pre-filed direct testimony provides the Company’s  
14 total revenue requirement, avoided costs, and Calendar Year 2019  
15 summer and winter peak and energy savings per unit measure for the  
16 Company’s DSM/EE Programs, as required by Rule R8-69(f)(1)(ii)(a),  
17 (b), (d), and (e) and calculated consistent with the Mechanism.
- 18 2. Schedule 2 provides a UCT calculation for each Program and the  
19 portfolio of Programs for the projected Vintage Year 2019, as defined  
20 in Paragraph 14 of the Mechanism.
- 21 3. Schedule 3 provides a comparison of the forecasted energy and  
22 summer and winter capacity reductions for the Company’s ongoing

- 1 Phase I Air Conditioner Cycling Program and Phase III, IV, V, and VI  
2 DSM/EE Programs, as required by Rule R8-69(f)(1)(iii)(h).
- 3 4. Schedule 4 provides the cost-effectiveness test evaluations required by  
4 Paragraph 41 of the Mechanism.
- 5 5. Schedule 5 provides the Company's actually-incurred EM&V costs  
6 during the Test Period, as well as projected EM&V costs during the  
7 Calendar Year 2019.
- 8 6. Schedule 6 supports the calculation of estimated energy savings for all  
9 DSM/EE Phase I, II, III, IV, and V programs, and the Residential  
10 Retail LED Lighting Program, over the Test Period for the EMF Rider,  
11 which is based on actual EM&V data collected and analyzed by DNV  
12 GL.
- 13 7. Schedule 7 presents the date, weather conditions, event trigger, and  
14 customer enrollment and activation data for the Air Conditioner  
15 Cycling Program during the Test Period.

16 **Q. Please explain the information you have provided in your Schedule 1.**

17 A. My Schedule 1 first presents the system-level revenue requirement per  
18 appropriate capacity, energy, and measure unit metric, for each ongoing Phase  
19 I,<sup>1</sup> Phase III,<sup>2</sup> Phase IV,<sup>3</sup> Phase V,<sup>4</sup> and Phase VI<sup>5</sup> DSM/EE Program. This

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<sup>1</sup> The Company's ongoing Phase I DSM/EE Program is the Residential Air Conditioner Cycling Program (Docket No. E-22, Sub 465).

<sup>2</sup> The Company's ongoing Phase III programs are the Non-residential Heating and Cooling Efficiency Program (Docket No. E-22, Sub 507) and the Non-Residential Lighting Systems and Controls Program (Docket No. E-22, Sub 508). On August 16, 2018, the Company filed a motion in Docket No. E-22, Sub 509 to close the Non-residential Window Film Program, and filed applications in Docket No.

1 table was developed using the revenue requirement amounts requested for  
2 recovery during the upcoming Rate Period, as provided in Company Witness  
3 Alan J. Moore's Schedule 1. Next, my Schedule 1 provides the system-level  
4 avoided costs per appropriate capacity, energy, and measure unit metric, for  
5 each of the approved going-forward Phase I, Phase III, Phase IV, Phase V,  
6 and Phase VI Programs. The proposed jurisdictional allocation factors, as  
7 required by Rule R8-69(f)(1)(ii)(b), are provided in Company Witness  
8 J. Clayton Crouch's Schedule 4. Finally, my Schedule 1 shows the total  
9 expected system-level energy and summer and winter capacity reductions for  
10 each Program in the aggregate and per appropriate capacity, energy, and  
11 measure unit metric for Calendar Year 2019. The per unit cost for the Air  
12 Conditioning Cycling Program is based on summer demand reductions  
13 because the Company is a summer peaking utility.

14 **Q. By the terms of the Mechanism, how was the UCT developed in support**  
15 **of the Calendar Year 2019 PPI calculation?**

16 A. The UCT used to support the calculation of the Calendar Year 2019 PPI for  
17 each Vintage Year was developed in accordance with Paragraphs 13-14 of the  
18 Mechanism. The Strategist model, a computer modeling and resource  
19 optimization tool, was used to calculate a projected UCT based on the 2019

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E-22, Subs 507 and 508 for Commission approval to transition the Non-residential Heating and Cooling Efficiency Program and the Non-residential Lighting Systems and Controls Program to be offered on a North Carolina-only basis.

<sup>3</sup> The Company's Phase IV Program is the Income and Age Qualifying Home Improvement Program (Docket No. E-22, Sub 523).

<sup>4</sup> The Company's Phase V program is the Small Business Improvement Program (Docket No. E-22, Sub 538).

<sup>5</sup> The Company's Phase VI program is the Non-residential Prescriptive Program (Docket No. E-22, Sub 543).

1 Vintage Year (as defined in Paragraph 14 of the Mechanism), using the base  
2 case assumptions consistent with the Company's most recent 2018 Integrated  
3 Resource Plan, as filed with the Commission on May 1, 2018, in Docket No.  
4 E-100, Sub 157 ("2018 Plan"). Because the Company's system for modeling  
5 projected costs and benefits is based on the calendar year, in this proceeding  
6 the Company is applying the projected costs for Calendar Year 2019 to the  
7 proposed February 1, 2019 – January 31, 2020 Rate Period, which is  
8 discussed in the direct testimony of Company Witnesses Michael T. Hubbard  
9 and Moore.

10 **Q. Please explain the role of the Total Resource Cost ("TRC") Test in**  
11 **calculating PPI under the Mechanism.**

12 A. The Commission approved amendments to the Mechanism on May 22, 2017,<sup>6</sup>  
13 which transitioned the PPI to a portfolio-based incentive calculation beginning  
14 with Vintage Year 2017. The TRC is one of the four cost/benefit tests  
15 required by the Mechanism to be applied in evaluating DSM/EE Programs,  
16 and is used in calculating the PPI under the portfolio-based approach  
17 applicable to the Test Period and Calendar Year 2019. Strategist values are  
18 calculated based on Calendar Year. Pursuant to Paragraph 51 of the pre-  
19 existing Mechanism, each individual DSM/EE program is required to have a  
20 Vintage Year TRC above 1.00 or that program is presumed ineligible for a  
21 PPI. Each of the Company's Program's Vintage Year TRC test results  
22 recoverable during the Test Period had a TRC value above 1.00 except for the

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<sup>6</sup> *Order Approving Revised Cost Recovery and Incentive Mechanism*, Docket No. E-22, Sub 464 (May 22, 2017).



1 Residential Income and Age Qualifying Home Improvement Program, which  
2 is a program that is in the public interest. The Company is not seeking a PPI  
3 for this Program.

4 **Q. Please explain the role of the UCT Test in calculating PPI under the**  
5 **Mechanism for Vintage Year 2019 for recovery during the Rate Period.**

6 A. In accordance with Paragraph 53 of the Mechanism, the PPI shall be based on  
7 the net dollar savings of the Company's DSM/EE portfolio, as calculated  
8 using the UCT. Pursuant to Paragraph 52 of the Mechanism, Low-Income  
9 Programs or other programs explicitly approved with expected UCT results  
10 less than 1.00 shall not be included in the portfolio for purposes of the PPI  
11 calculation. However, for purposes of PPI determination, Low Income  
12 Programs shall be included, as appropriate, in dispatch calculations to  
13 determine avoided kW and kWh associated with Programs eligible for a PPI.

14 My Schedule 2 presents the 2019 Vintage Year UCT and TRC cost/benefit  
15 portfolio scores, as well as the individual program scores pursuant to  
16 Paragraphs 52-53 of the Mechanism.

17 **Q. Please explain the information you have provided in your Schedule 3.**

18 A. My Schedule 3 presents forecasted energy and summer and winter capacity  
19 reductions at the generator for the Company's ongoing Phase I, Phase III,  
20 Phase IV, Phase V, and Phase VI DSM/EE Programs during the Calendar  
21 Year 2019. Specifically, Schedule 3 provides a comparison of the Phase I,  
22 Phase III, Phase IV, Phase V, and Phase VI Programs forecasted in the

1 Company's 2017 Plan Update and 2018 Plan. Generally, differences in the  
2 forecasted energy and capacity reductions can be explained by differences in  
3 program modeling assumptions, such as penetrations and load shapes. These  
4 differences arise in part from data collected through the EM&V process,  
5 changes to implementation schedules, and jurisdictional requirements.

6 **Q. Did the Company perform going-forward cost/benefit results for existing**  
7 **Programs as required by Paragraph 41 of the Mechanism?**

8 A. Yes. Going-forward cost/benefit results were performed for the Phase I AC  
9 Cycling Program, Phase III North Carolina-only, Phase IV, and Phase V  
10 Programs, and are included in my Schedule 4.

11 In accordance with Paragraph 41, the Company has not developed going-  
12 forward cost/benefit analyses for the Company's Phase VI Non-Residential  
13 Prescriptive Program, which has not been implemented for at least 12 months.

14 **Q. What are the Company's objectives for EM&V?**

15 A. The objectives of the Company's EM&V are to provide an assessment of each  
16 Program's progress toward its goals, including tracking actual cumulative  
17 indicators over time versus the planning assumptions, such as the number of  
18 participants, estimated energy (kWh) and demand (kW) savings, and Program  
19 costs. EM&V tracking also provides average peak kW reduction per  
20 participant, average kWh savings per participant, if appropriate, and average  
21 incentive per participant for each Program.

1 **Q. Have you provided the Company's estimated EM&V cost for Calendar**  
2 **Year 2019 and actual EM&V costs during the Test Period?**

3 A. Yes. My Schedule 5 provides the Company's projected EM&V costs during  
4 Calendar Year 2019, as well as the Company's actual EM&V costs during the  
5 Test Period for the North Carolina jurisdiction. The Company intends to  
6 continue to file its annual EM&V Report with the Commission on May 1 each  
7 year.

8 **Q. Can you please describe the information provided in your Schedule 6?**

9 A. Yes. My Schedule 6 supports the calculation of estimated energy savings for  
10 all DSM/EE Phases I, II, III, IV, and V Programs, and the Residential Retail  
11 LED Lighting Program, over the Test Period for the EMF Rider, which is  
12 based on actual EM&V data collected and analyzed by DNV GL. The lost  
13 sales (kWh) reflected in this schedule will be used by Company Witness  
14 Moore in the calculation of lost revenues in this proceeding.

15 **Q. Have you provided information on the Air Conditioner Cycling Program**  
16 **activation events that occurred during the Test Period, as required by**  
17 **Rule R8-69(f)(1)(iii)(g)?**

18 A. Yes. My Schedule 7 reflects event-based data for the Air Conditioner Cycling  
19 Program during the Test Period, including the date, weather conditions, event  
20 trigger, and customer enrollment and switch activation data.

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

22 A. Yes, it does.

**BACKGROUND AND QUALIFICATIONS  
OF  
DEANNA R. KESLER**

Ms. Kesler has held various positions with Dominion Virginia Power in the Power Operations Management Services, Generation and System Planning, Production Costing, Energy Efficiency, and Integrated Resource Planning areas. She originally joined Dominion Virginia Power in 1984 and returned in 2008. She has also had a variety of leadership roles prior to rejoining the Company both as a consultant and as an internal employee for several major corporations.

Ms. Kesler has a Masters in Business Administration from Virginia Commonwealth University. She also studied Business Administration at Virginia Commonwealth University and Chemical Engineering and Finance at Virginia Polytechnic Institute and State University.

**Revenue Requirement per Appropriate Unit<sup>1 2</sup>**  
**Rule R8-69(f)(1)(ii)(a)**

Program	Total Revenue Requirement (000s)	kW Reductions	MWh Reductions	DSM Cost per kW	EE Cost per MWh
Air Conditioner Cycling Program	10,141	63,793	N/A	\$ 159	N/A
Non-Residential Heating & Cooling Efficiency Program	132	41	169	N/A	\$ 785
Non-Residential Lighting Systems & Controls Program	276	219	1,214	N/A	\$ 227
Residential Income and Age Qualifying Home Improvement Program	4,180	746	7,698	N/A	\$ 543
Non-Residential Small Business Improvement Program	7,969	6,236	34,043	N/A	\$ 234
Non-Residential Prescriptive Program	6,540	12,455	81,270	N/A	\$ 80

*Note: 1) Exclusive of net lost revenues*

*Note: 2) Based on Individual Program Evaluation*

**Avoided Costs per Appropriate Unit**  
**Rule R8-69(f)(1)(ii)(b)**

Program	Total Avoided Costs (000s)	Capacity Reductions kW	Energy Reductions (MWh)	DSM Avoided Cost per kW	EE Avoided Cost per MWh
Air Conditioner Cycling Program	\$ 5,348	63,793	N/A	\$ 84	\$ -
Non-Residential Heating & Cooling Efficiency Program	\$ 10	41	169	\$ 251	\$ 61
Non-Residential Lighting Systems & Controls Program	\$ 63	219	1,214	\$ 286	\$ 52
Residential Income and Age Qualifying Home Improvement	\$ 340	746	7,698	\$ 456	\$ 44
Non-Residential Small Business Improvement Program	\$ 1,816	6,236	34,043	\$ 291	\$ 53
Non-Residential Prescriptive Program	\$ 3,953	12,455	81,270	\$ 317	\$ 49

*Note: Based on Individual Program Evaluation*

**2018 Summer/Winter Peak & Energy Savings (System-Level at the Meter)**  
**Rule R8-69(f)(1)(ii)(d)(e)**

Program	Summer MW Reductions (2019)	Winter MW Reductions (2019)	GWh Reductions (2019)
Air Conditioner Cycling Program	63.79	0.00	0.00
Non-Residential Heating & Cooling Efficiency Program (NC Only)	0.04	0.00	0.17
Non-Residential Lighting Systems & Controls Program (NC Only)	0.22	0.00	1.21
Residential Income and Age Qualifying Home Improvement Program	0.75	3.40	7.70
Non-Residential Small Business Improvement Program	6.24	13.25	34.04
Non-Residential Prescriptive Program	12.46	25.93	81.27

*Note: Based on Individual Program Evaluation*

**North Carolina-only Non-Residential Heating and Cooling Efficiency Program UCT**  
**Program Life 15.00**

Year	2018 Pen. Benefits	2018 Pen. Costs	Annual Net Benefits (000s)	2018 Vintage Year C/B Scores	
	Total Benefits (000s)	Total Costs (000s)		UCT Ratio	TRC Ratio
<b>NPV</b>	<b>\$ 203</b>	<b>\$ 90</b>	<b>\$113.33</b>	2.26	2.43
2018	\$ -	\$ -	\$ -		
2019	\$ 10	\$ 95	-\$85		
2020	\$ 18	\$ -	\$ 18		
2021	\$ 18	\$ -	\$ 18		
2022	\$ 18	\$ -	\$ 18		
2023	\$ 19	\$ -	\$ 19		
2024	\$ 20	\$ -	\$ 20		
2025	\$ 20	\$ -	\$ 20		
2026	\$ 22	\$ -	\$ 22		
2027	\$ 24	\$ -	\$ 24		
2028	\$ 24	\$ -	\$ 24		
2029	\$ 25	\$ -	\$ 25		
2030	\$ 25	\$ -	\$ 25		
2031	\$ 27	\$ -	\$ 27		
2032	\$ 28	\$ -	\$ 28		
2033	\$ 29	\$ -	\$ 29		
2034	\$ 15	\$ -	\$ 15		

*Note: Based on Individual Program Evaluation*

**North Carolina-only Non-Residential Lighting Systems and Controls Program UCT**  
**Program Life 10.00**

Year	2018 Pen. Benefits	2018 Pen. Costs	Annual Net Benefits (000s)	2018 Vintage Year C/B Scores	
	Total Benefits (000s)	Total Costs (000s)		UCT Ratio	TRC Ratio
<b>NPV</b>	<b>\$ 835</b>	<b>\$ 203</b>	<b>\$632.02</b>	4.11	3.19
2018	\$ -	\$ -	\$ -		
2019	\$ 62	\$ 216	-\$154		
2020	\$ 108	\$ -	\$ 108		
2021	\$ 105	\$ -	\$ 105		
2022	\$ 109	\$ -	\$ 109		
2023	\$ 114	\$ -	\$ 114		
2024	\$ 116	\$ -	\$ 116		
2025	\$ 120	\$ -	\$ 120		
2026	\$ 128	\$ -	\$ 128		
2027	\$ 135	\$ -	\$ 135		
2028	\$ 139	\$ -	\$ 139		
2029	\$ 66	\$ -	\$ 66		

*Note: Based on Individual Program Evaluation*



**AC Cycling Program UCT**  
Program Life 15.00

Year	2018 Pen. Benefits	2018 Pen. Costs	Annual Net Benefits (000s)	2018 Vintage Year C/B Scores	
	Total Benefits (000s)	Total Costs (000s)		UCT Ratio	TRC Ratio
<b>NPV</b>	<b>\$ 3,649</b>	<b>\$ 6,150</b>	<b>-\$2,501.13</b>	0.59	0.94
2018	\$ -	\$ -	\$ -		
2019	\$ 198	\$ 4,349	-\$4,152		
2020	\$ 280	\$ 240	\$ 40		
2021	\$ 281	\$ 240	\$ 41		
2022	\$ 307	\$ 240	\$ 67		
2023	\$ 327	\$ 240	\$ 87		
2024	\$ 348	\$ 240	\$ 108		
2025	\$ 372	\$ 240	\$ 132		
2026	\$ 393	\$ 240	\$ 153		
2027	\$ 424	\$ 240	\$ 184		
2028	\$ 450	\$ 240	\$ 210		
2029	\$ 482	\$ 240	\$ 242		
2030	\$ 513	\$ 240	\$ 273		
2031	\$ 537	\$ 240	\$ 297		
2032	\$ 552	\$ 240	\$ 312		
2033	\$ 566	\$ 240	\$ 326		
2034	\$ 242	\$ -	\$ 242		

*Note: Based on Individual Program Evaluation*

**Income and Age Qualifying Home Improvement**  
**Program Life 15.00**

Year	2018 Pen. Benefits	2018 Pen. Costs	Annual Net Benefits (000s)	2018 Pen. Benefits	
	Total Benefits (000s)	Total Costs (000s)		UCT Ratio	TRC Ratio
<b>NPV</b>	<b>\$ 758</b>	<b>\$ 3,932</b>	<b>-\$3,174.65</b>	0.19	0.19
2018	\$ -	\$ -	\$ -		
2019	\$ 38	\$ 4,180	-\$4,142		
2020	\$ 71	\$ -	\$ 71		
2021	\$ 69	\$ -	\$ 69		
2022	\$ 71	\$ -	\$ 71		
2023	\$ 74	\$ -	\$ 74		
2024	\$ 75	\$ -	\$ 75		
2025	\$ 76	\$ -	\$ 76		
2026	\$ 82	\$ -	\$ 82		
2027	\$ 87	\$ -	\$ 87		
2028	\$ 88	\$ -	\$ 88		
2029	\$ 92	\$ -	\$ 92		
2030	\$ 95	\$ -	\$ 95		
2031	\$ 98	\$ -	\$ 98		
2032	\$ 102	\$ -	\$ 102		
2033	\$ 108	\$ -	\$ 108		
2034	\$ 51	\$ -	\$ 51		

*Note: Based on Individual Program Evaluation*

**Small Business Improvement Program**  
Program Life 14.00

Year	2018 Pen. Benefits	2018 Pen. Costs	Annual Net Benefits (000s)	2018 Vintage Year C/B Scores	
	Total Benefits (000s)	Total Costs (000s)		UCT Ratio	TRC Ratio
<b>NPV</b>	<b>\$ 7,020</b>	<b>\$ 7,301</b>	<b>-\$280.98</b>	0.96	0.73
2018	\$ -	\$ -	\$ -		
2019	\$ 390	\$ 7,762	-\$7,372		
2020	\$ 687	\$ -	\$ 687		
2021	\$ 661	\$ -	\$ 661		
2022	\$ 681	\$ -	\$ 681		
2023	\$ 711	\$ -	\$ 711		
2024	\$ 730	\$ -	\$ 730		
2025	\$ 758	\$ -	\$ 758		
2026	\$ 805	\$ -	\$ 805		
2027	\$ 845	\$ -	\$ 845		
2028	\$ 869	\$ -	\$ 869		
2029	\$ 916	\$ -	\$ 916		
2030	\$ 949	\$ -	\$ 949		
2031	\$ 981	\$ -	\$ 981		
2032	\$ 1,015	\$ -	\$ 1,015		
2033	\$ 478	\$ -	\$ 478		

*Note: Based on Individual Program Evaluation*

**Non-Residential Prescriptive Program**  
**Program Life 6.00**

Year	2018 Pen. Benefits	2018 Pen. Costs	Annual Net Benefits (000s)	2018 Vintage Year C/B Scores	
	Total Benefits (000s)	Total Costs (000s)		UCT Ratio	TRC Ratio
<b>NPV</b>	<b>\$ 11,784</b>	<b>\$ 5,960</b>	<b>\$5,824.51</b>	1.98	1.41
2018	\$ -	\$ -	\$ -		
2019	\$ 1,386	\$ 6,335	-\$4,950		
2020	\$ 2,432	\$ -	\$ 2,432		
2021	\$ 2,359	\$ -	\$ 2,359		
2022	\$ 2,432	\$ -	\$ 2,432		
2023	\$ 2,551	\$ -	\$ 2,551		
2024	\$ 2,601	\$ -	\$ 2,601		
2025	\$ 1,196	\$ -	\$ 1,196		

*Note: Based on Individual Program Evaluation*

**PORTFOLIO**  
Program Life 15.00

Year	2018 Pen. Benefits	2018 Pen. Costs	Annual Net Benefits (000s)	2018 Vintage Year C/B Scores	
	Total Benefits (000s)	Total Costs (000s)		UCT Ratio	TRC Ratio
<b>NPV</b>	<b>\$ 23,487</b>	<b>\$ 19,704</b>	<b>\$3,782.85</b>	1.19	1.06
2018	\$ -	\$ -	\$ -		
2019	\$ 2,046	\$ 18,758	-\$16,712		
2020	\$ 3,517	\$ 240	\$ 3,277		
2021	\$ 3,426	\$ 240	\$ 3,186		
2022	\$ 3,549	\$ 240	\$ 3,309		
2023	\$ 3,721	\$ 240	\$ 3,481		
2024	\$ 3,815	\$ 240	\$ 3,575		
2025	\$ 2,470	\$ 240	\$ 2,230		
2026	\$ 1,348	\$ 240	\$ 1,108		
2027	\$ 1,426	\$ 240	\$ 1,186		
2028	\$ 1,480	\$ 240	\$ 1,240		
2029	\$ 1,489	\$ 240	\$ 1,249		
2030	\$ 1,488	\$ 240	\$ 1,248		
2031	\$ 1,544	\$ 240	\$ 1,304		
2032	\$ 1,595	\$ 240	\$ 1,355		
2033	\$ 1,074	\$ 240	\$ 834		
2034	\$ 257	\$ -	\$ 257		

**2018 Integrated Resource Plan Forecasted Energy Savings (MWh) (System-Level at the Generator)**

Programs	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Air Conditioner Cycling Program	0	0	0	0	0	0	0	0	0	0
Non-Residential Lighting Systems & Controls Program	159,339	193,288	198,635	204,087	209,646	212,664	213,495	214,311	215,099	215,860
Non-Residential Heating and Cooling Efficiency Program	70,367	108,956	113,859	118,852	123,935	126,804	127,705	128,590	129,445	130,270
Income and Age Qualifying Home Improvement Program	6,155	7,677	9,430	11,182	12,935	13,834	13,923	14,010	14,092	14,171
Small Business Improvement Program	17,389	33,401	52,153	61,749	63,212	64,147	64,653	65,149	65,628	66,091
Non-Residential Prescriptive Program	29,124	81,731	134,339	186,946	213,532	216,827	218,822	220,780	222,671	224,498

**2017 Integrated Resource Plan Update Forecasted Energy Savings (MWh) (System-Level at the Generator)**

Programs	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Air Conditioner Cycling Program	0	0	0	0	0	0	0	0	0	0
Non-Residential Lighting Systems & Controls Program	166,114	194,205	198,620	203,123	206,192	208,025	209,853	211,634	213,352	215,019
Non-Residential Heating and Cooling Efficiency Program	131,454	156,422	159,586	162,808	165,248	166,992	168,731	170,426	172,061	173,647
Income and Age Qualifying Home Improvement Program	6,018	8,107	10,196	12,284	13,380	13,523	13,665	13,802	13,933	14,058
Small Business Improvement Program	28,980	45,033	63,832	73,452	74,546	75,368	76,188	76,986	77,755	78,502
Non-Residential Prescriptive Program	99,769	188,453	277,136	365,820	408,891	413,399	417,897	422,278	426,504	430,603

**Difference in Forecasted Energy Savings (MWh) (System-Level at the Generator)**

Programs	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Air Conditioner Cycling Program	-	-	-	-	-	-	-	-	-	0
Non-Residential Lighting Systems & Controls Program	(6,774)	(917)	14	964	3,454	4,639	3,642	2,676	1,747	841
Non-Residential Heating and Cooling Efficiency Program	(61,087)	(47,466)	(45,727)	(43,956)	(41,313)	(40,188)	(41,027)	(41,836)	(42,616)	(43,376)
Income and Age Qualifying Home Improvement Program	136	(430)	(766)	(1,102)	(445)	311	258	207	160	113
Small Business Improvement Program	(11,591)	(11,631)	(11,679)	(11,703)	(11,334)	(11,221)	(11,535)	(11,837)	(12,127)	(12,411)
Non-Residential Prescriptive Program	(70,646)	(106,722)	(142,797)	(178,873)	(195,359)	(196,572)	(199,075)	(201,498)	(203,833)	(206,105)

## Notes:

- Difference values are the 2018 Integrated Resource Plan Energy Savings less the 2017 Integrated Resource Plan Update Energy Savings.

**2018 Integrated Resource Plan Forecasted Coincident Capacity Savings (kW) (System-Level at the Generator)**

Programs	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Air Conditioner Cycling Program	91,285	91,285	91,285	91,285	91,285	91,285	91,285	91,285	91,285	91,285
Non-Residential Lighting Systems & Controls Program	25,640	30,603	31,450	32,313	33,192	33,639	33,770	33,899	34,023	34,144
Non-Residential Heating and Cooling Efficiency Program	27,747	40,863	42,700	44,570	46,474	47,470	47,807	48,138	48,457	48,766
Income and Age Qualifying Home Improvement Program	1,182	1,538	1,883	2,229	2,574	2,728	2,746	2,763	2,779	2,795
Small Business Improvement Program	3,772	8,368	13,747	16,364	16,783	17,043	17,188	17,329	17,466	17,598
Non-Residential Prescriptive Program	4,658	12,524	20,390	28,256	31,956	32,433	32,731	33,023	33,306	33,579

**2017 Integrated Resource Plan Update Forecasted Coincident Capacity Savings (kW) (System-Level at the Generator)**

Programs	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Air Conditioner Cycling Program	77,995	77,995	77,995	77,995	77,995	77,995	77,995	77,995	77,995	77,995
Non-Residential Lighting Systems & Controls Program	26,505	30,582	31,277	31,986	32,451	32,740	33,027	33,307	33,577	33,839
Non-Residential Heating and Cooling Efficiency Program	50,245	58,729	59,917	61,126	62,013	62,667	63,319	63,954	64,566	65,160
Income and Age Qualifying Home Improvement Program	1,177	1,575	1,973	2,372	2,553	2,581	2,608	2,634	2,659	2,682
Small Business Improvement Program	8,382	12,990	18,382	21,006	21,315	21,550	21,784	22,012	22,232	22,445
Non-Residential Prescriptive Program	14,784	27,456	40,128	52,799	58,452	59,097	59,739	60,364	60,967	61,552

**Forecasted Coincident Capacity Savings Difference (kW) (System-Level at the Generator)**

Programs	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Air Conditioner Cycling Program	13,290	13,290	13,290	13,290	13,290	13,290	13,290	13,290	13,290	13,290
Non-Residential Lighting Systems & Controls Program	(865)	21	172	326	741	899	743	592	447	305
Non-Residential Heating and Cooling Efficiency Program	(22,498)	(17,866)	(17,217)	(16,557)	(15,539)	(15,197)	(15,512)	(15,816)	(16,109)	(16,394)
Income and Age Qualifying Home Improvement Program	6	(38)	(90)	(143)	21	148	138	129	121	112
Small Business Improvement Program	(4,610)	(4,622)	(4,636)	(4,642)	(4,532)	(4,507)	(4,596)	(4,683)	(4,765)	(4,847)
Non-Residential Prescriptive Program	(10,126)	(14,932)	(19,737)	(24,543)	(26,496)	(26,664)	(27,008)	(27,341)	(27,661)	(27,974)

## Notes:

- Difference values are the 2018 Integrated Resource Plan Capacity Savings less the 2017 Integrated Resource Plan Update Capacity Savings

<b>Air Conditioner Cycling Program</b>				
	<b>Participant</b>	<b>Utility</b>	<b>TRC</b>	<b>RIM</b>
Total NPV Benefits	\$ 46,885	\$ 90,725	\$ 90,725	\$ 90,725
Total NPV Costs	\$ -	\$ 151,200	\$ 100,208	\$ 151,200
Net Benefits NPV	\$ 46,885	\$ (60,475)	\$ (9,483)	\$ (60,475)
Benefit/Cost Ratio	N/A	0.60	0.91	0.60
<b>Income and Age Qualifying Home Improvement Program</b>				
	<b>Participant</b>	<b>Utility</b>	<b>TRC</b>	<b>RIM</b>
Total NPV Benefits	\$ 22,616	\$ 10,116	\$ 10,116	\$ 10,116
Total NPV Costs	\$ -	\$ 46,261	\$ 46,261	\$ 71,402
Net Benefits NPV	\$ 22,616	\$ (36,145)	\$ (36,145)	\$ (61,286)
Benefit/Cost Ratio	N/A	0.22	0.22	0.14
<b>Small Business Improvement Program</b>				
	<b>Participant</b>	<b>Utility</b>	<b>TRC</b>	<b>RIM</b>
Total NPV Benefits	\$ 94,867	\$ 48,767	\$ 48,767	\$ 48,767
Total NPV Costs	\$ 46,247	\$ 46,475	\$ 55,527	\$ 113,026
Net Benefits NPV	\$ 48,619	\$ 2,292	\$ (6,760)	\$ (64,259)
Benefit/Cost Ratio	2.05	1.05	0.88	0.43
<b>Non-Residential Lighting Systems &amp; Controls Program (NC only)</b>				
	<b>Participant</b>	<b>Utility</b>	<b>TRC</b>	<b>RIM</b>
Total NPV Benefits	\$ 1,740	\$ 1,084	\$ 1,084	\$ 1,084
Total NPV Costs	\$ 239	\$ 269	\$ 345	\$ 1,936
Net Benefits NPV	\$ 1,501	\$ 815	\$ 739	\$ (852)
Benefit/Cost Ratio	7.29	4.03	3.14	0.56
<b>Non-Residential Heating and Cooling Efficiency Program (NC only)</b>				
	<b>Participant</b>	<b>Utility</b>	<b>TRC</b>	<b>RIM</b>
Total NPV Benefits	\$ 363	\$ 255	\$ 255	\$ 255
Total NPV Costs	\$ 50	\$ 120	\$ 113	\$ 449
Net Benefits NPV	\$ 313	\$ 135	\$ 142	\$ (195)
Benefit/Cost Ratio	7.22	2.12	2.26	0.57

*Note: Based on Individual Program Evaluation*



	Portfolio			
	Participant	Utility	TRC	RIM
Total NPV Benefits	\$ 412,906	\$ 325,454	\$ 325,454	\$ 325,454
Total NPV Costs	\$ 128,735	\$ 283,453	\$ 264,511	\$ 591,526
Net Benefits NPV	\$ 284,171	\$ 42,001	\$ 60,942	\$ (266,072)
Benefit/Cost Ratio	3.21	1.15	1.23	0.55

**Schedule 5**

DSM Program	Actual NC EM&V Costs During Rate Period (12 Months Ended Dec 2017)
Residential Air Conditioner Cycling	
Residential Heat Pump Tune-Up	
Residential Heat Pump Upgrade	
Residential Duct Sealing	
Residential Home Energy Check-Up	
Non-Residential Duct Testing & Sealing	
Non-Residential Energy Audit	
Non Residential Heating & Cooling Efficiency	
Non Residential Lighting Systems & Controls	
Non Residential Solar Window Film	
Residential Income & Age Qualifying Home Improvement	
Residential Small Business Improvement Program	
Residential Retail LED Lighting Program (NC only)	

DSM Program	Projected NC EM&V Costs During 2019
Residential Air Conditioner Cycling	
Non Residential Heating & Cooling Efficiency (NC only)	
Non Residential Lighting Systems & Controls (NC only)	
Non Residential Solar Window Film	
Residential Income and Age Qualifying	
Non Residential Small Business Improvement	
Residential Retail LED Lighting Program (NC only)	
Non-Residential Prescriptive Program	

Company Exhibit DRK-1  
Schedule 6  
Page 1 of 4

NC GENERAL RATE CASE; DOCKET E-22, SUB 532

				2017												2017 Total	
Phase II EE Programs: Net Energy Savings (kWh) (Cumulative by Month)				1	2	3	4	5	6	7	8	9	10	11	12		
Rate Code	Rate Schedule	2017 Percentage		Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.		
<b>Residential Heat Pump Tune Up Program:</b>																	
163	Schedule 1	99.0%		10 185	10 713	11 055	11 055	11 055	11 055	11 055	11 055	11 055	11 055	11 055	11 055	11 055	131 446
164	Schedule 1P	0.0%		-	-	-	-	-	-	-	-	-	-	-	-	-	
165	Schedule 1T	0.0%		-	-	-	-	-	-	-	-	-	-	-	-	-	
166	Schedule 1DF	1.0%		108	108	108	108	108	108	108	108	108	108	108	108	1 296	
<b>Residential Heat Pump Tune Up Sub-Total:</b>				<b>10 293</b>	<b>10 821</b>	<b>11 163</b>	<b>11 163</b>	<b>11 163</b>	<b>11 163</b>	<b>11 163</b>	<b>11 163</b>	<b>11 163</b>	<b>11 163</b>	<b>11 163</b>	<b>11 163</b>	<b>11 163</b>	<b>132,742</b>
<b>Residential Heat Pump Upgrade Program:</b>																	
163	Schedule 1	99.7%		5 739	6 207	6 352	6 352	6 352	6 352	6 352	6 352	6 352	6 352	6 352	6 352	75 468	
164	Schedule 1P	0.3%		21	21	21	21	21	21	21	21	21	21	21	21	248	
166	Schedule 1DF	0.0%		-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Residential Heat Pump Upgrade Sub-Total:</b>				<b>5 760</b>	<b>6 227</b>	<b>6 373</b>	<b>6 373</b>	<b>6 373</b>	<b>6 373</b>	<b>6 373</b>	<b>6 373</b>	<b>6 373</b>	<b>6 373</b>	<b>6 373</b>	<b>6 373</b>	<b>6 373</b>	<b>75,716</b>
<b>Residential Home Energy Check Up Program:</b>																	
163	Schedule 1	93.6%		598	2 944	3 435	3 435	3 435	3 435	3 435	3 435	3 435	3 435	3 435	3 435	37 892	
164	Schedule 1P	3.8%		-	139	139	139	139	139	139	139	139	139	139	139	1 528	
165	Schedule 1T	0.0%		-	-	-	-	-	-	-	-	-	-	-	-	-	
166	Schedule 1DF	2.7%		-	98	98	98	98	98	98	98	98	98	98	98	1 080	
195	Schedule 26	0.0%		-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Residential Home Energy Check Up Sub-Total:</b>				<b>598</b>	<b>3 181</b>	<b>3 672</b>	<b>3 672</b>	<b>3 672</b>	<b>3 672</b>	<b>3 672</b>	<b>3 672</b>	<b>3 672</b>	<b>3 672</b>	<b>3 672</b>	<b>3 672</b>	<b>3 672</b>	<b>40,499</b>
<b>Residential Duct Sealing Program:</b>																	
163	Schedule 1	98.2%		683	759	774	774	774	774	774	774	774	774	774	774	9 180	
166	Schedule 1DF	1.8%		14	14	14	14	14	14	14	14	14	14	14	14	166	
<b>Residential Duct Sealing Sub-Total:</b>				<b>683</b>	<b>759</b>	<b>774</b>	<b>774</b>	<b>774</b>	<b>774</b>	<b>774</b>	<b>774</b>	<b>774</b>	<b>774</b>	<b>774</b>	<b>774</b>	<b>774</b>	<b>9,346</b>
<b>Non-Residential Duct Sealing and Testing Program:</b>																	
168	Schedule 5	50.5%		22 869	23 586	23 586	23 586	23 586	23 586	23 586	23 586	23 586	23 586	23 586	23 586	282 312	
170	Schedule 5P	6.0%		2 770	2 770	2 770	2 770	2 770	2 770	2 770	2 770	2 770	2 770	2 770	2 770	33 237	
176	Schedule 6P	0.0%		-	-	-	-	-	-	-	-	-	-	-	-	-	
182	Schedule 7	0.0%		-	-	-	-	-	-	-	-	-	-	-	-	-	
183	Schedule 10 (Variable Pricing)	20.7%		-	-	11 554	11 554	11 554	11 554	11 554	11 554	11 554	11 554	11 554	11 554	115 542	
184	Schedule 30	13.1%		6 090	6 090	6 090	6 090	6 090	6 090	6 090	6 090	6 090	6 090	6 090	6 090	73 078	
188	Schedule 42	9.7%		4 535	4 535	4 535	4 535	4 535	4 535	4 535	4 535	4 535	4 535	4 535	4 535	54 425	
<b>Non-Residential Duct Sealing and Testing Sub-Total:</b>				<b>36 264</b>	<b>36 981</b>	<b>48 535</b>	<b>48 535</b>	<b>48 535</b>	<b>48 535</b>	<b>48 535</b>	<b>48 535</b>	<b>48 535</b>	<b>48 535</b>	<b>48 535</b>	<b>48 535</b>	<b>48 535</b>	<b>558,594</b>
<b>Non-Residential Energy Audit Program:</b>																	
168	Schedule 5	9.3%		990	3 044	6 262	6 262	6 262	6 262	6 262	6 262	6 262	6 262	6 262	6 262	66 656	
170	Schedule 5P	57.6%		23 793	32 832	35 639	35 639	35 639	35 639	35 639	35 639	35 639	35 639	35 639	35 639	413 018	
176	Schedule 6P	9.5%		5 685	5 685	5 685	5 685	5 685	5 685	5 685	5 685	5 685	5 685	5 685	5 685	68 216	
183	Schedule 10 (Variable Pricing)	23.5%		8 801	14 485	14 485	14 485	14 485	14 485	14 485	14 485	14 485	14 485	14 485	14 485	168 132	
184	Schedule 30	0.0%		20	20	20	20	20	20	20	20	20	20	20	20	241	
188	Schedule 42	0.0%		17	17	17	17	17	17	17	17	17	17	17	17	198	
195	Schedule 26	0.0%		-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Non-Residential Energy Audit Sub-Total:</b>				<b>39 305</b>	<b>56 082</b>	<b>62 107</b>	<b>62 107</b>	<b>62 107</b>	<b>62 107</b>	<b>62 107</b>	<b>62 107</b>	<b>62 107</b>	<b>62 107</b>	<b>62 107</b>	<b>62 107</b>	<b>62 107</b>	<b>716,462</b>
<b>Total:</b>				<b>92,969</b>	<b>114,051</b>	<b>132,624</b>	<b>132,624</b>	<b>132,624</b>	<b>132,624</b>	<b>132,624</b>	<b>132,624</b>	<b>132,624</b>	<b>132,624</b>	<b>132,624</b>	<b>132,624</b>	<b>132,624</b>	<b>1,533,359</b>

NOTES:

- Net energy savings (kWh) are based on DNV GL's analysis of EM&V data from actual program participants.
- 2017 Total Energy savings (kWh) are inclusive of EE measures installed on or after June 1 2016 through December 31 2017 that are accumulated and realized between January 1 2017 through December 31 2017.

NC GENERAL RATE CASE; DOCKET E-22, SUB 532

			2017												2017 Total	
Phase III EE Programs: Net Energy Savings (kWh) (Cumulative by Month)			2017	1	2	3	4	5	6	7	8	9	10	11	12	
Rate Code	Rate Schedule	Percentage	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.		
<b>Non-Residential Heating and Cooling Efficiency:</b>																
168	Schedule 5	6.8%	72	72	72	72	72	72	72	72	569	569	569	569		2 850
170	Schedule 5P	0.4%	-	-	-	-	-	-	25	25	25	25	25	25		172
183	Schedule 10 (Variable Pricing)	0.0%	-	-	-	-	-	-	-	-	-	-	-	-		-
184	Schedule 30	10.7%	374	374	374	374	374	374	374	374	374	374	374	374		4 483
188	Schedule 42	82.2%	-	-	-	-	-	4 318	4 318	4 318	4 318	4 318	4 318	4 318		34 547
<b>Non-Residential Heating and Cooling Efficiency Sub-Total:</b>			<b>100.0%</b>	<b>445</b>	<b>445</b>	<b>445</b>	<b>445</b>	<b>4,764</b>	<b>4,788</b>	<b>4,788</b>	<b>4,788</b>	<b>5,285</b>	<b>5,285</b>	<b>5,285</b>	<b>5,285</b>	<b>42,051</b>
<b>Non-Residential Lighting Systems and Controls:</b>																
168	Schedule 5	34.2%	35 590	35 590	45 066	51 141	56 325	56 325	56 325	63 884	71 538	73 011	74 119	74 162		693 076
170	Schedule 5P	46.8%	54 471	57 343	57 343	62 133	86 777	86 777	86 777	86 777	92 705	92 705	92 705	92 705		949 216
176	Schedule 6P	2.4%	4 059	4 059	4 059	4 059	4 059	4 059	4 059	4 059	4 059	4 059	4 059	4 059		48 709
183	Schedule 10 (Variable Pricing)	7.1%	12 064	12 064	12 064	12 064	12 064	12 064	12 064	12 064	12 064	12 064	12 064	12 064		144 772
184	Schedule 30	3.3%	-	-	-	821	993	993	993	993	15 444	15 444	15 444	15 444		66 565
188	Schedule 42	6.2%	6 860	6 860	6 860	11 669	11 669	11 669	11 669	11 669	11 669	11 669	11 669	11 669		125 605
<b>Non-Residential Lighting Systems and Controls Sub-Total:</b>			<b>100.0%</b>	<b>113,044</b>	<b>115,917</b>	<b>125,393</b>	<b>141,887</b>	<b>171,887</b>	<b>171,887</b>	<b>171,887</b>	<b>179,447</b>	<b>207,479</b>	<b>208,952</b>	<b>210,060</b>	<b>210,103</b>	<b>2,027,944</b>
<b>Total:</b>				<b>113,490</b>	<b>116,362</b>	<b>125,839</b>	<b>142,333</b>	<b>176,651</b>	<b>176,676</b>	<b>176,676</b>	<b>184,235</b>	<b>212,764</b>	<b>214,238</b>	<b>215,345</b>	<b>215,388</b>	<b>2,069,995</b>

NOTES:

- Net energy savings (kWh) are based on Dominion's planning attribution assumptions applied to DNV GL's deemed energy savings estimates from actual program participants.
- 2017 Total Energy savings (kWh) are inclusive of EE measures installed on or after June 1 2016 through December 31 2017 that are accumulated and realized between January 1 2017 through December 31 2017.

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Phase IV EE Programs: Net Energy Savings (kWh) (Cumulative by Month)	Rate Code	Rate Schedule	2017 Percentage	2017												2017 Total	
				1 Jan.	2 Feb.	3 Mar.	4 Apr.	5 May	6 Jun.	7 Jul.	8 Aug.	9 Sep.	10 Oct.	11 Nov.	12 Dec.		
Residential Income and Age Qualifying Home Improvement:																	
	163	Schedule 1		2,738	696	735	475	288	180	121	365	354			291	1,077	
	163	Schedule 1	99.3%	9,740	10,436	11,171	11,646	11,934	12,113	12,235	12,600	12,954		12,954	13,245	14,322	145,350
	168	Schedule 5															
	168	Schedule 5	0.7%	89	89	89	89	89	89	89	89	89	89	89	89	89	1,073
Residential Income and Age Qualifying Home Improvement Sub-Total:				9,829	10,526	11,260	11,735	12,023	12,203	12,324	12,689	13,043	13,043	13,043	13,334	14,412	146,423
Total:			100.0%	9,829	10,526	11,260	11,735	12,023	12,203	12,324	12,689	13,043	13,043	13,043	13,334	14,412	146,423

## NOTES:

- Net energy savings (kWh) are based on Dominion's planning attribution assumptions applied to DNV GL's deemed energy savings estimates from actual program participants.
- 2017 Total Energy savings (kWh) are inclusive of EE measures installed on, or after, June 1, 2016 through December 31, 2017 that are accumulated and realized between January 1, 2017 through December 31, 2017.

NC GENERAL RATE CASE; DOCKET E-22, SUB 532				2017												2017 Total
Phase V EE Programs: Net Energy Savings (kWh) (Cumulative by Month)	Rate Code	Rate Schedule	2017 Percentage	1	2	3	4	5	6	7	8	9	10	11	12	2017 Total
				Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	
Non-Residential Small Business Improvement	168	Schedule 5							1,049	3,982						7,873
	168	Schedule 5	100.0%	-	-	-	-	-	1,049	5,031	5,031	5,031	5,031	5,031	5,031	12,904
<b>Non-Residential Small Business Improvement Sub-Total:</b>			<b>100.0%</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,049</b>	<b>5,031</b>	<b>5,031</b>	<b>5,031</b>	<b>5,031</b>	<b>5,031</b>	<b>5,031</b>	<b>12,904</b>
Residential Retail LED:																
											13,955	40,158	40,685	57,096	45,712	
			100.0%	-	-	-	-	-	-	-	13,955	54,112	94,797	151,893	197,605	512,362
<b>Residential Retail LED Sub-Total:</b>			<b>100.0%</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>13,955</b>	<b>54,112</b>	<b>94,797</b>	<b>151,893</b>	<b>197,605</b>	<b>512,362</b>
<b>Total:</b>				<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,049</b>	<b>5,031</b>	<b>18,986</b>	<b>59,143</b>	<b>99,828</b>	<b>156,924</b>	<b>210,509</b>	<b>551,471</b>

NOTES:

1. Net energy savings (kWh) are based on Dominion's planning attribution assumptions applied to DNV GL's deemed energy savings estimates from actual program participants.
2. 2017 Total Energy savings (kWh) are inclusive of EE measures installed on or after January 1 2017 through December 31 2017 that are accumulated and realized over the same period.

Date	Weather Conditions °F	Event Trigger	Control Mode	Number of Customers Controlled	Number of Customers Enrolled
12-Jun-17	91	Peak Shaving	AC Units	81,795	97,838
13-Jun-17	90	Peak Shaving	AC Units	81,623	97,716
22-Jun-17	87	Peak Shaving	AC Units	81,553	97,251
3-Jul-18	93	Peak Shaving	AC Units	81,510	96,975
7-Jul-18	89	Peak Shaving	AC Units	81,490	96,937
11-Jul-17	95	Peak Shaving	AC Units	81,443	96,913
12-Jul-17	98	Peak Shaving	AC Units	81,331	96,878
13-Jul-17	98	Peak Shaving	AC Units	81,153	96,742
14-Jul-17	97	Peak Shaving	AC Units	80,973	96,520
18-Jul-17	91	Peak Shaving	AC Units	80,945	96,254
19-Jul-17	94	Peak Shaving	AC Units	80,853	96,155
20-Jul-17	97	Peak Shaving	AC Units	80,752	96,022
21-Jul-17	97	Peak Shaving	AC Units	80,668	95,877
24-Jul-17	94	Peak Shaving	AC Units	80,645	95,798
27-Jul-17	88	Peak Shaving	AC Units	68,663	95,622
1-Aug-17	89	Peak Shaving	AC Units	68,658	95,546
2-Aug-17	89	Peak Shaving	AC Units	68,654	95,523
3-Aug-17	92	Peak Shaving	AC Units	68,652	95,486
4-Aug-17	90	Peak Shaving	AC Units	68,632	95,404
16-Aug-17	90	Peak Shaving	AC Units	68,621	95,025
17-Aug-17	85	Peak Shaving	AC Units	68,614	95,003
18-Aug-17	91	Peak Shaving	AC Units	80,611	94,962
21-Aug-17	88	Peak Shaving	AC Units	80,596	94,918
22-Aug-17	90	Peak Shaving	AC Units	80,559	94,868
23-Aug-17	85	Peak Shaving	AC Units	80,540	94,805
5-Sep-17	86	Peak Shaving	AC Units	80,576	94,514
20-Sep-17	88	Peak Shaving	AC Units	81,873	94,169
21-Sep-17	88	Peak Shaving	AC Units	81,852	94,134
25-Sep-17	87	Peak Shaving	AC Units	81,816	94,080

## Definitions:

1. The "Number of Customers Enrolled" is the count of active participants effective the day of the event, defined as gross participants enrolled in the program less deactivations and removals.

2. The "Number of Customers Controlled" further adjusts the "Number of Customers Enrolled" for specific event date opt-outs, participants not in the dispatch log.

**DIRECT TESTIMONY  
OF  
JARVIS E. BATES  
ON BEHALF OF  
DOMINION ENERGY NORTH CAROLINA  
BEFORE THE  
NORTH CAROLINA UTILITIES COMMISSION  
DOCKET NO. E-22, SUB 556**

1 **Q. Please state your name, business address, and position with Virginia**  
2 **Electric and Power Company (“Dominion Energy North Carolina” or the**  
3 **“Company”).**

4 **A.** My name is Jarvis E. Bates, and my title is Energy Conservation Compliance  
5 Consultant for Dominion Energy North Carolina. My business address is 701  
6 East Cary Street, Richmond, Virginia 23219. My educational background and  
7 experience are detailed in Appendix A.

8 **Q. Please describe your area of responsibility with the Company.**

9 **A.** I am responsible for cost and reporting compliance matters in the Company’s  
10 Energy Conservation (“EC”) department including: (1) cost preparation and  
11 cost oversight associated with the demand-side management (“DSM”) and  
12 energy efficiency (“EE”) programs (“DSM/EE Programs” or “Programs”);  
13 (2) cost compliance with DSM/EE Program related rider requirements; and  
14 (3) EC department internal and external regulatory and managerial cost  
15 reporting.



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

2 A. My testimony supports the Company's request to recover all reasonable and  
3 prudent costs incurred in adopting and implementing the Company's portfolio  
4 of DSM/EE Programs and utility incentives, through its updated Rider C, as  
5 well as the Company's experience modification factor ("EMF") rider, Rider  
6 CE ("Application"). In my testimony, I provide cost projections, including  
7 Common Costs, for the Company's DSM/EE Programs during January 1,  
8 2019, through December 31, 2019, that have been used as a proxy for the  
9 projected February 1, 2019, through January 31, 2020, period (the "Rate  
10 Period"), as well as actual costs incurred during the EMF period January 1,  
11 2017, through December 31, 2017 ("Test Period"). My testimony also  
12 presents the Portfolio Performance Incentive ("PPI") for each Program in  
13 accordance with the revised Cost Recovery and Incentive Mechanism  
14 ("Mechanism") approved by the North Carolina Utilities Commission  
15 ("NCUC" or the "Commission") on May 22, 2017, in Docket No. E-22, Sub  
16 464. I also calculate the PPI EMF true-up for Vintage Year 2017 in  
17 accordance with the terms of the Mechanism. Additionally, my testimony  
18 lists the commercial and industrial customers that have elected to "opt out" of  
19 the Company's DSM/EE Programs as required by NCUC Rule R8-69(d)(2).

20 **Q. Mr. Bates, are you sponsoring any exhibits or schedules in connection**  
21 **with your testimony?**

22 A. Yes. Company Exhibit JEB-1, consisting of Schedules 1-7 (with all schedules  
23 provided in public and confidential versions filed under seal), was prepared

1 under my direction and supervision and is accurate and complete to the best of  
2 my knowledge and belief. My Schedules 1-5 support the development of the  
3 projected Rate Period revenue requirement: Schedule 1 provides summary  
4 system-level Program and system-level Common Costs; Schedule 2 provides  
5 details for system-level Program Costs; Schedule 3 provides details for  
6 system-level Common Costs; Schedule 4 provides DSM Projected Program  
7 Costs, which are used by Company Witness J. Clayton Crouch for purposes of  
8 allocating Common Costs; and Schedule 5 provides the streamlined  
9 calculation of the Projected PPI for qualifying Programs. Schedule 6 provides  
10 actual cost information in support of the PPI true-up. Schedule 7 provides  
11 actual cost information in support of the Test Period EMF revenue  
12 requirement developed by Company Witness Alan J. Moore and includes  
13 actual system-level Program and system-level Common Costs incurred during  
14 the Test Period.

15 **Q. Please identify the Company's DSM/EE Programs for which cost**  
16 **recovery is sought in this proceeding.**

17 A. The Company is seeking cost recovery for adopting and implementing:

18 (a) the previously approved Phase I DSM/EE program: Residential Air

19 Conditioner Cycling Program;<sup>1</sup> (b) the previously approved Phase III

20 DSM/EE programs: Non-Residential Lighting Systems and Controls, Non-

21 residential Heating and Cooling Efficiency and Non-residential Window

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<sup>1</sup> Docket No. E-22, Sub 465. All other Phase I programs except the Residential Air Conditioner Cycling Program have previously been concluded.

1 Film;<sup>2</sup> (c) the previously approved Phase IV Income and Age Qualifying  
2 Home Improvement Program;<sup>3</sup> (d) the previously approved Phase V Non-  
3 Residential Small Business Improvement Program;<sup>4</sup> (e) the previously  
4 approved Residential Retail LED Lighting program;<sup>5</sup> and (f) the previously  
5 approved Phase VI Non-Residential Prescriptive Program.<sup>6</sup> Due to the  
6 Company's proposed closures of its Phase III Non-residential Window Film  
7 Program and Residential Retail LED Lighting Program, only limited wind  
8 down and evaluation, measurement and verification ("EM&V") costs are  
9 projected to be incurred during the Rate Period for these programs.

10 **Q. What is the nature of the costs for the DSM/EE Programs?**

11 A. The costs are primarily categorized as direct "Program Costs" and indirect  
12 "Common Costs." These Program Costs and Common Costs are those solely  
13 associated with the EC department, which was assigned the responsibility to  
14 separately identify and track DSM/EE costs related to the proposed Programs.  
15 The projected Program Costs are those costs that are directly attributable to  
16 individual Programs and primarily include costs based on signed vendor  
17 contracts. Program Costs include design, implementation, marketing,  
18 information technology hardware and software, call center, customer

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<sup>2</sup> Docket No. E-22, Subs 507, 508, and 509. On August 16, 2018, the Company filed a motion in Docket No. E-22, Sub 509 to close the Non-residential Window Film Program, and filed applications in Docket No. E-22, Subs 507 and 508 for Commission approval to transition the Non-residential Heating and Cooling Efficiency Program and the Non-residential Lighting Systems and Controls Program to be offered on a North Carolina-only basis.

<sup>3</sup> Docket No. E-22, Sub 523.

<sup>4</sup> Docket No. E-22, Sub 538.

<sup>5</sup> Docket No. E-22, Sub 539.

<sup>6</sup> Docket No. E-22, Sub 543.

1 incentives, equipment, startup costs, vendor margins, data collection and  
2 reporting, promotional events, management and field operations, EM&V  
3 costs, and similar vendor and/or internal costs. The majority of these Program  
4 Costs are based on contracts with the Company's four main Program vendors,  
5 Comverge, Inc., Ecova, Honeywell, and Nexant. The Company will also  
6 incur certain indirect Common Costs that are part of implementation of the  
7 DSM/EE Programs, which are not specifically associated with any individual  
8 DSM Program. These costs include certain customer communication costs,  
9 department labor costs, dues and association costs, and external vendor costs.  
10 Company Witness Moore further addresses deferral of DSM/EE Program  
11 costs in his direct testimony.

12 **Q. How is the information that you provide related to projected Rate Period**  
13 **Program Costs and Common Costs used by the other witnesses in this**  
14 **proceeding?**

15 A. The Company is seeking to recover reasonable and prudent costs that are  
16 projected for implementation of the DSM/EE Programs during the Rate  
17 Period. As discussed above, such costs include the Program Costs and  
18 Common Costs. Schedule 1 of my prefiled direct testimony shows both  
19 Program Costs and Common Costs, at the system level, associated with  
20 implementation of the Phase I, Phase III, Phase IV, Phase V, Phase VI, and  
21 Residential Retail LED Lighting DSM/EE Programs for the Rate Period.  
22 Company Witness Moore uses these costs to develop the revenue requirement  
23 in support of this Application. Company Witness Crouch then explains the

1 assignment and allocation of these costs to the North Carolina jurisdictional  
2 customers, using penetration and participant percentages from my Schedule 4,  
3 which are provided pursuant to NCUC Rule R8-9(f)(1)(ii)(a). Finally,  
4 Company Witness Debra A. Stephens develops the DSM/EE Rider, Rider C,  
5 for recovery of the projected costs.

6 **Q. How is the information you provide in Schedules 6 and 7 related to actual**  
7 **Test Period Program and Common Costs used by the other witnesses in**  
8 **this proceeding?**

9 A. Through Rider CE, the Company is seeking to true up all DSM/EE Program  
10 and Common Costs incurred during the Test Period with the revenues  
11 received through Rider C during the Test Period. Company Witness Moore  
12 uses the actually incurred Test Period DSM/EE Program and Common Costs  
13 set forth in my Schedules 6 and 7 to develop the EMF revenue requirement to  
14 be recovered through Rider CE. Company Witness Crouch then explains the  
15 assignment and allocation of these costs to the North Carolina jurisdictional  
16 customers. Finally, Company Witness Stephens calculates Rider CE to  
17 recover these costs.

18 **Q. Please describe the PPI provisions in the Mechanism.**

19 A. The Mechanism has historically provided for a PPI based upon the  
20 performance of each individual program, which would be eligible for an  
21 incentive if the Program achieved a utility cost test (“UCT”) score above 1.0.  
22 Through the revisions to the Mechanism agreed to between the Company and  
23 the Public Staff and approved by the Commission on May 22, 2017, the

1 Mechanism now provides for a “portfolio performance incentive” applicable  
2 to measures installed beginning with Vintage Year 2017. Paragraphs 49 – 61  
3 of the Mechanism govern calculation and recovery of the PPI.

4 **Q. Please describe Schedule 5 of your prefiled direct testimony, which**  
5 **calculates the projected PPI to be recovered during the Rate Period**  
6 **consistent with the Mechanism.**

7 A. My Schedule 5 calculates the projected PPI to be recovered during the Rate  
8 Period in a manner consistent with Paragraphs 49-61 of the revised  
9 Mechanism, and consistent with the Company’s approach approved in the  
10 2017 cost recovery proceeding, Docket No. E-22, Sub 545 (“2017 DSM  
11 Case”). Specifically, my Schedule 5 utilizes two PPI components.

12 First, PPI actual results from pertinent Vintage Years (2016 and prior) were  
13 calculated using the methodology identical to past DSM cases. Starting with  
14 the 2017 Vintage Year, PPI actual results are calculated using the new  
15 portfolio methodology.

16 Second, Projected PPI estimates for Vintage Year 2019, and for Vintage Year  
17 2018, are calculated in accordance with Paragraph 55(b) of the Mechanism.

18 **Q. Please explain the Company’s approach for calculating the projected**  
19 **Rate Period PPI.**

20 A. Paragraph 55(b) of the Mechanism provides that the Company may utilize a  
21 reasonable, simplified approach to estimate net dollar savings associated with  
22 measurement units installed in future Vintage Years for purposes of projecting

1 the PPI to be recovered during the Rate Period. The Company's approach for  
2 producing the projected PPI relies on the two components of the calculation.  
3 For the first component, the Company uses the data supporting its PPI  
4 calculation in the prior year's DSM cost recovery proceeding to isolate the  
5 actual PPI dollar amount for the prior Vintage Year and then continues to use  
6 that amount in this current case as the first component of the projected PPI  
7 total revenue requirement. Consistent with the Company's approach in the  
8 2017 DSM Case, the second component of the PPI estimate is calculated  
9 using the current case's operating expense revenue requirement times 1% to  
10 produce a dollar amount for estimated PPI. Adding the actual PPI dollar  
11 amount to the estimated PPI dollar amount for the Rate Period thus produces a  
12 streamlined and reasonably conservative estimate of the projected PPI for  
13 each Program. This data would naturally refresh with every new DSM/EE  
14 cost recovery proceeding.

15 **Q. Please describe Schedule 6 of your prefiled direct testimony, which**  
16 **calculates the PPI EMF true-up consistent with the Mechanism.**

17 A. My Schedule 6 calculates the EMF true-up in a manner consistent with  
18 Paragraph 59 of the revised Mechanism. I have obtained the number of actual  
19 installed measurement units and the verified kW and kWh savings associated  
20 with each Program for Vintage Year 2017 from the Company's most recently  
21 filed EM&V Report, as filed May 1, 2018, in Docket No. E-22, Sub 545.  
22 Coupled with the Company's actual costs for Vintage Year 2017, this  
23 information is used to calculate the actual net cost/benefit results for each

1 Program. I then developed a comparison of actual results versus projected  
2 cost/benefit results that are used to derive a true-up PPI. Once a PPI true-up  
3 for a given Vintage Year has been completed based upon final EM&V data  
4 filed with the Commission, the Company finalizes its PPI true-up for that  
5 Vintage Year.

6 **Q. Are you providing any updates to the 2016 Vintage Year True Up?**

7 A. Yes, due to updates in the 2018 EM&V Report for 2016 kWh savings for the  
8 Non-residential Duct Testing and Sealing, Non-residential HVAC, and Non-  
9 residential Lighting Systems and Controls programs. Revised PPI true up  
10 calculations have been included in my Schedule 6.

11 **Q. Are you also providing information regarding the Company's event  
12 sponsorship and consumer education and awareness initiatives during the  
13 Test Period?**

14 A. Yes. As directed by the Commission, the Company provides the following  
15 information regarding its event sponsorship and consumer education and  
16 awareness initiatives during the Test Period. The EC department actively ties  
17 its communication and outreach activities directly to a specific DSM/EE  
18 Program, so actual general education and awareness costs are limited.

19 The EC Department also relies heavily on the Dominion Energy, Inc.  
20 ("Dominion Energy") website to provide general education to our customers  
21 through tips, videos, and online energy audit tools, among other channels.  
22 The EC program pages have garnered approximately 89,000 visits in the



1 current Test Period. In addition, the Company's DSM Phase II, III, V, and VI  
2 implementation vendor, Honeywell, has created its own program web pages  
3 for detailed tracking on marketing efforts. Honeywell's program pages have  
4 garnered over 99,000 hits during the Test Period. In addition, the EC  
5 department took advantage of other high-coverage, low-cost channels, such as  
6 social media. Dominion Energy is continually growing social media presence  
7 on both Facebook and Twitter gaining, since creation, over 74,000 fans and  
8 58,000 followers, respectively. Whenever possible, the EC department  
9 attempts to utilize low-cost options to communicate general education to our  
10 customers.

11 **Q. Please elaborate on the status of DSM/EE opt-out customers.**

12 A. As required to be listed by NCUC Rule R8-69(d)(2), the following customers  
13 have elected to opt out of the Company's DSM/EE Programs pursuant to  
14 North Carolina General Statutes § 62-133.9(f) and NCUC Rule R8-69(d):  
15 Weyerhaeuser (1 account); Nucor Steel-Hertford (1 account); KapStone Paper  
16 and Packaging Company (2 accounts); KABA Ilco (1 account); Consolidated  
17 Diesel (1 account); Domtar Paper Company LLC (1 account); Enviva Pellets  
18 (2 accounts); Flambeau Products Corp. (1 account); Lowes Home Center, Inc.  
19 (5 accounts); Hospira, Inc. (1 account); Parkdale America LLC (1 account);  
20 and WalMart Stores (6 accounts). Company Witness Stephens' direct  
21 testimony provides projected North Carolina total retail monthly sales for the  
22 Calendar Year for accounts who have chosen to opt out of the DSM/EE Rider,  
23 as required by Rule R8-69(f)(1)(vii).

- 1 Q. Does that conclude your prefiled direct testimony?
- 2 A. Yes, it does.

**BACKGROUND AND QUALIFICATIONS  
OF  
JARVIS E. BATES**

Mr. Bates is the Energy Conservation Compliance Consultant for Dominion Energy Virginia / Dominion Energy North Carolina. His responsibilities include demand-side management and energy efficiency (“DSM/EE”) program cost oversight, compliance, and DSM/EE internal and external reporting. He has provided testimony in prior DSM filings in Virginia and North Carolina.

Mr. Bates has a Bachelor of Business Administration degree in Finance from James Madison University. Prior to joining the company in 2007, he had over 14 years of experience in finance, operations management, and leadership in the Telecom, Healthcare, and Retail industries. Since joining Dominion, he has held finance positions supporting the Services Company as well as supporting Energy Conservation.

Row	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Column 12	Column 13
	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	2020	Rate Year
	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	
Programs (2)													
Phase I Total	391,687	391,687	391,687	391,687	1,341,687	1,341,687	1,341,687	1,341,687	391,687	391,687	391,687	391,687	8,500,240
Phase II Total	52,140	52,140	52,140	52,140	23,960	23,960	23,960	23,960	23,960	23,960	23,960	23,960	583,078
Phase IV													
Phase V Total	664,129	664,129	651,805	651,805	646,805	646,805	646,805	646,805	646,805	646,805	646,805	646,805	7,846,305
Phase VI													
DSM Phases I, III, IV, V, and VI Total	2,004,852	2,004,852	1,955,748	1,955,748	2,890,748	2,890,748	2,890,748	2,890,748	1,940,748	1,940,748	1,940,748	1,940,748	27,247,187
Program O&M Total	1,921,519	1,921,519	1,872,415	1,872,415	2,807,415	2,807,415	2,807,415	2,807,415	1,857,415	1,857,415	1,857,415	1,857,415	26,247,187
Program Capital Total	83,333	83,333	83,333	83,333	83,333	83,333	83,333	83,333	83,333	83,333	83,333	83,333	1,000,000
Common Costs (O&M Only)													
Total	199,092	199,092	199,092	199,092	199,092	199,092	199,092	199,092	199,092	199,092	199,092	199,092	2,000,000
Program and Common O&M Total	2,120,611	2,120,611	2,071,507	2,071,507	3,006,507	3,006,507	3,006,507	3,006,507	2,056,507	2,056,507	2,056,507	2,056,507	28,247,187
Program Capital Total	83,333	83,333	83,333	83,333	83,333	83,333	83,333	83,333	83,333	83,333	83,333	83,333	1,000,000
Grand Total	\$ 2,203,944	\$ 2,203,944	\$ 2,154,840	\$ 2,154,840	\$ 3,089,840	\$ 3,089,840	\$ 3,089,840	\$ 3,089,840	\$ 2,140,840	\$ 2,140,840	\$ 2,140,840	\$ 2,140,840	\$ 29,247,187

Notes  
 1. System a Total of All Subfunctions  
 2. Res. = Residential; Com. = Commercial; Non Res. = Non Res. der-Hid  
 3. Costs exclude PPI & Lost Revenues

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Row	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Column 12	Column 13	
	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	2020	Rate Year	
	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan		
1	[REDACTED]													
2														
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10														
11	O&M	308,353	308,353	308,353	308,353	1,258,353	1,258,353	1,258,353	1,258,353	308,353	308,353	308,353	308,353	7,500,240
12	Capital	83,333	83,333	83,333	83,333	83,333	83,333	83,333	83,333	83,333	83,333	83,333	83,333	1,000,000
13	Grand Total	\$ 391,687	\$ 391,687	\$ 391,687	\$ 391,687	\$ 1,341,687	\$ 1,341,687	\$ 1,341,687	\$ 1,341,687	\$ 391,687	\$ 391,687	\$ 391,687	\$ 391,687	\$ 8,500,240

Notes:

1. System = Total of All Jurisdictions
2. Res. = Residential; Com. = Commercial; Non Res. = Non Residential
3. Costs exclude PPI & Lost Revenues

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Row	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Column 12	Column 13											
	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	2020	Rate Year											
	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan												
1	[REDACTED]																							
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21																								
22	Total all Program Costs																							
23	Grand Total																							
24	\$	52,740	\$	52,740	\$	35,960	\$	35,960	\$	25,960	\$	25,960	\$	25,960	\$	25,960	\$	25,960	\$	25,960	\$	25,960	\$	385,076

- Notes:
1. System = Total of All Jurisdictions
  2. Res. = Residential; Com. = Commercial; Non Res. = Non Residential
  3. Costs exclude PPI & Lost Revenues

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Row	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Column 12	Column 13
	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	2020	Rate Year
Programs	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	
1	[REDACTED]												
2	[REDACTED]												
3	[REDACTED]												
4	[REDACTED]												
5	[REDACTED]												
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19	[REDACTED]												
20	[REDACTED]												

- Notes:
- 1. System = Total of All Jurisdictions
  - 2. Res. = Residential, Com. = Commercial, Non Res. = Non Residential
  - 3. Costs exclude PPI & Lost Revenues

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Row	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Column 12	Column 13
Programs	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	2020	
Phase V	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Rate Year
1	[REDACTED]												
2	[REDACTED]												
3	[REDACTED]												
4	[REDACTED]												
5	[REDACTED]												
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18	[REDACTED]												
19	[REDACTED]												
20	[REDACTED]												

- Notes:
- 1. System = Total of All Jurisdictions
  - 2. Res. = Residential; Com. = Commercial; Non Res. = Non Residential
  - 3. Costs exclude PPI & Lost Revenues

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Row	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Column 12	Column 13
	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	2020	Rate Year
Programs	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	
Phase VI													
1													
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- Notes:
- 1. System = Total of All Jurisdictions
  - 2. Res. = Residential, Com. = Commercial, Non Res. = Non Residential
  - 3. Costs exclude PPI & Lost Revenues

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	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Column 12	Column 13
	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	2020	Rate Year
	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	
<b>Common Costs</b>	<b></b>												
Energy Conservation Labor													
Customer Communication	25,897	25,897	25,897	25,897	25,897	25,897	25,897	25,897	25,897	25,897	25,897	25,897	310,765
Consultant Support													
Dues & Associations	8,533	8,533	8,533	8,533	8,533	8,533	8,533	8,533	8,533	8,533	8,533	8,533	102,400
Energy Conservation Staff Support	3,333	3,333	3,333	3,333	3,333	3,333	3,333	3,333	3,333	3,333	3,333	3,333	40,000
<b>Total Common Costs</b>	<b>\$ 199,092</b>	<b>\$ 199,092</b>	<b>\$ 199,092</b>	<b>\$ 199,092</b>	<b>\$ 199,092</b>	<b>\$ 199,092</b>	<b>\$ 199,092</b>	<b>\$ 199,092</b>	<b>\$ 199,092</b>	<b>\$ 199,092</b>	<b>\$ 199,092</b>	<b>\$ 199,092</b>	<b>\$ 2,389,110</b>

Notes:  
 1. System = Total of All Jurisdictions

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Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Column 12	Column 13
2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	2020	Rate Year
Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	

DSM Phase II Program

Total	\$	51,605	\$	51,605	\$	51,605	\$	51,605	\$	51,605	\$	109,942	\$	109,942	\$	109,942	\$	109,942	\$	51,605	\$	51,605	\$	51,605	\$	(51,605)
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Notes:

- System = Total of All Jurisdictions
- Res. = Residential; Com. = Commercial; Non Res. = Non Residential
- All the costs on this page are only for the purpose of allocating projected nonmon costs among programs. Dominion NC Power is not requesting any cost recovery for DSM Phase II DG program. The DSM program costs shown above are direct costs. However, the total types of costs for these programs that are not requested in this filing include: direct costs, common costs, PPL, lost revenues, etc.

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Row				Year 2019	Year 2019	Year 2019	Year 2019	Year 2019	Year 2019	Year 2019	Year 2019	Year 2019	Year 2019	Year 2019	Year 2019	Year 2020	Total
1	Projected by Program Total			Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan		
2	DSM I	Res	Lighting	3 388	3 388	3 388	3 388	3 388	3 388	3 388	3 388	3 388	3 388	3 388	3 388	3 388	40 653
3	DSM I	Res	Air Conditioner Cycling	559	559	559	559	559	559	559	559	559	559	559	559	559	6 713
4	DSM I	Res	Low Income	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	DSM I	Com	Lighting	2 280	2 280	2 280	2 280	2 280	2 280	2 280	2 280	2 280	2 280	2 280	2 280	2 280	27 365
6	DSM I	Com	HVAC	435	435	435	435	435	435	435	435	435	435	435	435	435	5 215
7	DSM I	Com	Lighting NC	367	367	367	367	367	367	367	367	367	367	367	367	367	4 399
8	DSM I	Com	HVAC Upgrade NC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	DSM II	Res	Heat Pump Tune-Up	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	DSM II	Res	Heat Pump Upgrade	288	288	288	288	288	288	288	288	288	288	288	288	288	3 455
11	DSM II	Res	Duct Sealing	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	DSM II	Res	Home Energy Check-Up	16	16	16	16	16	16	16	16	16	16	16	16	16	194
13	DSM II	Non Res.	Duct Testing & Sealing	5 543	5 543	5 543	5 543	5 543	5 543	5 543	5 543	5 543	5 543	5 543	5 543	5 543	66 517
14	DSM II	Non Res.	Energy Audit	527	527	527	527	527	527	527	527	527	527	527	527	527	6 319
15	DSM III	Non Res.	Lighting Systems & Controls	4 782	4 782	4 782	4 782	4 782	4 782	4 782	4 782	4 782	4 782	4 782	4 782	4 782	57 383
16	DSM III	Non Res.	Heating & Cooling Efficiency	2 993	2 993	2 993	2 993	2 993	2 993	2 993	2 993	2 993	2 993	2 993	2 993	2 993	35 919
17	DSM III	Non Res.	Window Film	813	813	813	813	813	813	813	813	813	813	813	813	813	9 756
18	DSM III	Non Res.	Lighting Systems & Controls - NC Only	180	180	180	180	180	180	180	180	180	180	180	180	180	2 160
19	DSM III	Non Res.	Heating & Cooling Efficiency - NC Only	80	80	80	80	80	80	80	80	80	80	80	80	80	955
18	DSM IV	Res.	Income and Age Qualifying Home Improve	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	DSM V	Non Res.	Qualifying Small Business Improvement	1 037	1 037	1 037	1 037	1 037	1 037	1 037	1 037	1 037	1 037	1 037	1 037	1 037	12 445
20	DSM V	Res.	LED Lighting - NC Only	932	932	932	932	932	932	932	932	932	932	932	932	932	11 181
21	DSM VI	Non Res.	Prescriptive	1 025	1 025	1 025	1 025	1 025	1 025	1 025	1 025	1 025	1 025	1 025	1 025	1 025	12 304
22																	
23	Projected		Total	25 245	25 245	25 245	25 245	25 245	25 245	25 245	25 245	25 245	25 245	25 245	25 245	25 245	302 935
24																	
25																	
26																	
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**Demand Side Management (DSM)**

NC Program Performance Incentive (PPI) Estimates  
 Projected for Vintage Years 2018 and 2019  
 Dollars

DOCKET NO. E-22, SUB 556

CONFIDENTIAL INFORMATION HIGHLIGHTED IN YELLOW

Company Exhibit JEB-1  
 Schedule 5  
 Page 3 of 3

From DSM E-22, Sub 543  
 Company Exhibit No. JEB-1  
 Schedule 1  
 Page 1 of 1

Year 2018

System Program Projected Direct Costs					
Res.	Air Conditioner Cycling	1.0%	\$	3,854	
Non Res.	Window Film	1.0%		1,371	
Non Res.	Heating & Cooling Efficiency	1.0%		1,212	
Non Res.	Lighting Systems & Controls	1.0%		3,854	
Non Res.	Qualifying Small Business Improvement	1.0%		4,013	
Res.	LED Lighting - NC Only	1.0%		11,181	
Non Res.	Prescriptive	1.0%		3,828	
Total				\$	32,526,442
					29,313

From DSM E-22, Sub XXX  
 Company Exhibit No. JEB-1  
 Schedule 1  
 Page 1 of 1

Year 2019

System Program Projected Direct Costs					
Res.	Air Conditioner Cycling	1.0%	\$	4,058	
Non Res.	Window Film	1.0%		-	
Non Res.	Heating & Cooling Efficiency - NC Only	1.0%		955	
Non Res.	Lighting Systems & Controls - NC Only	1.0%		2,160	
Non Res.	Qualifying Small Business Improvement	1.0%		4,667	
Res.	LED Lighting - NC Only	1.0%		-	
Non Res.	Prescriptive	1.0%		3,810	
Total				\$	21,908,839
					\$ 15,650

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Aug 21 2018

Demand Side Management  
 Program Performance Incentive (PPI) Trueup for Year 2017  
 AC Cycling Program  
 Dollars

Company Exhibit JEB-1  
 Schedule 6  
 Page 1 of 8

Row	Col1 Vintage Year 2017 Planned	Col2 Vintage Year 2017 Actual
1		
2		
3		
4	System Net Benefit	(\$1,777,133)
5	Jurisdictional Allocation %	5.4105%
6		
7	NC Net Benefit	(\$96,152)
8	NC DR Program Incentive %	9.08%
9	NC DR Program Incentive %	\$0
10		
11	Years to Spread Benefit	10
12	Financial Rate	6.22%
13	Amortized Benefit	\$4,666

**Notes:**

- 1 Jurisdictional allocation factors are from Rate Department.
- 2 From the NC Stipulation: 9.08% incentive; 10 year benefit amortization
- 3 The financial rate for the amortization is from the Planning Department.
- 4 Starting in 2015, the Planned Benefit was estimate of 1% of NC program costs

**System Benefits:**

- 1 Using measure life years from the program summaries in the original DSM case filing.
- 2 Using "KW verified per unit savings" from EM&V filing
- 3 Counts from EM&V filing.

**System Costs:**

- 1 Program costs include direct costs.

Demand Side Management  
 Program Performance Incentive (PPI) Trueup for Year 2017  
 Non Res Lighting & Controls  
 Dollars

Company Exhibit JEB-1  
 Schedule 6  
 Page 2 of 8

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Aug 21 2018

Row		Col1 Vintage Year 2017 Planned	Col2 Vintage Year 2017 Actual
1			
2			
3			
4	System Net Benefit		\$12,539,052
5	Jurisdictional Allocation %		6.0132%
6			
7	NC Net Benefit		\$753,998
8	NC EE Program Incentive %	14.76%	14.76%
9	NC EE Program Incentive \$	\$0	\$111,290
10			
11	Years to Spread Benefit	10	10
12	Financial Rate	6.22%	6.22%
13	Amortized Benefit	\$3,473	\$15,281

**Notes:**

- 1 Jurisdictional allocation factors are from Rate Department.
- 2 From the NC Stipulation: 14.76% incentive; 10 year benefit amortization
- 3 The financial rate for the amortization is from the Planning Department.
- 4 Starting in 2015, the Planned Benefit was estimate of 1% of NC program costs

**System Benefits:**

- 1 Using measure life years from the program summaries in the original DSM case filing.
- 2 Using "KWH verified per unit savings" from EM&V filing
- 3 Counts from EM&V filing.

**System Costs:**

- 1 Program costs include direct costs.



Demand Side Management  
 Program Performance Incentive (PPI) Trueup for Year 2017  
 Non Res HVAC  
 Dollars

Company Exhibit JEB-1  
 Schedule 6  
 Page 3 of 8

Row		Col1 Vintage Year 2017 Planned	Col2 Vintage Year 2017 Actual
1			
2			
3			
4	System Net Benefit		\$3,358,054
5	Jurisdictional Allocation %		6.0132%
6			
7	NC Net Benefit		\$201,927
8	NC EE Program Incentive %	14.76%	14.76%
9	NC EE Program Incentive \$	\$0	\$29,804
10			
11	Years to Spread Benefit	10	10
12	Financial Rate	6.22%	6.22%
13	Amortized Benefit	\$1,225	\$4,092

**Notes:**

- 1 Jurisdictional allocation factors are from Rate Department.
- 2 From the NC Stipulation: 14.76% incentive; 10 year benefit amortization
- 3 The financial rate for the amortization is from the Planning Department.
- 4 Starting in 2015, the Planned Benefit was estimate of 1% of NC program costs

**System Benefits:**

- 1 Using measure life years from the program summaries in the original DSM case filing.
- 2 Using "KWH verified per unit savings" from EM&V filing
- 3 Counts from EM&V filing.

**System Costs:**

- 1 Program costs include direct costs.

Demand Side Management  
 Program Performance Incentive (PPI) Trueup for Year 2017  
 Non Res Window Film  
 Dollars

Company Exhibit JEB-1  
 Schedule 6  
 Page 4 of 8

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Aug 21 2018

Row		Col1 Vintage Year 2017 Planned	Col2 Vintage Year 2017 Actual
1			
2			
3			
4	System Net Benefit		\$1,034,829
5	Jurisdictional Allocation %		6.0132%
6			
7	NC Net Benefit		\$62,226
8	NC EE Program Incentive %	14.76%	14.76%
9	NC EE Program Incentive \$	\$0	\$9,185
10			
11	Years to Spread Benefit	10	10
12	Financial Rate	6.22%	6.22%
13	Amortized Benefit	\$1,267	\$1,261

**Notes:**

- 1 Jurisdictional allocation factors are from Rate Department.
- 2 From the NC Stipulation: 14.76% incentive; 10 year benefit amortization
- 3 The financial rate for the amortization is from the Planning Department.
- 4 Starting in 2015, the Planned Benefit was estimate of 1% of NC program costs

**System Benefits:**

- 1 Using measure life years from the program summaries in the original DSM case filing.
- 2 Using "KWH verified per unit savings" from EM&V filing
- 3 Counts from EM&V filing.

**System Costs:**

- 1 Program costs include direct costs.

Demand Side Management  
 Program Performance Incentive (PPI) Trueup for Year 2017  
 Non Res Small Business  
 Dollars

Company Exhibit JEB-1  
 Schedule 6  
 Page 5 of 8

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Aug 21 2018

Row		Col1 Vintage Year 2017 Planned	Col2 Vintage Year 2017 Actual
1			
2			
3			
4	System Net Benefit		\$6,918,871
5	Jurisdictional Allocation %		6.0132%
6			
7	NC Net Benefit		\$416,046
8	NC EE Program Incentive %	14.76%	14.76%
9	NC EE Program Incentive \$	\$0	\$61,408
10			
11	Years to Spread Benefit	10	10
12	Financial Rate	6.22%	6.22%
13	Amortized Benefit	\$3,509	\$8,432

**Notes:**

- 1 Jurisdictional allocation factors are from Rate Department.
- 2 From the NC Stipulation: 14.76% incentive; 10 year benefit amortization
- 3 The financial rate for the amortization is from the Planning Department.
- 4 Starting in 2015, the Planned Benefit was estimate of 1% of NC program costs

**System Benefits:**

- 1 Using measure life years from the program summaries in the original DSM case filing.
- 2 Using "KWH verified per unit savings" from EM&V filing
- 3 Counts from EM&V filing.

**System Costs:**

- 1 Program costs include direct costs.

Demand Side Management  
 Program Performance Incentive (PPI) Trueup for Year 2016 - EM&V Correction  
 Non Res Duct  
 Dollars

Company Exhibit JEB-1  
 Schedule 6  
 Page 6 of 8

Row	Col1 Vintage Year 2016 Planned	Col2 Vintage Year 2016 Actual
1		
2		
3	System Net Benefit	\$20,721,161
4	Jurisdictional Allocation %	6.0314%
5		
6	NC Net Benefit	\$1,249,776
7	NC EE Program Incentive %	13.0%
8	NC EE Program Incentive \$	\$162,471
9		
10	Years to Spread Benefit	10
11	Financial Rate	6.29%
12	Amortized Benefit	\$3,804

## Notes:

- 1 Jurisdictional allocation factors are from Rate Department.
- 2 From the NC Stipulation: 13% incentive; 10 year benefit amortization
- 3 The financial rate for the amortization is from the Rate Department.
- 4 Starting in 2015, the Planned Benefit was estimate of 1% of NC program costs

## System Benefits:

- 1 Using measure life years from the program summaries in the original DSM case filing.
- 2 Using "KWH verified per unit savings" from EM&V filing
- 3 Counts from EM&V filing.

## System Costs:

- 1 Program costs include direct costs.

Demand Side Management  
 Program Performance Incentive (PPI) Trueup for Year 2016 - EM&V Correction  
 Non Res Lighting & Controls  
 Dollars

Company Exhibit JEB-1  
 Schedule 6  
 Page 7 of 8

Row	Col1 Vintage Year 2016 Planned	Col2 Vintage Year 2016 Actual
1		
2		
3	System Net Benefit	\$21,688,005
4	Jurisdictional Allocation %	6.0314%
5		
6	NC Net Benefit	\$1,308,090
7	NC EE Program Incentive %	13.0%
8	NC EE Program Incentive \$	\$0
9		
10	Years to Spread Benefit	10
11	Financial Rate	6.29%
12	Amortized Benefit	\$3,434

Notes:

- 1 Jurisdictional allocation factors are from Rate Department.
- 2 From the NC Stipulation: 13% incentive; 10 year benefit amortization
- 3 The financial rate for the amortization is from the Rate Department.
- 4 Starting in 2015, the Planned Benefit was estimate of 1% of NC program costs

System Benefits:

- 1 Using measure life years from the program summaries in the original DSM case filing.
- 2 Using "KWH verified per unit savings" from EM&V filing
- 3 Counts from EM&V filing.

System Costs:

- 1 Program costs include direct costs.

Demand Side Management  
 Program Performance Incentive (PPI) Trueup for Year 2016 - EM&V Correction  
 Non Res HVAC  
 Dollars

Company Exhibit JEB-1  
 Schedule 6  
 Page 8 of 8

Row	Col1 Vintage Year 2016 Planned	Col2 Vintage Year 2016 Actual
1		
2		
3		\$11,999,714
4		6.0314%
5		
6		\$723,751
7	13.0%	13.0%
8	\$0	\$94,088
9		
10	10	10
11	6.29%	6.29%
12	\$1,160	\$12,957

**Notes:**

- 1 Jurisdictional allocation factors are from Rate Department.
- 2 From the NC Stipulation: 13% incentive; 10 year benefit amortization
- 3 The financial rate for the amortization is from the Rate Department.
- 4 Starting in 2015, the Planned Benefit was estimate of 1% of NC program costs

**System Benefits:**

- 1 Using measure life years from the program summaries in the original DSM case filing.
- 2 Using "KWH verified per unit savings" from EM&V filing
- 3 Counts from EM&V filing.

**System Costs:**

- 1 Program costs include direct costs.

Row	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11	Column 12	Column 13	
	Year 2017	Year 2017	Year 2017	Year 2017	Year 2017	Year 2017	Year 2017	Year 2017	Year 2017	Year 2017	Year 2017	Year 2017	12 Month	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
1	Program Costs O&M													
2	[REDACTED]													
3	[REDACTED]													
4	[REDACTED]													
5	[REDACTED]													
6	[REDACTED]													
7	[REDACTED]													
8	[REDACTED]													
9	[REDACTED]													
10	Subtotal 1	49,792	218,416	186,293	264,228	222,725	1,197,466	1,216,770	1,217,512	1,098,275	205,653	174,878	(3,323)	6,048,653
11	[REDACTED]													
12	[REDACTED]													
13	[REDACTED]													
14	[REDACTED]													
15	[REDACTED]													
16	[REDACTED]													
17	[REDACTED]													
18	Subtotal 2	2,221,501	1,059,351	546,704	465,692	107,068	-	72,045	58,442	46,523	44,935	34,129	81,751	4,738,141
19	[REDACTED]													
20	[REDACTED]													
21	[REDACTED]													
22	[REDACTED]													
23	Subtotal 3	839,505	698,882	1,135,490	840,651	1,368,232	644,586	797,136	829,436	1,174,149	1,010,686	1,234,045	604,274	11,177,072
24	[REDACTED]													
25	[REDACTED]													
26	[REDACTED]													
27	[REDACTED]													
28	[REDACTED]													
29	Subtotal 4	231,123	144,291	288,318	393,519	465,792	323,752	649,044	329,638	379,274	457,957	330,681	416,503	4,409,801
30	[REDACTED]													
31	[REDACTED]													
32	[REDACTED]													
33	[REDACTED]													
34	[REDACTED]													
35	[REDACTED]													
36	Subtotal 5	201,452	147,190	202,904	183,492	177,201	157,672	99,817	265,840	201,545	167,481	173,109	212,254	2,189,953
37	[REDACTED]													
38	Common Costs	97,652	189,486	(11,420)	85,809	85,807	167,850	118,163	138,850	136,213	195,155	138,874	40,314	1,382,752
39	[REDACTED]													
40	Total All O&M Costs	\$ 4,203,377	\$ 2,722,285	\$ 3,032,398	\$ 2,675,807	\$ 2,883,929	\$ 2,774,766	\$ 3,296,807	\$ 3,248,394	\$ 3,107,302	\$ 2,646,992	\$ 2,703,122	\$ 1,845,885	\$ 35,141,062

Notes:  
 1 This schedule does not include PPI Lost Revenues or Capital. Nor does it include Electric Vehicles (which is Virginia only).  
 2 The DSM I Commercial HVAC and DSM I Commercial Lighting Programs became 100% NC only Programs on January 1, 2014 (see Docket No. E-22 SUB 467 Commercial HVAC and Commercial Lighting Final Orders dated 12/16/2013).  
 3 The DSM I Residential Low Income Program became 100% NC only on January 1, 2015 (see Docket No. E-22 SUB 513).  
 4 The Virginia only costs are for purposes of allocating common costs among programs. Dominion Energy NC is not requesting cost recovery for DSM Phase IV Appliance Recycling or Phase VI Non Residential Prescriptive programs or the DG program in this filing.

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 Aug 21 2018

**DIRECT TESTIMONY  
OF  
ALAN J. MOORE  
ON BEHALF OF  
DOMINION ENERGY NORTH CAROLINA  
BEFORE THE  
NORTH CAROLINA UTILITIES COMMISSION  
DOCKET NO. E-22, SUB 556**

1 **Q. Please state your name, business address, and position with Virginia**  
2 **Electric and Power Company (“Dominion Energy North Carolina” or the**  
3 **“Company”).**

4 A. My name is Alan J. Moore. I am a Regulatory Analyst III in the Regulatory  
5 Accounting Department for Dominion Energy North Carolina. My business  
6 address is 701 East Cary Street, Richmond, Virginia 23219. A statement of  
7 my background and qualifications is attached as Appendix A.

8 **Q. Please describe your area of responsibility with the Company.**

9 A. I am responsible for analyzing and calculating revenue requirements for  
10 Dominion Energy North Carolina.

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

12 A. My testimony supports the Company’s request to recover all reasonable and  
13 prudent costs incurred in adopting and implementing the Company’s portfolio  
14 of North Carolina demand-side management (“DSM”) and energy efficiency  
15 (“EE”) programs (“DSM/EE Programs” or “Programs”) and utility incentives,  
16 through its updated Rider C, as well as the Company’s experience  
17 modification factor (“EMF”) rider, Rider CE (“Application”).



1 The purpose of my testimony is to address the development of the updated  
2 Rider C and Rider CE revenue requirements in support of the Application.  
3 Pursuant to North Carolina Utilities Commission (“NCUC” or the  
4 “Commission”) Rule R8-69, the Company’s Rider C revenue requirement  
5 includes projected costs associated with: (a) the previously-approved Phase I  
6 Air Conditioner Cycling Program;<sup>1</sup> (b) the previously-approved Phase III  
7 DSM/EE programs: Non-residential Lighting Systems and Controls Program,  
8 Non-residential Heating and Cooling Efficiency Program, and Non-residential  
9 Window Film Program;<sup>2</sup> (c) the previously-approved Phase IV Residential  
10 Income and Age Qualifying Home Improvement Program;<sup>3</sup> (d) the  
11 previously-approved Phase V Small Business Improvement Program;<sup>4</sup> (e) the  
12 previously-approved Residential Retail LED Lighting program;<sup>5</sup> and (f) the  
13 previously-approved Phase VI Non-Residential Prescriptive Program.<sup>6</sup>

14 Pursuant to Paragraph 28 of the revised Cost Recovery and Incentive  
15 Mechanism (“Mechanism”) approved by the Commission’s May 22, 2017  
16 Order issued in Docket No. E-22, Sub 464, the Rider CE revenue requirement  
17 includes a true-up of the Company’s DSM/EE Rider C rates in effect for the

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<sup>1</sup> Docket No. E-22, Sub 465. All other Phase I programs except the Residential Air Conditioner Cycling Program have previously been concluded.

<sup>2</sup> Docket No. E-22, Subs 507, 508, and 509. On August 16, 2018, the Company filed a motion in Docket No. E-22, Sub 509 requesting Commission approval to close the Non-residential Window Film Program. On August 16, 2018, the Company applied in Docket No. E-22, Subs 507 and 508 for Commission approval to transition the Non-residential Heating and Cooling Efficiency Program and the Non-residential Lighting Systems and Controls Program to be offered on a North Carolina-only basis.

<sup>3</sup> Docket No. E-22, Sub 523.

<sup>4</sup> Docket No. E-22, Sub 538.

<sup>5</sup> Docket No. E-22, Sub 539. On August 16, 2018, the Company filed a motion in Docket No. E-22, Sub 539 requesting Commission approval to close the Residential Retail LED Lighting Program.

<sup>6</sup> Docket No. E-22, Sub 543.

1 Phase I, Phase II, Phase III, Phase IV, Phase V, and Phase VI Programs, and  
2 the Residential Retail LED Lighting Program, during the 12-month period of  
3 January 1, 2017, through December 31, 2017 (“Test Period”).

4 The Rider C and Rider CE revenue requirements presented in this filing are  
5 developed in accordance with the revised Mechanism. Development of these  
6 revenue requirements is also consistent with development of the revenue  
7 requirements approved in the Company’s 2012 – 2017 DSM/EE cost recovery  
8 proceedings, except as modified to comply with the new Mechanism.

9 **Q. Mr. Moore, are you sponsoring any exhibits or schedules in connection**  
10 **with your testimony?**

11 A. Yes. Company Exhibit AJM-1, consisting of Schedules 1 – 3 (Schedules 1  
12 and 2 provided in public and confidential versions filed under seal), was  
13 prepared under my supervision and direction and is accurate and complete to  
14 the best of my knowledge and belief. My Schedule 1 supports the projected  
15 rate period revenue requirement for Rider C, and Schedule 2 presents the  
16 revenue requirement for EMF Rider CE. Schedule 3 contains my supporting  
17 workpapers pursuant to NCUC Rule R8-69(f)(1)(viii).

18 **Q. Please summarize the key components of the two revenue requirements**  
19 **presented in this case.**

20 A. The pre-filed direct testimony of Company Witness Jarvis E. Bates provides  
21 the projected costs and Portfolio Performance Incentive (“PPI”) related to  
22 each of the previously-identified DSM/EE Programs. I have used those cost

1 projections pursuant to NCUC Rule R8-69 to calculate the expected revenue  
2 requirement to be recovered through Rider C, from February 1, 2019, through  
3 January 31, 2020, the proposed rate period (the “Rate Period”) in this case. In  
4 particular, in order to calculate the projected revenue requirement for Rider C,  
5 I incorporated the following cost components: (1) operating expenses  
6 projected to be incurred during the Rate Period; (2) capital costs (including  
7 related depreciation expense) projected to be incurred during the Rate Period;  
8 and (3) PPI projected for the Rate Period pursuant to the revised Mechanism.  
9 As noted by Company Witness Michael T. Hubbard, and consistent with the  
10 Company’s last four cost recovery proceedings,<sup>7</sup> the Company is not  
11 projecting net lost revenues for the Rate Period in this proceeding. Each of  
12 these other cost components will be discussed in more detail later in my  
13 testimony.

14 For the DSM/EE EMF Rider CE, I have incorporated actual costs (both  
15 capital and O&M components) and PPI as provided by Company Witness  
16 Bates for the 12-month period of January 1, 2017, through December 31, 2017  
17 (“Test Period”). I have also included measured net lost revenues in the Rider  
18 CE revenue requirement for the Test Period as described in more detail later  
19 in my testimony.

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<sup>7</sup> Docket No. E-22, Subs 513, 524, 536, and 545.

- 1 **Q. How did you determine what the Rate Period and Test Period should be**  
2 **for this proceeding?**
- 3 A. Pursuant to NCUC Rule R8-69(a), the Rate Period is the same as the period  
4 during which the rider established under Commission Rule R8-55, the  
5 Company's fuel factor, is in effect. As explained by Company Witness  
6 Hubbard, in previous years, the Company has proposed Rider C rates to be  
7 effective for a calendar year Rate Period, consistent with the rate period  
8 previously used for fuel factor riders under Rule R8-55. Based on discussions  
9 with the Public Staff following the conclusion of the Company's 2017 rider  
10 proceedings, the Company is proposing for updated Rider C to be effective for  
11 a February 1, 2019, through January 31, 2020, Rate Period. The Company is  
12 requesting this adjustment to the annual Rate Period in order to extend the  
13 time for the Commission to issue orders in the Company's three annual rider  
14 proceedings filed pursuant to NCUC Rules R8-55, R8-67, and R8-69,  
15 respectively, and to then allow the Company additional time to finalize rates  
16 and customer notices (including allowing reasonable time for Public Staff  
17 review) prior to the updated annual riders' effective date. The Company  
18 intends to continue to use a February 1 through January 31 rate period in  
19 future rider cases.
- 20 The Test Period for this proceeding will be the 12-month period ending  
21 December 31, 2017, as provided for in Paragraph 28 of the Mechanism.

1 **Q. What capital structure and rate of return on common equity has the**  
2 **Company used to calculate the capital related costs for the Test Period**  
3 **and Rate Period in this proceeding?**

4 A. Consistent with Paragraph 40 of the Mechanism, the Company has calculated  
5 the capital-related costs for the Test Period using the actual capital structure  
6 and cost of capital for the 12-month period ended December 31, 2017,  
7 incorporating a 9.90% return on common equity (“ROE”) that was approved  
8 in the Company’s most recent general rate case on December 22, 2016, in  
9 Docket No. E-22, Sub 532.<sup>8</sup> For calculating the projected Rate Period in this  
10 proceeding, the Company has utilized the most recently filed NCUC ES-1  
11 capital structure and cost of capital for the period ending June 30, 2018,  
12 incorporating the 9.90% ROE.

13 **Q. Do the Rider C and Rider CE revenue requirements include recovery of**  
14 **net lost revenues?**

15 A. As addressed by Company Witness Hubbard, only Rider CE includes a  
16 request to recover measured net lost revenues, as allowed by Commission  
17 Rule R8-69(c)(1) and the Mechanism. As noted above, the Company has not  
18 projected Rate Period net lost revenues for recovery in this proceeding. Going  
19 forward, all net Vintage Year 2019 lost revenues will be appropriately  
20 recovered through a future EMF Rider CE true-up cost recovery factor. As I  
21 will discuss in greater detail below, Rider CE provides for the recovery of

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<sup>8</sup> See *Order Granting General Rate Increase*, Docket No. E-22, Sub 532 (Dec. 22, 2016).

1 actual incremental North Carolina jurisdictional kWh energy reductions for  
2 the Test Period.

3 **Q. Are there any other limitations on the eligibility of energy savings as a**  
4 **result of the Company's approved EE programs to count towards**  
5 **recovery of net lost revenues?**

6 A. Paragraph 43 of the Mechanism provides that kWh sales reductions achieved  
7 by a measurement unit installed in a given Vintage Year are eligible for use in  
8 calculating lost revenues for only the first 36 months after installation of the  
9 measurement unit. Further, Paragraph 46 of the Mechanism provides that  
10 notwithstanding this 36-month period of kWh sales reductions, any installed  
11 measurement unit shall cease being eligible for use in calculating net lost  
12 revenues as of the effective date of (a) a Commission-approved alternative  
13 cost recovery mechanism that accounts for the eligible recoverable net lost  
14 revenues associated with eligible kWh sales reductions, or (b) the  
15 implementation of new base rates approved in a general rate case or  
16 comparable proceeding to the extent that the rates set in that proceeding are  
17 set to explicitly or implicitly recover the net lost revenues associated with an  
18 installed measurement unit's kWh sales reductions.

1 **Q. Did the installation of the measurement units used to calculate the actual**  
2 **net lost revenues for the Test Period in this filing fall within the 36-month**  
3 **limitation provided for under Paragraph 43 of the Mechanism?**

4 A. Yes. As part of the DSM/EE EMF Rider CE, the Company is seeking to  
5 recover net lost revenues resulting from measures installed up through the end  
6 of the 2017 Test Period.

7 **Q. Has a portion of kWh energy savings associated with previously-installed**  
8 **measures already been captured in the Company's non-fuel base rates?**

9 A. Yes. The rates approved in the Company's 2016 general rate case were  
10 designed to include the cumulative kWh sales reductions recognized in the net  
11 lost revenues related to EE measurement units installed through June 30,  
12 2016, to be recovered through base rates beginning on November 1, 2016.  
13 Therefore, consistent with Paragraph 46 of the Mechanism, beginning  
14 November 1, 2016, the Company excludes from total kWh energy savings, the  
15 June 30, 2016 total cumulative monthly level of kWh sales reductions that  
16 were incorporated into base rates effective November 1, 2016. The net lost  
17 revenues proposed for recovery in this filing for January 1, 2017, through  
18 December 31, 2017, include only incremental kWh energy savings resulting  
19 from energy efficiency measures installed subsequent to June 30, 2016.

1 **Q. Mr. Moore, can you describe in more detail the projected Rate Period**  
2 **revenue requirement to be recovered through Rider C requested in this**  
3 **case?**

4 A. Yes. The projected revenue requirement begins with the projected operating  
5 expense revenue requirement as reflected on line 1 of page 1 of my  
6 Schedule 1. The projected operating expenses for the Rate Period, as  
7 supported in the pre-filed direct testimony of Company Witness Bates, are  
8 presented for current recovery by program on line 1 of page 2 of my  
9 Schedule 1. Line 2 of page 2 of my Schedule 1 presents the system level  
10 common costs that are allocated to each program in accordance with the  
11 methodology described by Company Witness J. Clayton Crouch. The  
12 projected operating expenses and proportionate share of common costs for  
13 each program are then allocated to the North Carolina jurisdiction using the  
14 jurisdictional allocation factors supported by Company Witness Crouch, to  
15 derive the projected North Carolina jurisdictional operating expense revenue  
16 requirement presented on line 5 of page 3 of my Schedule 1.

17 The second component of the projected Rate Period revenue requirement is  
18 the projected capital costs revenue requirement as presented on line 2 of page  
19 1 of my Schedule 1. Lines 6 through 8 of page 3 of my Schedule 1 present the  
20 projected North Carolina jurisdictional depreciation expense, property taxes,  
21 and rate base costs, respectively, related to the Air Conditioner Cycling  
22 Program. The projected rate base for the Rate Period as depicted on page 4 of  
23 my Schedule 1 includes the actual system level net plant balances as of June



1 30, 2018, and projected monthly system level capital expenditures as  
2 supported by Company Witness Bates. The Air Conditioner Cycling Program  
3 is the only DSM/EE program with capital expenditures being presented for  
4 recovery in this current filing. The capital expenditures, projected to be  
5 closed to plant-in-service each month, are added to the actual June 30, 2018  
6 plant balance, and accumulated throughout the Rate Period. The projected  
7 monthly depreciation expense is projected using a 7.15% annual depreciation  
8 factor from the Company's most recent depreciation study. This projected  
9 annual depreciation rate factor assumes an estimated depreciable life of 15  
10 years with 0% net salvage and includes interim retirement assumptions. The  
11 resulting depreciation expenses projected to be incurred during the Rate  
12 Period are included for current recovery as shown on line 5 of page 4 of my  
13 Schedule 1, and the projected accumulated depreciation balances are shown as  
14 a reduction to average rate base as reflected on line 6 of page 4. The monthly  
15 accumulated deferred income taxes, as supported by my Schedule 3, also  
16 serve as monthly reductions to the projected rate base for the Rate Period as  
17 reflected on line 8 of page 4 of my Schedule 1. These system level projected  
18 amounts are then allocated to the North Carolina jurisdiction as explained by  
19 Company Witness Crouch in his direct testimony in this proceeding.

20 The projected North Carolina jurisdiction rate base financing costs are  
21 determined by multiplying each two-month average rate base for the Rate  
22 Period by the Company's cost of capital as presented on line 4 of page 5 of  
23 my Schedule 1. As discussed above, for purposes of this Application, the

1 Company has used the capital structure and cost of capital as provided in its  
2 June 30, 2018 NCUC ES-1 Report, incorporating a rate of return on common  
3 equity of 9.90%, which resulted in a weighted average cost of capital of  
4 7.328% as presented on page 5 of my Schedule 1. The equity component for  
5 purposes of determining the return on rate base is grossed up to a revenue  
6 level in developing the common equity including income taxes revenue  
7 requirement on rate base as presented on line 20 of page 4 of my Schedule 1.

8 The final component of my Rate Period revenue requirement is the projected  
9 PPI revenue requirement shown on line 4 of page 1 of my Schedule 1.

10 Company Witness Bates provides the PPI calculation, which is incorporated  
11 into the revenue requirement and reflected on line 10 of page 3 of my  
12 Schedule 1.

13 **Q. Please provide an overview of the DSM/EE EMF Rider CE revenue**  
14 **requirement.**

15 A. Consistent with Paragraph 37 of the Mechanism, this DSM/EE EMF requests  
16 recovery of the “difference between the reasonable and prudent Costs incurred  
17 or amortized during the applicable test period and the revenues actually  
18 realized during such test period under the DSM/EE rider then in effect.” The  
19 DSM/EE EMF Rider CE also includes a true-up of the PPI and net lost  
20 revenues components for this same Test Period. Finally, the DSM/EE EMF  
21 Rider CE includes a return on the over- or under-recovery balance up and  
22 until the effective date of the Rate Period on February 1, 2019, calculated at  
23 the rate of return approved in the Company’s most recent general rate case in

1 Docket No. E-22, Sub 532. Commission Rule R8-69(e)(3) provides that the  
2 EMF will remain in effect for a fixed 12-month period and will continue as a  
3 rider to rates established in any intervening general rate case.

4 **Q. Mr. Moore, can you now describe the details of the DSM/EE EMF Rider**  
5 **CE revenue requirement calculation presented on page 1 of your**  
6 **Schedule 2?**

7 A. Yes. Page 1 of my Schedule 2 presents the DSM/EE EMF Rider CE revenue  
8 requirement requested for recovery during the Rate Period. The monthly  
9 revenue requirement on line 1 of page 1 of my Schedule 2 reflects the  
10 reasonable and prudent costs actually incurred during the Test Period in this  
11 proceeding. This actual monthly revenue requirement is calculated on pages 2  
12 and 3 of my Schedule 2 and will be discussed in greater detail below. The  
13 actual monthly Rider C revenues included on line 4 of page 1 of my  
14 Schedule 2 were obtained from the Company's Accounting Department. As  
15 first established in the Company's 2013 DSM/EE cost recovery proceeding,  
16 pursuant to NCUC Rule R8-69(c)(3), lines 2 and 5 eliminate utility incentives  
17 from the calculation of carrying costs on the EMF Test Period over/under-  
18 recovery deferral. The net monthly over- or under-recovered amount as  
19 presented on line 7 of page 1 of my Schedule 2 will be refunded or collected  
20 over the Rate Period. In addition, as prescribed by Rule R8-69(b)(6), carrying  
21 costs are calculated on the over- or under-recovered deferral amounts net of  
22 utility incentives at the rate of return approved in the Company's most recent  
23 general rate case in Docket No. E-22, Sub 532. Also pursuant to Commission

1 Rule R8-69(b)(6), the equity component has been grossed up to reflect the  
2 necessary recovery of income taxes. The total carrying costs calculated on the  
3 monthly over- or under-recovered amounts net of utility incentives for the  
4 Test Period are presented on line 13 of page 1 of my Schedule 2.

5 Also pursuant to Rule R8-69(b)(6), financing costs are calculated for the  
6 current EMF Test Period over-recovery amount, exclusive of utility  
7 incentives, as presented on line 8 of page 1 of my Schedule 2. Line 15 reflects  
8 these carrying costs which are calculated on line 5 of page 6 of my Schedule 2  
9 for the deferral period of January 2018 through January 2019 at the net-of-tax  
10 rate of return approved in the Company's most recent general rate case in  
11 accordance with Rule R8-69(b)(6).

12 The carrying costs net of utility incentives to be refunded on line 13 of page 1,  
13 combined with the related 2017 financing costs on line 15, are offset by the  
14 net monthly under-recovered amounts calculated on line 7, to reflect the total  
15 DSM/EE EMF Rider CE revenue requirement amount to be recovered over  
16 the Rate Period.

17 **Q. Please describe the remaining pages of Schedule 2 that support the**  
18 **DSM/EE EMF Rider CE revenue requirement presented on page 1 of**  
19 **your Schedule 2.**

20 A. Pages 2 and 3 of my Schedule 2 present the monthly revenue requirement for  
21 the reasonable and prudent costs actually incurred during the Test Period. The  
22 actual operating expenses provided by Company Witness Bates for each

1 Program include a proportionate share of Common Costs allocated according  
2 to the methodology described by Company Witness Crouch, and are included  
3 on line 2 of page 2 of my Schedule 2. This Common Cost allocation  
4 methodology is in compliance with the Mechanism and is also consistent with  
5 the methodology employed in the Company's previous DSM filings. The  
6 resulting system level amounts are then allocated to the North Carolina  
7 jurisdiction as explained by Company Witness Crouch to derive the North  
8 Carolina jurisdictional operating expenses including Common Costs presented  
9 on line 5 of page 3 of my Schedule 2. Line 6 of page 3 of my Schedule 2  
10 presents the monthly property taxes related to the air conditioner cycling  
11 program assets, while lines 7 and 8 present the actual North Carolina  
12 jurisdictional depreciation expense and return on rate base as calculated on  
13 page 4 of my Schedule 2, and will be discussed in more detail below. Next,  
14 the North Carolina jurisdictional net lost revenues calculated on page 5 of my  
15 Schedule 2 are included on line 9 of page 3 of my Schedule 2. Finally, the  
16 actual PPI amounts for the Test Period, as calculated by Company Witness  
17 Bates, are included on line 10 of page 3 of my Schedule 2. The resulting  
18 monthly revenue requirement by program calculated on line 11 and totaled on  
19 line 12 of page 3 of my Schedule 2 reflects the reasonable and prudent costs  
20 actually incurred during the Test Period.

21 The revenue requirement on Rate Base Costs for the Test Period is calculated  
22 on page 4 of my Schedule 2. Actual monthly Net Plant balances and  
23 Accumulated Deferred Income Taxes were provided by the Fixed Assets

1 Department and Tax Department, respectively. Depreciation expenses  
2 incurred during the Test Period are included in the actual costs, and the  
3 accumulated balances are shown as a reduction to plant-in-service to derive  
4 cumulative system level of net plant as presented on line 4 of page 4 of my  
5 Schedule 2. The monthly accumulated deferred income taxes on line 5 of  
6 page 4, as supported by my Schedule 3, also serve as monthly reductions to  
7 the rate base for the Test Period. These system level amounts are then  
8 allocated to the North Carolina jurisdiction as explained by Company Witness  
9 Crouch to derive the monthly North Carolina jurisdictional AC Cycling rate  
10 base amounts as included on line 8.

11 The 2-month average North Carolina jurisdictional rate base over the Test  
12 Period is presented on line 9 of page 4. As described earlier in my testimony,  
13 to determine the return on rate base for the Test Period, the 2-month rate base  
14 averages on line 9 of page 4 were multiplied by the Company's cost of capital  
15 based on the capital structure and cost of capital for the 12-month period  
16 ended December 31, 2017. The Company utilized the Commission-approved  
17 ROE of 9.90% which resulted in a weighted average cost of capital of  
18 7.345%, as presented on lines 8 of page 7 of my Schedule 2. The equity  
19 component is grossed up to a revenue level for purposes of calculating the  
20 revenue requirement on rate base costs during the Test Period as presented on  
21 line 17 of page 4 of my Schedule 2.

22 Page 5 of my Schedule 2 presents the calculation of the actual net lost  
23 revenues for the Test Period, based upon the actual North Carolina

1 jurisdictional energy reductions as presented by Company Witness Deanna R.  
2 Kesler. Company Witness Debra A. Stephens provides the billing rates  
3 applied to these North Carolina jurisdictional net kWh energy savings as  
4 presented on line 2 of page 5 of my Schedule 2. The actual net lost revenues  
5 are then reduced for variable O&M savings and found revenues. The variable  
6 O&M savings presented on line 4 of page 5 were provided by the Company's  
7 Integrated Resource Planning Department. As discussed by Company  
8 Witness Hubbard, there were no actual found revenues for the Test Period as  
9 indicated on line 5 of page 5 of my Schedule 2. Line 6 of page 5 provides the  
10 net lost revenues by program for the Test Period.

11 As previously mentioned, page 6 of my Schedule 2 presents the calculation of  
12 financing costs on the Rider CE net of utility incentives over-recovery to be  
13 refunded over the Rate Period, pursuant to NCUC Rules R8-69(b)(3) and (6),  
14 and Paragraph 39 of the Mechanism.

15 **Q. Mr. Moore, do you have anything else you would like to discuss regarding**  
16 **the DSM/EE EMF Rider CE revenue requirement?**

17 A. Yes. The DSM/EE EMF Rider CE revenue requirement is materially larger  
18 for this filing than it has been previously. A significant majority of the true-  
19 up amount is the result of the Phase V Small Business Improvement Program  
20 and the Residential Retail LED Lighting program being excluded from the  
21 2016 Rider C projection that set rates for the January 1, 2017 through  
22 December 31, 2017 rate year.

1 **Q. What is the total revenue requirement for Riders C and CE?**

2 A. As summarized on page 1 of my Schedule 1, the Company is requesting  
3 recovery of projected operating expenses of \$2,071,198, and projected capital  
4 cost revenue requirement of \$136,168. These amounts combined with the  
5 projected PPI of \$302,935 provide for a total Rider C revenue requirement of  
6 \$2,510,301.

7 As depicted on page 1 of my Schedule 2, the Rider CE revenue requirement  
8 presents the amount of \$1,839,922, which will be recovered by the Company  
9 over the Rate Period. The combined revenue requirements for the two riders,  
10 Rider C and Rider CE, for the Rate Period totals \$4,350,223, representing a  
11 \$606,298 increase over the rates currently in effect.

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

13 A. Yes, it does.



**BACKGROUND AND QUALIFICATIONS  
OF  
ALAN J. MOORE**

Alan J. Moore received his undergraduate degree from Longwood University with a Bachelor of Science in Business Administration with an Accounting concentration in 2007. Mr. Moore received his Masters of Business Administration degree from Longwood University in 2015. Mr. Moore was hired by the Company in 2007 as an Internal Auditor prior to joining the Regulatory Accounting Department in April 2014. His current position of Regulatory Analyst III in the Regulatory Accounting Department includes responsibility for analyzing and calculating revenue requirements for Dominion Energy North Carolina rate proceedings.

**Dominion Energy North Carolina  
Docket No. E-22, Sub 556  
Projected Revenue Requirement for DSM/EE Rider C  
For the Rate Period February 1, 2019 - January 31, 2020**

<u>line no.</u>	<u>Rider C</u>	<u>Item Location / Formula</u>
1 Projected Operating Expense Revenue Requirement	\$ 1,754,074	Sch 1, Page 3, Line 5
2 Projected Capital Costs Revenue Requirement	\$ 136,168	Sch 1, Page 3, Line 6 + Line 7 + Line 8
3 Projected Net Lost Revenues	\$ -	Sch 1, Page 3, Line 9
4 Projected Program Performance Incentive Revenue Requiremen	<u>\$ 302,935</u>	Sch 1, Page 3, Line 10
5 Total Revenue Requirement	\$ 2,193,177	Line 1 + Line 2 + Line 3 + Line 4



**Dominion Energy North Carolina**  
**Docket No. E-22, Sub 556**  
**Projected Revenue Requirement for DSM/EE Rider C**  
**For the Rate Period February 1, 2019 - January 31, 2020**

line no.	Projection Feb 19	Projection Mar 19	Projection Apr 19	Projection May 19	Projection Jun 19	Projection Jul 19	Projection Aug 19	Projection Sep 19	Projection Oct 19	Projection Nov 19	Projection Dec 19	Projection Jan 20	Rate Period Total
<b>5 Projected NC Jurisdiction Operating Expenses (Line 3 Line 4)</b>													
Air Conditioner Cycling Program													
Commercial HVAC Upgrade Program													
Commercial Lighting Program													
Residential Heat Pump Tune-up Program													
Residential Heat Pump Upgrade Program													
Residential Duct Testing & Sealing Program													
Residential Home Energy Check-Up Program													
Non-Residential Duct Testing & Sealing Program													
Non-Residential Energy Audit Program													
Non-Residential Window Film Program													
Non-Residential Heating & Cooling Efficiency Program													
Non-Residential Lighting Systems & Controls Program													
Residential Income and Age Qualifying Home Improvement Program													
Qualifying Small Business Improvement Program													
Residential LED Lighting - NC Only													
Non-Residential Prescriptive Program													
<b>6 Projected NC Jurisdiction Depreciation Expense (Page 4, Line 5 Line 10)</b>	\$ 6,506	\$ 6,533	\$ 6,560	\$ 6,587	\$ 6,613	\$ 6,640	\$ 6,667	\$ 6,694	\$ 6,721	\$ 6,748	\$ 6,775	\$ 6,801	\$ 79,845
Air Conditioner Cycling Program													
<b>7 Projected NC Jurisdiction Property Taxes</b>	\$ 789	\$ 789	\$ 789	\$ 789	\$ 789	\$ 789	\$ 789	\$ 789	\$ 789	\$ 789	\$ 789	\$ 789	\$ 9,471
Air Conditioner Cycling Program													
<b>8 Projected NC Jurisdiction Rate Base Costs (Page 4, Line 21)</b>	\$ 3,956	\$ 3,950	\$ 3,944	\$ 3,937	\$ 3,927	\$ 3,917	\$ 3,905	\$ 3,892	\$ 3,878	\$ 3,863	\$ 3,847	\$ 3,836	\$ 46,852
Air Conditioner Cycling Program													
<b>9 NC Jurisdiction Projected Net Lost Revenues</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>10 NC Jurisdiction Projected Program Performance Incentive (PPI)</b>													
Residential Lighting (PPI Only)	\$ 3,388	\$ 3,388	\$ 3,388	\$ 3,388	\$ 3,388	\$ 3,388	\$ 3,388	\$ 3,388	\$ 3,388	\$ 3,388	\$ 3,388	\$ 3,388	\$ 40,653
Air Conditioner Cycling Program	\$ 559	\$ 559	\$ 559	\$ 559	\$ 559	\$ 559	\$ 559	\$ 559	\$ 559	\$ 559	\$ 559	\$ 559	\$ 6,713
Commercial HVAC Upgrade Program	\$ 435	\$ 435	\$ 435	\$ 435	\$ 435	\$ 435	\$ 435	\$ 435	\$ 435	\$ 435	\$ 435	\$ 435	\$ 5,215
Commercial Lighting Program	\$ 2,647	\$ 2,647	\$ 2,647	\$ 2,647	\$ 2,647	\$ 2,647	\$ 2,647	\$ 2,647	\$ 2,647	\$ 2,647	\$ 2,647	\$ 2,647	\$ 31,764
Residential Heat Pump Tune-up Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Residential Heat Pump Upgrade Program	\$ 288	\$ 288	\$ 288	\$ 288	\$ 288	\$ 288	\$ 288	\$ 288	\$ 288	\$ 288	\$ 288	\$ 288	\$ 3,455
Residential Duct Testing & Sealing Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Residential Home Energy Check-Up Program	\$ 16	\$ 16	\$ 16	\$ 16	\$ 16	\$ 16	\$ 16	\$ 16	\$ 16	\$ 16	\$ 16	\$ 16	\$ 194
Non-Residential Duct Testing & Sealing Program	\$ 5,543	\$ 5,543	\$ 5,543	\$ 5,543	\$ 5,543	\$ 5,543	\$ 5,543	\$ 5,543	\$ 5,543	\$ 5,543	\$ 5,543	\$ 5,543	\$ 66,517
Non-Residential Energy Audit Program	\$ 527	\$ 527	\$ 527	\$ 527	\$ 527	\$ 527	\$ 527	\$ 527	\$ 527	\$ 527	\$ 527	\$ 527	\$ 6,319
Non-Residential Window Film Program	\$ 813	\$ 813	\$ 813	\$ 813	\$ 813	\$ 813	\$ 813	\$ 813	\$ 813	\$ 813	\$ 813	\$ 813	\$ 9,756
Non-Residential Heating & Cooling Efficiency Program	\$ 3,073	\$ 3,073	\$ 3,073	\$ 3,073	\$ 3,073	\$ 3,073	\$ 3,073	\$ 3,073	\$ 3,073	\$ 3,073	\$ 3,073	\$ 3,073	\$ 36,874
Non-Residential Lighting Systems & Controls Program	\$ 4,962	\$ 4,962	\$ 4,962	\$ 4,962	\$ 4,962	\$ 4,962	\$ 4,962	\$ 4,962	\$ 4,962	\$ 4,962	\$ 4,962	\$ 4,962	\$ 59,544
Residential Income and Age Qualifying Home Improvement Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Qualifying Small Business Improvement Program	\$ 1,037	\$ 1,037	\$ 1,037	\$ 1,037	\$ 1,037	\$ 1,037	\$ 1,037	\$ 1,037	\$ 1,037	\$ 1,037	\$ 1,037	\$ 1,037	\$ 12,445
Residential LED Lighting - NC Only	\$ 932	\$ 932	\$ 932	\$ 932	\$ 932	\$ 932	\$ 932	\$ 932	\$ 932	\$ 932	\$ 932	\$ 932	\$ 11,181
Non-Residential Prescriptive Program	\$ 1,025	\$ 1,025	\$ 1,025	\$ 1,025	\$ 1,025	\$ 1,025	\$ 1,025	\$ 1,025	\$ 1,025	\$ 1,025	\$ 1,025	\$ 1,025	\$ 12,304
<b>11 Projected Revenue Requirement (Sum Lines 5 through 10)</b>													
Residential Lighting (PPI Only)													
Air Conditioner Cycling Program													
Commercial HVAC Upgrade Program													
Commercial Lighting Program													
Residential Heat Pump Tune-up Program													
Residential Heat Pump Upgrade Program													
Residential Duct Testing & Sealing Program													
Residential Home Energy Check-Up Program													
Non-Residential Duct Testing & Sealing Program													
Non-Residential Energy Audit Program													
Non-Residential Window Film Program													
Non-Residential Heating & Cooling Efficiency Program													
Non-Residential Lighting Systems & Controls Program													
Residential Income and Age Qualifying Home Improvement Program													
Qualifying Small Business Improvement Program													
Residential LED Lighting - NC Only													
Non-Residential Prescriptive Program													
	\$ 197,047	\$ 197,068	\$ 163,756	\$ 163,775	\$ 209,591	\$ 209,608	\$ 209,623	\$ 209,637	\$ 158,250	\$ 158,262	\$ 158,272	\$ 158,288	\$ 2,193,177

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Aug 21 2018

**Dominion Energy North Carolina  
Docket No. E 22, Sub 556  
Revenue Requirement for DSM/EE Rider C  
Projected Rate Base Cost For the Period June 1, 2018 January 31, 2020**

Line no.	Actual Jan-18	Project on Jul-18	Projection Aug-18	Projection Sep-18	Projection Oct-18	Projection Nov-18	Projection on Dec-18	Projection Jan-19	Projection Feb-19	Projection Mar-19	Projection Apr-19	Projection on May-19	Projection Jun-19	Projection Jul-19	Projection on Aug-19	Projection Sep-19	Projection Oct-19	Projection Nov-19	Projection Dec-19	Projection Jan-20	
1 System Level Actual Plant In Service Air Conditioner Cycling Program	\$ 19,516	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
2 Projected Capital Expenditures Air Conditioner Cycling Program	0	83,333	83,333	83,333	83,333	83,333	83,333	83,333	83,333	83,333	83,333	83,333	83,333	83,333	83,333	83,333	83,333	83,333	83,333	83,333	
3 Cumulative Gross Plant (Line 1 - Line 2) Air Conditioner Cycling Program	\$ 19,516	\$ 19,597,977	\$ 19,681,311	\$ 19,766	\$ 19,851,777	\$ 19,933,111	\$ 20,016	\$ 20,097,977	\$ 20,181,311	\$ 20,266	\$ 20,351,777	\$ 20,433,111	\$ 20,516	\$ 20,597,977	\$ 20,681,311	\$ 20,766	\$ 20,851,777	\$ 20,933,111	\$ 21,016	\$ 21,097,977	
Monthly Depreciation Percentages Air Conditioner Cycling Program	0.5958%	0.5958%	0.5958%	0.5958%	0.5958%	0.5958%	0.5958%	0.5958%	0.5958%	0.5958%	0.5958%	0.5958%	0.5958%	0.5958%	0.5958%	0.5958%	0.5958%	0.5958%	0.5958%	0.5958%	
5 Projected System Monthly Depreciation Expense (Line 3 * Line 4) Air Conditioner Cycling Program	\$ 116,771	\$ 117,268	\$ 117,766	\$ 118,264	\$ 118,762	\$ 119,260	\$ 119,758	\$ 120,256	\$ 120,754	\$ 121,252	\$ 121,750	\$ 122,248	\$ 122,746	\$ 123,244	\$ 123,742	\$ 124,240	\$ 124,738	\$ 125,236	\$ 125,734	\$ 126,232	
6 Actual/Projected System Level of Accumulated Depreciation Air Conditioner Cycling Program	\$ 7,186,867	\$ 7,303,38	\$ 7,420,706	\$ 7,538,70	\$ 7,656,731	\$ 7,775,88	\$ 7,894,72	\$ 8,013,93	\$ 8,133,70	\$ 8,253,83	\$ 8,374,23	\$ 8,494,60	\$ 8,615,03	\$ 8,735,42	\$ 8,855,86	\$ 8,976,29	\$ 9,096,71	\$ 9,217,14	\$ 9,337,56	\$ 9,457,97	
7 Actual/Projected Cumulative Net Plant (Line 3 - Line 6) Air Conditioner Cycling Program	\$ 12,327,977	\$ 12,295,0	\$ 12,260,605	\$ 12,226,17	\$ 12,191,27	\$ 12,155,822	\$ 12,119,902	\$ 12,083,85	\$ 12,048,571	\$ 12,013,161	\$ 11,977,725	\$ 11,942,285	\$ 11,906,851	\$ 11,871,416	\$ 11,835,981	\$ 11,800,546	\$ 11,765,111	\$ 11,729,676	\$ 11,694,241	\$ 11,658,806	\$ 11,623,371
8 Actual/Projected Accumulated Deferred Income Tax Air Conditioner Cycling Program	\$ (2,696,66)	\$ (2,620,263)	\$ (2,544,859)	\$ (2,469,455)	\$ (2,394,051)	\$ (2,318,647)	\$ (2,243,243)	\$ (2,167,839)	\$ (2,092,435)	\$ (2,017,031)	\$ (1,941,627)	\$ (1,866,223)	\$ (1,790,819)	\$ (1,715,415)	\$ (1,640,011)	\$ (1,564,607)	\$ (1,489,203)	\$ (1,413,799)	\$ (1,338,395)	\$ (1,262,991)	
9 Monthly Actual/Projected Rate Base (Line 7 - Line 8) Air Conditioner Cycling Program	\$ 9,678,310	\$ 9,672,77	\$ 9,669,76	\$ 9,666,720	\$ 9,663,684	\$ 9,660,648	\$ 9,657,612	\$ 9,654,576	\$ 9,651,540	\$ 9,648,504	\$ 9,645,468	\$ 9,642,432	\$ 9,639,396	\$ 9,636,360	\$ 9,633,324	\$ 9,630,288	\$ 9,627,252	\$ 9,624,216	\$ 9,621,180	\$ 9,618,144	
10 Jurisdictional Allocation Factors Air Conditioner Cycling Program	5.105%	5.105%	5.105%	5.105%	5.105%	5.105%	5.105%	5.105%	5.105%	5.105%	5.105%	5.105%	5.105%	5.105%	5.105%	5.105%	5.105%	5.105%	5.105%	5.105%	
11 North Carolina Actual/Projected Rate Base (Line 9 x Line 10) Air Conditioner Cycling Program	\$ 523,655	\$ 523,275	\$ 523,182	\$ 522,910	\$ 522,611	\$ 522,285	\$ 521,933	\$ 521,555	\$ 520,826	\$ 520,033	\$ 519,080	\$ 517,962	\$ 516,685	\$ 515,253	\$ 513,637	\$ 511,871	\$ 509,900	\$ 507,850	\$ 505,595	\$ 503,181	
12 Rate Base (2 month average) Cost of Capital	\$ 521,10	\$ 520,29	\$ 519,556	\$ 518,821	\$ 518,086	\$ 517,351	\$ 516,616	\$ 515,881	\$ 515,146	\$ 514,411	\$ 513,676	\$ 512,941	\$ 512,206	\$ 511,471	\$ 510,736	\$ 509,999	\$ 509,264	\$ 508,529	\$ 507,794	\$ 507,059	
1 Net Operating Income Less Interest Expense LTD 15 Weighted Cost of Debt 16 Rate Base	\$ 3,183	\$ 3,178	\$ 3,173	\$ 3,167	\$ 3,162	\$ 3,157	\$ 3,152	\$ 3,147	\$ 3,142	\$ 3,137	\$ 3,132	\$ 3,127	\$ 3,122	\$ 3,117	\$ 3,112	\$ 3,107	\$ 3,102	\$ 3,097	\$ 3,092	\$ 3,087	
17 Revenue Requirement Interest Expense on Debt	\$ 938	\$ 936	\$ 935	\$ 933	\$ 931	\$ 928	\$ 926	\$ 923	\$ 919	\$ 916	\$ 912	\$ 909	\$ 905	\$ 901	\$ 897	\$ 893	\$ 889	\$ 885	\$ 881	\$ 877	
18 Net Income Related to Common Equity	\$ 2,245	\$ 2,242	\$ 2,238	\$ 2,233	\$ 2,228	\$ 2,223	\$ 2,218	\$ 2,213	\$ 2,208	\$ 2,203	\$ 2,198	\$ 2,193	\$ 2,188	\$ 2,183	\$ 2,178	\$ 2,173	\$ 2,168	\$ 2,163	\$ 2,158	\$ 2,153	
19 North Carolina Jurisdictional Income Tax Gross up Factor	7.38%	7.38%	7.38%	7.38%	7.38%	7.38%	7.38%	7.38%	7.38%	7.38%	7.38%	7.38%	7.38%	7.38%	7.38%	7.38%	7.38%	7.38%	7.38%	7.38%	
20 Revenue Requirement Common Equity Including Income Taxes	\$ 3,018	\$ 3,014	\$ 3,009	\$ 3,004	\$ 2,999	\$ 2,994	\$ 2,989	\$ 2,984	\$ 2,979	\$ 2,974	\$ 2,969	\$ 2,964	\$ 2,959	\$ 2,954	\$ 2,949	\$ 2,944	\$ 2,939	\$ 2,934	\$ 2,929	\$ 2,924	
21 Revenue Requirement on Rate Base (Line 17 - Line 20)	\$ 3,956	\$ 3,950	\$ 3,944	\$ 3,937	\$ 3,929	\$ 3,922	\$ 3,915	\$ 3,908	\$ 3,901	\$ 3,894	\$ 3,887	\$ 3,880	\$ 3,873	\$ 3,866	\$ 3,859	\$ 3,852	\$ 3,845	\$ 3,838	\$ 3,831	\$ 3,824	

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***For Collection During the Rate Period February 1, 2019 - January 31, 2020***  
**Cost of Capital and Capital Structure (000s)**  
**As of June 30, 2018**

line  
no.

<b>Description</b>	<b>Average Capitalization</b>	<b>Average Capitalization Ratio</b>	<b>Average Embedded Cost%</b>	<b>Overall Cost Rate</b>
1 Total Long-Term Debt	\$11,087,822	47.787%	4.519%	2.159%
2 Total Preferred Stock	\$0	0.000%	0.000%	0.000%
3 Common Equity	\$12,114,780	52.213%	9.900%	5.169%
4 Total	<u>\$23,202,602</u>	<u>100.000%</u>		<u>7.328%</u>

**Dominion Energy North Carolina  
 Docket No. E-22, Sub 556  
 Projected Revenue Requirement For DSM/EE Rider C  
 For the Rate Period February 1, 2019 - January 31, 2020**

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**R8-69 (f)(1)(ii)(a) System Rate Period Revenue Requirement per Program (excludes net lost revenue)**

Program	O&M (1)	Depreciation Expense	Cost of Capital	Utility Incentives	Total Costs and Incentives
Air Conditioner Cycling Program		\$1,475,735	\$865,945	\$124,071	
Residential NC Only Low Income Program		\$0	\$0	\$0	
Commercial HVAC Upgrade Program		\$0	\$0	\$5,215	
Commercial Lighting Program		\$0	\$0	\$31,764	
Residential Heat Pump Tune-up Program		\$0	\$0	\$0	
Residential Heat Pump Upgrade Program		\$0	\$0	\$57,450	
Residential Duct Testing & Sealing Program		\$0	\$0	\$0	
Residential Home Energy Check-Up Program		\$0	\$0	\$3,233	
Non-Residential Duct Testing & Sealing Program		\$0	\$0	\$1,106,191	
Non-Residential Energy Audit Program		\$0	\$0	\$105,081	
Non-Residential Window Film Program		\$0	\$0	\$162,239	
Non-Residential Heating & Cooling Efficiency Program		\$0	\$0	\$613,216	
Non-Residential Lighting Systems & Controls Program		\$0	\$0	\$990,218	
Residential Income and Age Qualifying Home Improvement Progr		\$0	\$0	\$0	
Qualifying Small Business Improvement Program		\$0	\$0	\$206,962	
Residential LED Lighting - NC Only		\$0	\$0	\$11,181	
Non-Residential Prescriptive Program		\$0	\$0	\$204,625	
Common Costs	\$2,318,260				\$2,318,260

**R8-69 (f)(1)(ii)(a) North Carolina Jurisdictional Rate Period Revenue Requirement per Program (excludes net lost revenue)**

Program	O&M (1)	Depreciation Expense	Cost of Capital	Utility Incentives	Total Costs and Incentives
Residential Lighting Program (PPI Only)		\$0	\$0	\$40,653	
Air Conditioner Cycling Program		\$79,845	\$46,852	\$6,713	
Residential NC Only Low Income Program		\$0	\$0	\$0	
Commercial HVAC Upgrade Program		\$0	\$0	\$5,215	
Commercial Lighting Program		\$0	\$0	\$31,764	
Residential Heat Pump Tune-up Program		\$0	\$0	\$0	
Residential Heat Pump Upgrade Program		\$0	\$0	\$3,455	
Residential Duct Testing & Sealing Program		\$0	\$0	\$0	
Residential Home Energy Check-Up Program		\$0	\$0	\$194	
Non-Residential Duct Testing & Sealing Program		\$0	\$0	\$66,517	
Non-Residential Energy Audit Program		\$0	\$0	\$6,319	
Non-Residential Window Film Program		\$0	\$0	\$9,756	
Non-Residential Heating & Cooling Efficiency Program		\$0	\$0	\$36,874	
Non-Residential Lighting Systems & Controls Program		\$0	\$0	\$59,544	
Residential Income and Age Qualifying Home Improvement Progr		\$0	\$0	\$0	
Qualifying Small Business Improvement Program		\$0	\$0	\$12,445	
Residential LED Lighting - NC Only		\$0	\$0	\$11,181	
Non-Residential Prescriptive Program		\$0	\$0	\$12,304	

(1) O&M Includes AC Cycling Property Taxes

**Dominion Energy North Carolina Power**  
**Docket No. E-22, Sub 556**  
**DSM/EE Experience Modification Factor (Rider CE) for the Test Period January 1, 2017 through December 31, 2017**  
**For (Refund)/Recovery in the Rate Period February 1, 2019 - January 31, 2020**

line no.	Jan 17	Feb 17	Mar 17	Apr 17	May 17	Jun 17	Jul 17	Aug 17	Sep 17	Oct 17	Nov 17	Dec 17	Rider CE Total
1 Monthly Revenue Requirement (Page 3; Line 12)	\$ 293,162	\$ 207,302	\$ 222,602	\$ 208,761	\$ 224,379	\$ 215,319	\$ 420,355	\$ 312,525	\$ 326,137	\$ 306,968	\$ 289,681	\$ 313,689	\$ 3,340,880
2 Less Portion Related to Utility Incentives (Page 3, Lines 9 & 1c)	\$ (37,374)	\$ (38,419)	\$ (40,503)	\$ (41,092)	\$ (43,192)	\$ (45,686)	\$ (58,284)	\$ (63,213)	\$ (63,514)	\$ (65,147)	\$ (66,843)	\$ (70,526)	\$ (633,793)
3 Monthly Revenue Requirement Net of Incentives (Line 1 + Line 2)	\$ 255,789	\$ 168,883	\$ 182,099	\$ 167,669	\$ 181,187	\$ 169,634	\$ 362,071	\$ 249,311	\$ 262,622	\$ 241,821	\$ 222,838	\$ 243,163	\$ 2,707,087
4 Monthly Rider C Revenues	\$ 115,800	\$ 115,652	\$ 120,922	\$ 128,111	\$ 95,996	\$ 148,357	\$ 189,441	\$ 137,382	\$ 168,079	\$ 99,947	\$ 145,127	\$ 146,846	\$ 1,611,659
5 Less Portion Related to Utility Incentives (Rev Req in Previous Rider C Filings)	\$ (12,890)	\$ (12,874)	\$ (13,461)	\$ (14,261)	\$ (10,686)	\$ (16,514)	\$ (21,088)	\$ (15,293)	\$ (18,710)	\$ (11,126)	\$ (16,155)	\$ (16,346)	\$ (179,402)
6 Monthly Rider C Revenues Net of Incentives (Line 4 + Line 5)	\$ 102,910	\$ 102,778	\$ 107,462	\$ 113,850	\$ 85,310	\$ 131,842	\$ 168,353	\$ 122,089	\$ 149,369	\$ 88,821	\$ 128,973	\$ 130,500	\$ 1,432,256
7 Monthly (Over)/Under Recovery Before Carrying Costs (Line 1 - Line 4)	\$ 177,362	\$ 91,650	\$ 101,679	\$ 80,651	\$ 128,383	\$ 66,963	\$ 230,914	\$ 175,143	\$ 158,058	\$ 207,021	\$ 144,553	\$ 166,843	\$ 1,729,222
8 Monthly (Over)/Under Recovery Excluding Utility Incentives (Line 3 - Line 6)	\$ 152,879	\$ 66,105	\$ 74,637	\$ 53,819	\$ 95,877	\$ 37,791	\$ 193,718	\$ 127,222	\$ 113,253	\$ 153,000	\$ 93,866	\$ 112,664	\$ 1,274,831
9 Deferred Income Tax	\$ 59,322	\$ 25,651	\$ 28,961	\$ 20,883	\$ 37,203	\$ 14,664	\$ 75,168	\$ 49,366	\$ 43,946	\$ 59,369	\$ 36,423	\$ 43,717	\$ 494,673
10 Net Monthly (Over)/Under Recovery Net of ADIT and Incentives (Line 8 - Line 9)	\$ 93,557	\$ 40,454	\$ 45,676	\$ 32,936	\$ 58,674	\$ 23,127	\$ 118,549	\$ 77,856	\$ 69,308	\$ 93,631	\$ 57,443	\$ 68,947	\$ 780,158
11 Cumulative Net Monthly (Over)/Under Recovery (Net of Incentives)	\$ 93,557	\$ 134,012	\$ 179,687	\$ 212,623	\$ 271,297	\$ 294,424	\$ 412,973	\$ 490,829	\$ 560,137	\$ 653,768	\$ 711,211	\$ 780,158	
12 Two Month Average Cumulative Net (Over)/Under Recovery (Net of Incentives)	\$ 46,779	\$ 113,784	\$ 156,849	\$ 196,155	\$ 241,960	\$ 282,860	\$ 353,698	\$ 451,901	\$ 525,483	\$ 606,953	\$ 682,490	\$ 745,685	
13 Carrying Cost on Cumulative (Over)/Under Recovery [1]	\$ 356	\$ 866	\$ 1,194	\$ 1,493	\$ 1,841	\$ 2,153	\$ 2,692	\$ 3,439	\$ 3,999	\$ 4,619	\$ 5,194	\$ 5,675	\$ 33,521
14 DSM EE/EMF to be (refunded)/collected during the Rate Period (Line 7 + Line 13)	\$ 177,718	\$ 92,516	\$ 102,873	\$ 82,144	\$ 130,224	\$ 69,116	\$ 233,606	\$ 178,582	\$ 162,057	\$ 211,640	\$ 149,747	\$ 172,518	\$ 1,762,743
Revenue Requirement for Financing Costs on Current Rider CE (Over) Recovery Net of Utility Incentives and ADIT for Jan 2017 - Dec 2017 (Page 6, Line 5)													\$ 77,179
Total DSM EE EMF Rider CE Revenue Requirement to be (Refunded)/Collected over the 16 January 1, 2018 - December 31, 2018 Rate Year													\$ 1,839,922

[1] Pre-tax Overall Weighted Rate of Return Jan - Oct, Approved in Docket No. E-22, Sub 479. Nov and Dec Approved in Docket No. E-22, Sub 532.



**Dominion Energy North Carolina**  
**Docket No. E-22, Sub 556**  
**Actual Revenue Requirement for DSM/EE EMF Rider CE**  
**For the Test Period January 1, 2017 - December 31, 2017**

line no.	Actual Jan-17	Actual Feb-17	Actual Mar-17	Actual Apr-17	Actual May-17	Actual Jun-17	Actual Jul-17	Actual Aug-17	Actual Sep-17	Actual Oct-17	Actual Nov-17	Actual Dec-17	Total Test Period
<b>1 System Program Operating Expenses</b>													
Air Conditioner Cycling Program													
Residential Lighting Program													
Residential Low Income Program (NC Only)													
Commercial HVAC Upgrade Program (NC Trailing EMV Costs Only)													
Commercial Lighting Program (NC Trailing EMV Costs Only)													
Residential Heat Pump Tune-up Program													
Residential Heat Pump Upgrade Program													
Residential Duct Testing & Sealing Program													
Residential Home Energy Check-up Program													
Non-Residential Duct Testing & Sealing Program													
Non-Residential Energy Audit Program													
Non-Residential Lighting Systems and Controls													
Non-Residential Heating & Cooling Efficiency													
Non-Residential Window Film													
Residential Income & Age Qualifying Home Improvement Program													
Commercial Small Business Improvement													
Residential LED													
<b>2 Allocate System Common Costs to Programs</b>													
Air Conditioner Cycling Program	\$ 21,030	\$ 40,808	\$ (2,459)	\$ 18,480	\$ 18,479	\$ 36,148	\$ 25,448	\$ 29,903	\$ 29,335	\$ 42,029	\$ 29,908	\$ 8,682	\$ 297,790
Residential Lighting Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Residential Low Income Program (NC Only)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Commercial HVAC Upgrade Program (NC Trailing EMV Costs Only)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Commercial Lighting Program (NC Trailing EMV Costs Only)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Residential Heat Pump Tune-up Program	\$ 1,908	\$ 3,703	\$ (223)	\$ 1,677	\$ 1,677	\$ 3,280	\$ 2,309	\$ 2,713	\$ 2,662	\$ 3,814	\$ 2,714	\$ 788	\$ 27,022
Residential Heat Pump Upgrade Program	\$ 2,159	\$ 4,189	\$ (252)	\$ 1,897	\$ 1,897	\$ 3,711	\$ 2,612	\$ 3,070	\$ 3,012	\$ 4,315	\$ 3,070	\$ 891	\$ 30,571
Residential Duct Testing & Sealing Program	\$ 886	\$ 1,718	\$ (104)	\$ 778	\$ 778	\$ 1,522	\$ 1,072	\$ 1,259	\$ 1,235	\$ 1,770	\$ 1,259	\$ 366	\$ 12,539
Residential Home Energy Check-up Program	\$ 1,961	\$ 3,806	\$ (229)	\$ 1,724	\$ 1,723	\$ 3,371	\$ 2,373	\$ 2,789	\$ 2,736	\$ 3,920	\$ 2,789	\$ 810	\$ 27,774
Non-Residential Duct Testing & Sealing Program	\$ 5,225	\$ 10,139	\$ (611)	\$ 4,591	\$ 4,591	\$ 8,981	\$ 6,322	\$ 7,429	\$ 7,288	\$ 10,442	\$ 7,431	\$ 2,157	\$ 73,986
Non-Residential Energy Audit Program	\$ 962	\$ 1,868	\$ (113)	\$ 846	\$ 846	\$ 1,654	\$ 1,165	\$ 1,368	\$ 1,343	\$ 1,923	\$ 1,369	\$ 397	\$ 13,628
Non-Residential Lighting Systems and Controls	\$ 24,561	\$ 47,658	\$ (2,872)	\$ 21,582	\$ 21,582	\$ 42,217	\$ 29,720	\$ 34,923	\$ 34,259	\$ 49,084	\$ 34,929	\$ 10,140	\$ 347,782
Non-Residential Heating & Cooling Efficiency	\$ 4,825	\$ 9,362	\$ (564)	\$ 4,240	\$ 4,239	\$ 8,293	\$ 5,838	\$ 6,860	\$ 6,730	\$ 9,642	\$ 6,861	\$ 1,992	\$ 68,317
Non-Residential Window Film	\$ 1,521	\$ 2,951	\$ (178)	\$ 1,336	\$ 1,336	\$ 2,614	\$ 1,840	\$ 2,163	\$ 2,121	\$ 3,039	\$ 2,163	\$ 628	\$ 21,536
Residential Income & Age Qualifying Home Improvement Program	\$ 14,364	\$ 27,872	\$ (1,680)	\$ 12,622	\$ 12,622	\$ 24,689	\$ 17,381	\$ 20,424	\$ 20,036	\$ 28,706	\$ 20,427	\$ 5,930	\$ 203,392
Commercial Small Business Improvement	\$ 10,428	\$ 20,235	\$ (1,220)	\$ 9,163	\$ 9,163	\$ 17,924	\$ 12,618	\$ 14,827	\$ 14,546	\$ 20,840	\$ 14,830	\$ 4,305	\$ 147,661
Residential LED	\$ 1,766	\$ 3,427	\$ (207)	\$ 1,552	\$ 1,552	\$ 3,036	\$ 2,137	\$ 2,511	\$ 2,463	\$ 3,529	\$ 2,512	\$ 729	\$ 25,007
<b>3 System Operating Expenses Including Allocated Common Costs</b>													
Air Conditioner Cycling Program													
Residential Lighting Program													
Residential Low Income Program (NC Only)													
Commercial HVAC Upgrade Program (NC Trailing EMV Costs Only)													
Commercial Lighting Program (NC Trailing EMV Costs Only)													
Residential Heat Pump Tune-up Program													
Residential Heat Pump Upgrade Program													
Residential Duct Testing & Sealing Program													
Residential Home Energy Check-up Program													
Non-Residential Duct Testing & Sealing Program													
Non-Residential Energy Audit Program													
Non-Residential Lighting Systems and Controls													
Non-Residential Heating & Cooling Efficiency													
Non-Residential Window Film													
Residential Income & Age Qualifying Home Improvement Program													
Commercial Small Business Improvement													
Residential LED													
<b>4 Jurisdictional Assignment Factors</b>													
Air Conditioner Cycling Program	5.4105%	5.4105%	5.4105%	5.4105%	5.4105%	5.4105%	5.4105%	5.4105%	5.4105%	5.4105%	5.4105%	5.4105%	5.4105%
Residential Lighting Program	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%
Residential Low Income Program (NC Only)	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%
Commercial HVAC Upgrade Program (NC Trailing EMV Costs Only)	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%
Commercial Lighting Program (NC Trailing EMV Costs Only)	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%
Residential Heat Pump Tune-up Program	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%
Residential Heat Pump Upgrade Program	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%
Residential Duct Testing & Sealing Program	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%
Residential Home Energy Check-up Program	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%
Non-Residential Duct Testing & Sealing Program	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%
Non-Residential Energy Audit Program	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%
Non-Residential Lighting Systems and Controls	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%
Non-Residential Heating & Cooling Efficiency	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%
Non-Residential Window Film	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%
Residential Income & Age Qualifying Home Improvement Program	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%
Commercial Small Business Improvement	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%	6.0132%
Residential LED	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%

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**Dominion Energy North Carolina**  
**Docket No. E-22, Sub 556**  
**Rate Base Costs For the Test Period January 1, 2017 - December 31, 2017**

line no.	Actual Dec 16	Actual Jan 17	Actual Feb 17	Actual Mar 17	Actual Apr 17	Actual May 17	Actual Jun 17	Actual Jul 17	Actual Aug 17	Actual Sep 17	Actual Oct 17	Actual Nov 17	Actual Dec 17
1 System Level Plant In Service Air Conditioner Cycling Program	\$ 19,352,669	\$ 19,357,539	\$ 19,355,869	\$ 19,359,619	\$ 19,357,219	\$ 19,360,594	\$ 19,376,119	\$ 19,378,969	\$ 19,392,094	\$ 19,396,219	\$ 19,402,969	\$ 19,426,969	\$ 19,454,944
2 System Depreciation Expense Air Conditioner Cycling Program	\$ (107,253)	\$ 105,338	\$ 105,328	\$ 105,349	\$ 105,335	\$ 155,362	\$ 115,450	\$ 115,466	\$ 115,544	\$ 115,569	\$ 115,609	\$ 115,752	\$ 115,919
3 System Accumulated Depreciation Air Conditioner Cycling Program	\$ 5,103,775	\$ 5,209,112	\$ 5,314,441	\$ 5,419,790	\$ 5,525,125	\$ 5,680,487	\$ 5,795,937	\$ 5,911,403	\$ 6,026,947	\$ 6,142,516	\$ 6,258,125	\$ 6,373,877	\$ 6,489,796
4 Cumulative System Net Plant (Line 1 - Line 3) Air Conditioner Cycling Program	\$ 14,248,894	\$ 14,148,426	\$ 14,041,428	\$ 13,939,829	\$ 13,832,094	\$ 13,680,107	\$ 13,580,182	\$ 13,467,566	\$ 13,365,147	\$ 13,253,703	\$ 13,144,844	\$ 13,053,092	\$ 12,965,148
5 System Accumulated Deferred Income Tax Air Conditioner Cycling Program	\$ (3,134,041)	\$ (3,108,108)	\$ (3,082,174)	\$ (3,056,241)	\$ (3,030,307)	\$ (3,004,374)	\$ (2,978,440)	\$ (2,952,507)	\$ (2,926,573)	\$ (2,900,641)	\$ (2,874,707)	\$ (2,848,774)	\$ (2,822,840)
6 Monthly Rate Base System (Line 4 + Line 5) Air Conditioner Cycling Program	\$ 11,114,853	\$ 11,040,318	\$ 10,959,254	\$ 10,883,588	\$ 10,801,787	\$ 10,675,733	\$ 10,601,742	\$ 10,515,059	\$ 10,438,574	\$ 10,353,062	\$ 10,270,137	\$ 10,204,318	\$ 10,142,308
7 Jurisdictional Allocation Factor Air Conditioner Cycling Program	5.4105%	5.4105%	5.4105%	5.4105%	5.4105%	5.4105%	5.4105%	5.4105%	5.4105%	5.4105%	5.4105%	5.4105%	5.4105%
8 North Carolina Rate Base (Line 6 x Line 7) Air Conditioner Cycling Program	\$ 601,369	\$ 597,336	\$ 592,950	\$ 588,857	\$ 584,431	\$ 577,611	\$ 573,607	\$ 568,917	\$ 564,779	\$ 560,152	\$ 555,666	\$ 552,105	\$ 548,750
9 North Carolina Rate Base (2 month average)		\$ 599,353	\$ 595,143	\$ 590,904	\$ 586,644	\$ 581,021	\$ 575,609	\$ 571,262	\$ 566,848	\$ 562,466	\$ 557,909	\$ 553,885	\$ 550,427
10 Cost of Capital (Page 9, Line 4/12)		0.6121%	0.6121%	0.6121%	0.6121%	0.6121%	0.6121%	0.6121%	0.6121%	0.6121%	0.6121%	0.6121%	0.6121%
11 Net Operating Income (Line 9 * Line 10) Less Interest Expense LTD	\$ 3,668	\$ 3,643	\$ 3,617	\$ 3,591	\$ 3,566	\$ 3,523	\$ 3,497	\$ 3,470	\$ 3,443	\$ 3,415	\$ 3,390	\$ 3,369	
12 Weighted Cost of Debt (Page 9, Line 1/12)		0.1829%	0.1829%	0.1829%	0.1829%	0.1829%	0.1829%	0.1829%	0.1829%	0.1829%	0.1829%	0.1634%	0.1634%
13 Rate Base (2 Month Average Line 9)	\$ 599,353	\$ 595,143	\$ 590,904	\$ 586,644	\$ 581,021	\$ 575,609	\$ 571,262	\$ 566,848	\$ 562,466	\$ 557,909	\$ 553,885	\$ 550,427	
<b>14 Revenue Requirement Interest Expense on Debt</b>	<b>\$ 1,096</b>	<b>\$ 1,089</b>	<b>\$ 1,081</b>	<b>\$ 1,073</b>	<b>\$ 1,063</b>	<b>\$ 1,053</b>	<b>\$ 1,045</b>	<b>\$ 1,037</b>	<b>\$ 1,029</b>	<b>\$ 1,020</b>	<b>\$ 905</b>	<b>\$ 900</b>	
15 Net Income Related to Common Equity (Line 11 - Line 14)	\$ 2,572	\$ 2,554	\$ 2,536	\$ 2,518	\$ 2,494	\$ 2,470	\$ 2,452	\$ 2,433	\$ 2,414	\$ 2,394	\$ 2,485	\$ 2,469	
16 North Carolina Jurisdictional Income Tax Gross-up Factor		61.20%	61.20%	61.20%	61.20%	61.20%	61.20%	61.20%	61.20%	61.20%	61.20%	61.20%	61.20%
<b>17 Revenue Requirement Common Equity Including Income Taxes</b>	<b>\$ 4,203</b>	<b>\$ 4,174</b>	<b>\$ 4,144</b>	<b>\$ 4,114</b>	<b>\$ 4,075</b>	<b>\$ 4,037</b>	<b>\$ 4,006</b>	<b>\$ 3,975</b>	<b>\$ 3,945</b>	<b>\$ 3,913</b>	<b>\$ 4,061</b>	<b>\$ 4,035</b>	
<b>18 Revenue Requirement on Rate Base (Line 14 + Line 17)</b>	<b>\$ 5,299</b>	<b>\$ 5,262</b>	<b>\$ 5,225</b>	<b>\$ 5,187</b>	<b>\$ 5,137</b>	<b>\$ 5,090</b>	<b>\$ 5,051</b>	<b>\$ 5,012</b>	<b>\$ 4,973</b>	<b>\$ 4,933</b>	<b>\$ 4,966</b>	<b>\$ 4,935</b>	

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**Dominion Energy North Carolina**  
**Docket No. E-22, Sub 556**  
**Actual Net Lost Revenues**  
**For the Test Period January 1, 2017 - December 31, 2017**

line no.	Actual Jan-17	Actual Feb-17	Actual Mar-17	Actual Apr-17	Actual May-17	Actual Jun-17	Actual Jul-17	Actual Aug-17	Actual Sep-17	Actual Oct-17	Actual Nov-17	Actual Dec-17	Total Test Period
<b>1 Jurisdictional Energy Reductions (kWh)</b>													
Residential Lighting Program	-	-	-	-	-	-	-	-	-	-	-	-	-
Residential Low Income Program (NC Only)	-	-	-	-	-	-	-	-	-	-	-	-	-
Commercial HVAC Upgrade Program (NC Trailing EMV Costs Only)	-	-	-	-	-	-	-	-	-	-	-	-	-
Commercial Lighting Program (NC Trailing EMV Costs Only)	-	-	-	-	-	-	-	-	-	-	-	-	-
Residential Heat Pump Tune-up Program	10,293	10,821	11,163	11,163	11,163	11,163	11,163	11,163	11,163	11,163	11,163	11,163	132,742
Residential Heat Pump Upgrade Program	5,760	6,227	6,373	6,373	6,373	6,373	6,373	6,373	6,373	6,373	6,373	6,373	75,716
Residential Duct Testing & Sealing Program	697	773	788	788	788	788	788	788	788	788	788	788	9,346
Residential Home Energy Check-up Program	598	3,181	3,672	3,672	3,672	3,672	3,672	3,672	3,672	3,672	3,672	3,672	40,499
Non-Residential Duct Testing & Sealing Program	36,264	36,981	48,535	48,535	48,535	48,535	48,535	48,535	48,535	48,535	48,535	48,535	558,594
Non-Residential Energy Audit Program	39,305	56,082	62,107	62,107	62,107	62,107	62,107	62,107	62,107	62,107	62,107	62,107	716,462
Non-Residential Lighting Systems and Controls	113,044	115,917	125,393	141,887	171,887	171,887	171,887	179,447	207,479	208,952	210,060	210,103	2,027,944
Non-Residential Heating & Cooling Efficiency	445	445	445	445	4,764	4,788	153,367	153,367	153,864	153,864	153,864	153,864	933,523
Non-Residential Window Film	-	-	-	-	-	-	-	-	-	-	-	-	-
Residential Income & Age Qualifying Home Improvement Program	9,829	10,526	11,260	11,735	12,023	12,203	12,324	12,689	13,043	13,043	13,334	14,412	146,423
Commercial Small Business Improvement	-	-	-	-	-	1,049	5,031	5,031	5,031	5,031	5,031	12,904	39,109
Residential LED	-	-	-	-	-	-	-	13,955	54,112	94,797	151,893	197,605	512,362
<b>2 Billing Rate</b>													
Residential Lighting Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Residential Low Income Program (NC Only)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Commercial HVAC Upgrade Program (NC Trailing EMV Costs Only)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Commercial Lighting Program (NC Trailing EMV Costs Only)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Residential Heat Pump Tune-up Program	\$ 0.07397	\$ 0.07403	\$ 0.07406	\$ 0.07408	\$ 0.07408	\$ 0.08886	\$ 0.08886	\$ 0.08885	\$ 0.08886	\$ 0.07407	\$ 0.07405	\$ 0.07400	\$ 0.07400
Residential Heat Pump Upgrade Program	\$ 0.07402	\$ 0.07404	\$ 0.07406	\$ 0.07413	\$ 0.07414	\$ 0.08890	\$ 0.08889	\$ 0.08893	\$ 0.08890	\$ 0.07410	\$ 0.07407	\$ 0.07388	\$ 0.07406
Residential Duct Testing & Sealing Program	\$ 0.07399	\$ 0.07397	\$ 0.07390	\$ 0.07400	\$ 0.07397	\$ 0.08872	\$ 0.08872	\$ 0.08875	\$ 0.08872	\$ 0.07394	\$ 0.07388	\$ 0.07394	\$ 0.07394
Residential Home Energy Check-up Program	\$ 0.07408	\$ 0.07413	\$ 0.07412	\$ 0.07420	\$ 0.07411	\$ 0.08894	\$ 0.08882	\$ 0.08886	\$ 0.08890	\$ 0.07412	\$ 0.07418	\$ 0.07409	\$ 0.07409
Non-Residential Duct Testing & Sealing Program	\$ 0.06497	\$ 0.05899	\$ 0.05860	\$ 0.05717	\$ 0.05882	\$ 0.06593	\$ 0.07654	\$ 0.07530	\$ 0.06844	\$ 0.06494	\$ 0.06165	\$ 0.06134	\$ 0.06134
Non-Residential Energy Audit Program	\$ 0.07123	\$ 0.07137	\$ 0.07193	\$ 0.07039	\$ 0.06989	\$ 0.07279	\$ 0.07504	\$ 0.07510	\$ 0.07340	\$ 0.07164	\$ 0.07462	\$ 0.07294	\$ 0.07294
Non-Residential Lighting Systems and Controls	\$ 0.07680	\$ 0.07230	\$ 0.07349	\$ 0.06999	\$ 0.06855	\$ 0.07632	\$ 0.08099	\$ 0.08163	\$ 0.07596	\$ 0.07391	\$ 0.07292	\$ 0.07354	\$ 0.07354
Non-Residential Heating & Cooling Efficiency	\$ 0.06531	\$ 0.04566	\$ 0.04393	\$ 0.04296	\$ 0.04237	\$ 0.05570	\$ 0.07267	\$ 0.09245	\$ 0.06573	\$ 0.06925	\$ 0.05345	\$ 0.05179	\$ 0.05179
Non-Residential Window Film	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Residential Income & Age Qualifying Home Improvement Program	\$ 0.07455	\$ 0.07456	\$ 0.07447	\$ 0.07443	\$ 0.07442	\$ 0.08926	\$ 0.08943	\$ 0.08927	\$ 0.08933	\$ 0.07438	\$ 0.07439	\$ 0.07440	\$ 0.07440
Commercial Small Business Improvement	\$ 0.06131	\$ 0.06187	\$ 0.06172	\$ 0.06164	\$ 0.06143	\$ 0.06961	\$ 0.06856	\$ 0.07019	\$ 0.06799	\$ 0.06299	\$ 0.05859	\$ 0.06319	\$ 0.06319
Residential LED	\$ 0.07434	\$ 0.07438	\$ 0.07439	\$ 0.07438	\$ 0.07435	\$ 0.08919	\$ 0.08914	\$ 0.08918	\$ 0.08918	\$ 0.07433	\$ 0.07438	\$ 0.07438	\$ 0.07438
<b>3 Jurisdictional Lost Revenues (Line 1 x Line 2)</b>													
Residential Lighting Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Residential Low Income Program (NC Only)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Commercial HVAC Upgrade Program (NC Trailing EMV Costs Only)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Commercial Lighting Program (NC Trailing EMV Costs Only)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Residential Heat Pump Tune-up Program	\$ 761	\$ 801	\$ 827	\$ 827	\$ 827	\$ 992	\$ 991	\$ 992	\$ 992	\$ 827	\$ 827	\$ 826	\$ 10,489
Residential Heat Pump Upgrade Program	\$ 426	\$ 461	\$ 472	\$ 472	\$ 472	\$ 567	\$ 566	\$ 567	\$ 567	\$ 472	\$ 472	\$ 472	\$ 5,987
Residential Duct Testing & Sealing Program	\$ 52	\$ 57	\$ 58	\$ 58	\$ 58	\$ 70	\$ 70	\$ 70	\$ 70	\$ 58	\$ 58	\$ 58	\$ 738
Residential Home Energy Check-up Program	\$ 44	\$ 236	\$ 272	\$ 272	\$ 272	\$ 327	\$ 326	\$ 326	\$ 326	\$ 272	\$ 272	\$ 272	\$ 3,219
Non-Residential Duct Testing & Sealing Program	\$ 2,356	\$ 2,181	\$ 2,844	\$ 2,775	\$ 2,855	\$ 3,200	\$ 3,715	\$ 3,655	\$ 3,322	\$ 3,152	\$ 2,992	\$ 2,977	\$ 36,024
Non-Residential Energy Audit Program	\$ 2,800	\$ 4,003	\$ 4,467	\$ 4,372	\$ 4,341	\$ 4,521	\$ 4,661	\$ 4,664	\$ 4,559	\$ 4,449	\$ 4,634	\$ 4,530	\$ 52,000
Non-Residential Lighting Systems and Controls	\$ 8,682	\$ 8,381	\$ 9,215	\$ 9,931	\$ 11,783	\$ 13,118	\$ 13,921	\$ 14,648	\$ 15,760	\$ 15,444	\$ 15,318	\$ 15,451	\$ 151,651
Non-Residential Heating & Cooling Efficiency	\$ 29	\$ 20	\$ 20	\$ 19	\$ 202	\$ 267	\$ 11,145	\$ 14,179	\$ 10,113	\$ 10,655	\$ 8,224	\$ 7,969	\$ 62,842
Non-Residential Window Film	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Residential Income & Age Qualifying Home Improvement Program	\$ 733	\$ 785	\$ 839	\$ 873	\$ 895	\$ 1,089	\$ 1,102	\$ 1,133	\$ 1,165	\$ 970	\$ 992	\$ 1,072	\$ 11,648
Commercial Small Business Improvement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 73	\$ 345	\$ 353	\$ 342	\$ 317	\$ 295	\$ 815	\$ 2,540
Residential LED	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,244	\$ 4,826	\$ 7,046	\$ 11,298	\$ 14,698	\$ 39,112
<b>4 Variable O&amp;M Savings</b>													
	\$ (7)	\$ (3)	\$ (9)	\$ (5)	\$ (10)	\$ (35)	\$ (56)	\$ (115)	\$ (25)	\$ (13)	\$ (37)	\$ (113)	\$ (429)
<b>5 Found Revenues</b>													
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>6 Net Lost Revenues (Line 3 + Line 4 + Line 5)</b>													
Residential Lighting Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Residential Low Income Program (NC Only)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Commercial HVAC Upgrade Program (NC Trailing EMV Costs Only)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Commercial Lighting Program (NC Trailing EMV Costs Only)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Residential Heat Pump Tune-up Program	\$ 761	\$ 801	\$ 826	\$ 827	\$ 827	\$ 991	\$ 990	\$ 989	\$ 991	\$ 827	\$ 826	\$ 824	\$ 10,480
Residential Heat Pump Upgrade Program	\$ 426	\$ 461	\$ 472	\$ 472	\$ 472	\$ 566	\$ 565	\$ 566	\$ 566	\$ 472	\$ 472	\$ 471	\$ 5,981
Residential Duct Testing & Sealing Program	\$ 52	\$ 57	\$ 58	\$ 58	\$ 58	\$ 70	\$ 70	\$ 70	\$ 70	\$ 58	\$ 58	\$ 58	\$ 737
Residential Home Energy Check-up Program	\$ 44	\$ 236	\$ 272	\$ 272	\$ 272	\$ 326	\$ 326	\$ 325	\$ 326	\$ 272	\$ 272	\$ 271	\$ 3,216
Non-Residential Duct Testing & Sealing Program	\$ 2,355	\$ 2,181	\$ 2,843	\$ 2,774	\$ 2,853	\$ 3,195	\$ 3,709	\$ 3,643	\$ 3,320	\$ 3,151	\$ 2,989	\$ 2,970	\$ 35,982
Non-Residential Energy Audit Program	\$ 2,798	\$ 4,002	\$ 4,465	\$ 4,371	\$ 4,339	\$ 4,514	\$ 4,653	\$ 4,650	\$ 4,556	\$ 4,448	\$ 4,631	\$ 4,520	\$ 51,948
Non-Residential Lighting Systems and Controls	\$ 8,678	\$ 8,379	\$ 9,211	\$ 9,928	\$ 11,777	\$ 13,100	\$ 13,901	\$ 14,607	\$ 15,751	\$ 15,439	\$ 15,306	\$ 15,418	\$ 151,495
Non-Residential Heating & Cooling Efficiency	\$ 29	\$ 20	\$ 20	\$ 19	\$ 202	\$ 266	\$ 11,127	\$ 14,143	\$ 10,107	\$ 10,652	\$ 8,215	\$ 7,945	\$ 62,745
Non-Residential Window Film	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Residential Income & Age Qualifying Home Improvement Program	\$ 732	\$ 785	\$ 838	\$ 873	\$ 894	\$ 1,088	\$ 1,101	\$ 1,130	\$ 1,165	\$ 970	\$ 991	\$ 1,070	\$ 11,637
Commercial Small Business Improvement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 73	\$ 344	\$ 352	\$ 342	\$ 317	\$ 294	\$ 813	\$ 2,536
Residential LED	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,241	\$ 4,823	\$ 7,044	\$ 11,289	\$ 14,667	\$ 39,065
<b>Total Lost Revenues All Programs</b>	<b>\$ 15,876</b>	<b>\$ 16,922</b>	<b>\$ 19,005</b>	<b>\$ 19,595</b>	<b>\$ 21,695</b>	<b>\$ 24,115</b>	<b>\$ 36,442</b>	<b>\$ 40,123</b>	<b>\$ 36,852</b>	<b>\$ 36,288</b>	<b>\$ 33,761</b>	<b>\$ 33,548</b>	<b>\$ 334,221</b>

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Aug 21 2018

**Dominion Energy North Carolina**  
**Docket No. E-22, Sub 556**  
**Refund of Financing Costs on Current Rider CE EMF Over-Recovery Over the Period of January 2017 - December 2017**  
**To Be Refunded Over the Rate Period February 1, 2019 - January 31, 2020**

line  
no.

1	Test Period (Over)/Under Recovery - Net of Utility Incentives (Net of ADIT), R8-69(b)(6) (Schedule 2, Page 1, Line 10)	\$ 780,000
2	Overall Cost of Capital Approved in Docket No. E-22, Sub 479 Grossed Up for Taxes	9.1%
3	Monthly Interest Rate (Line 2/12)	0.76167%
4	Number of Months Refund is Outstanding (January 2018 - January 2019)	12
5	<b>Interest to be Paid on Test Period (Over) Recovery Net of ADIT</b>	<b>\$ 77,100</b>

---

**VIRGINIA ELECTRIC AND POWER COMPANY**  
**Cost of Capital and Capital Structure**  
**13-Month Average**  
**As of December 31, 2017**

---

line no.	Description	Average Capitalization	Average Capitalization Ratio	Average Embedded Cost%	Overall Cost Rate
1	Total Long-Term Debt	10,962,762	47.979%	4.5745%	2.195%
2	Total Preferred Stock	0	0.000%	0.0000%	0.000%
3	Common Equity	11,886,486	52.021%	9.9000%	5.150%
4	Total	<u>\$22,849,248</u>	<u>100.000%</u>		<u>7.345%</u>

file: Summary ADIT AC Cycling 2018 Filing 8.13.2018

Virginia Power  
Estimated ADIT  
Dec 2016 - Jan 2020

Year	Month	ADIT
2016	Dec	(3,134,041)
2017	Jan	(3,108,108)
2017	Feb	(3,082,174)
2017	Mar	(3,056,241)
2017	Apr	(3,030,307)
2017	May	(3,004,374)
2017	Jun	(2,978,440)
2017	Jul	(2,952,507)
2017	Aug	(2,926,573)
2017	Sep	(2,900,641)
2017	Oct	(2,874,707)
2017	Nov	(2,848,774)
2017	Dec	(2,822,840)
2018	Jan	(2,794,878)
2018	Feb	(2,767,287)
2018	Mar	(2,737,881)
2018	Apr	(2,708,477)
2018	May	(2,679,072)
2018	Jun	(2,649,668)
2018	Jul	(2,620,263)
2018	Aug	(2,590,859)
2018	Sep	(2,561,454)
2018	Oct	(2,532,049)
2018	Nov	(2,502,644)
2018	Dec	(2,473,241)
2019	Jan	(2,445,654)
2019	Feb	(2,420,363)
2019	Mar	(2,397,613)
2019	Apr	(2,377,322)
2019	May	(2,359,573)
2019	Jun	(2,344,283)
2019	Jul	(2,331,534)
2019	Aug	(2,321,327)
2019	Sep	(2,313,579)
2019	Oct	(2,308,372)
2019	Nov	(2,305,625)
2019	Dec	(2,305,418)
2020	Jan	(2,274,770)

**Virginia Power  
 State Apportionment  
 2017**

X:\Income\VA Power\RIDERS\A-5\AC Cycling Device\2018\est ac cycling Dec 2016 - Jan 2020.xlsx\apportionment

		Year End 2017 @ Fed Rate 21% <u>Non Current Def</u>	Year End 2017 @ Fed Rate 35% <u>Non Current Def</u>
NC	0.03786400		
Current	3.000000%		
Def Current	3.000000%		
Non Current	2.500000%		
	0.113592%	0.00094660	0.00094660
WV	0.02405000		
Current	6.500000%		
Def Current	6.500000%		
Non Current	6.500000%		
	0.156325%	0.00156325	0.00156325
VA	0.93329800		
Current	6.000000%		
Def Current	6.000000%		
Non Current	6.000000%	0.05599788	0.05599788
DC	0.00000000		
Current	9.000000%		
Def Current	9.000000%		
Non Current	9.000000%	0.00000000	0.00000000
		0.05850773	0.05850773
		0.04622111	0.03803002
		0.21000000	0.35000000
		0.25622111	0.38803002
	fed effect of state	-0.01228662	-0.02047771

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Aug 21 2018



**Dominion North Carolina Power**  
**Docket No. E-22, Sub 556**  
**Monthly Revenues - Rider C**  
**For the Test Period January 1, 2017 - December 31, 2017**

<u>Revenue Class</u>	<u>Jan-17</u>	<u>Feb-17</u>	<u>Mar-17</u>	<u>Apr-17</u>	<u>May-17</u>	<u>Jun-17</u>	<u>Jul-17</u>	<u>Aug-17</u>	<u>Sep-17</u>	<u>Oct-17</u>	<u>Nov-17</u>	<u>Dec-17</u>	<u>2017 Totals</u>
Residential	\$ 114,024	\$ 75,179	\$ 72,567	\$ 60,314	\$ 65,163	\$ 89,687	\$ 116,211	\$ 104,024	\$ 76,568	\$ 64,540	\$ 68,092	\$ 92,738	\$ 999,106
Commercial	\$ 33,322	\$ 30,732	\$ 36,253	\$ 34,264	\$ 37,912	\$ 42,649	\$ 49,041	\$ 50,383	\$ 44,941	\$ 42,876	\$ 36,642	\$ 39,818	\$ 478,833
Industrial	\$ (37,934)	\$ 3,515	\$ 5,948	\$ 27,337	\$ (12,553)	\$ 9,093	\$ 17,107	\$ (24,593)	\$ 39,867	\$ (13,396)	\$ 34,594	\$ 7,893	\$ 56,880
COV	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Co/Muni	\$ 6,389	\$ 6,225	\$ 6,154	\$ 6,196	\$ 5,474	\$ 6,927	\$ 7,082	\$ 7,567	\$ 6,703	\$ 5,927	\$ 5,800	\$ 6,396	\$ 76,840
St & Traffic (COVA)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Federal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total Revenue by Month</b>	<b>\$ 115,800</b>	<b>\$ 115,652</b>	<b>\$ 120,922</b>	<b>\$ 128,111</b>	<b>\$ 95,996</b>	<b>\$ 148,357</b>	<b>\$ 189,441</b>	<b>\$ 137,382</b>	<b>\$ 168,079</b>	<b>\$ 99,947</b>	<b>\$ 145,127</b>	<b>\$ 146,846</b>	<b>\$ 1,611,659</b>

**DIRECT TESTIMONY  
OF  
J. CLAYTON CROUCH  
ON BEHALF OF  
DOMINION ENERGY NORTH CAROLINA  
BEFORE THE  
NORTH CAROLINA UTILITIES COMMISSION  
DOCKET NO. E-22, SUB 556**

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AUG 21 2018

1 **Q. Please state your name, business address, and position with Virginia**  
2 **Electric and Power Company (“Dominion Energy North Carolina” or the**  
3 **“Company”).**

4 A. My name is J. Clayton Crouch and I am a Regulatory Consultant for  
5 Dominion Energy North Carolina. My business address is 701 East Cary  
6 Street, Richmond, Virginia 23219. A statement of my background and  
7 qualifications is attached as Appendix A.

8 **Q. Please describe your area of responsibility with the Company.**

9 A. I am responsible for analyzing and calculating Company data used to create  
10 the allocation factors used in the cost of service studies and other applications  
11 for the Customer Rates Department.

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

13 A. My testimony supports the Company’s request to recover all reasonable and  
14 prudent costs incurred in adopting and implementing the Company’s portfolio  
15 of North Carolina demand-side management (“DSM”) and energy efficiency  
16 (“EE”) programs (“DSM/EE Programs” or “Programs”) and utility incentives,  
17 through its updated Rider C, as well as the Company’s experience  
18 modification factor (“EMF”) rider, Rider CE (“Application”). The purpose of

1 my testimony is to explain the jurisdiction and customer class responsibility of  
2 costs for the approved and proposed DSM/EE Programs for which the  
3 Company seeks approval for cost recovery in this proceeding.

4 **Q. Mr. Crouch, are you sponsoring any exhibits or schedules in connection**  
5 **with your testimony?**

6 A. Yes. Company Exhibit JCC-1, consisting of Schedules 1-4 (Schedules 1 and  
7 3 provided in public and confidential versions filed under seal) has been  
8 prepared under my direction and supervision, and is accurate and complete to  
9 the best of my knowledge and belief. My Schedules 1-4 support the  
10 jurisdictional allocation and customer class allocation of DSM/EE costs for  
11 the development of Rider C and Rider CE, as follows:

- 12 • Schedule 1 shows the allocation or assignment of system-level Common  
13 Costs to each individual DSM and EE Program and the determination of  
14 jurisdictional responsibility of system costs for approved Programs,  
15 including allocated Common Costs.
- 16 • Schedule 2 shows the factors for allocating total Program revenue  
17 requirements to customer classes.
- 18 • Schedule 3 shows how total Program revenue requirements are allocated  
19 to customer classes.
- 20 • Schedule 4 provides the documents to be filed in accordance with North  
21 Carolina Utilities Commission (“NCUC” or the “Commission”) Rule R8-  
22 69(f)(1)(ii)(b) and NCUC Rule R8-69(f)(1)(viii).

1 **Q. Before describing how you propose to determine the jurisdictional and**  
2 **customer class responsibility for DSM/EE costs, is the manner you**  
3 **propose consistent with the allocation approach approved in last year’s**  
4 **DSM/EE rider proceeding, Docket No. E-22, Sub 545?**

5 A. Yes. The methodology that I will describe is consistent with the methodology  
6 approved by the Commission’s December 21, 2017 Order in the Company’s  
7 most recent cost recovery proceeding in Docket No. E-22, Sub 545. This  
8 methodology is also consistent with the updated Cost Recovery and Incentive  
9 Mechanism (“Mechanism”) approved by the Commission’s May 22, 2017  
10 Order issued in Docket No. E-22, Sub 464.

11 **I. ALLOCATION OF COMMON COSTS TO**  
12 **DSM/EE PROGRAMS**

13 **Q. Please explain Common Costs and how such costs are allocated to the**  
14 **DSM and EE Programs.**

15 A. Certain costs including internal labor and related costs, program marketing  
16 costs, and information gathering costs are not directly attributable to specific  
17 Programs. The Company characterizes these costs as “Common Costs,”  
18 which are needed to design, implement, and operate the Programs. The DSM  
19 and EE Programs are administered in the Company’s Virginia and North  
20 Carolina service territories that compose the PJM designated DOM Zone.  
21 Therefore, these costs will be incurred and recovered on the DOM Zone  
22 system-level basis.

1 According to Paragraphs 29 – 30 of the revised Mechanism, system-level  
2 Common Costs are to be allocated to each DSM/EE Program on the basis of  
3 the estimated relative operating costs of each individual program including  
4 O&M, depreciation, property taxes, and insurance expenses.

5 My Schedule 1, Page 1 provides a general description of how system-level  
6 Common Costs are allocated to each Program. Page 2 provides the allocation  
7 of these costs to the Programs for the January 1, 2017, to December 31, 2017,  
8 test period (“Test Period”) through the EMF for recovery through Rider CE.  
9 Page 3 provides the allocation of these costs for the projected February 1,  
10 2019, to January 31, 2020, rate period (“Rate Period”) through Rider C.

11 **II. JURISDICTIONAL ALLOCATION OF**  
12 **PROGRAM COSTS**

13 **Q. Please describe how the system costs for approved DSM/EE Programs,**  
14 **including allocated Common Costs, will be allocated to the North**  
15 **Carolina jurisdiction according to the Mechanism.**

16 **A.** System-level costs for the approved DSM/EE Programs, including allocated  
17 Common Costs, are allocated or assigned to the North Carolina jurisdiction  
18 according to Paragraph 30 of the Mechanism. Paragraph 30 provides for the  
19 cost of DSM programs to be allocated on the basis of the Company’s  
20 coincident peak and for the cost of EE programs to be allocated on the basis of  
21 energy. In the case of both the DSM and EE allocation factors, the following  
22 retail jurisdictions are included in the development of each factor: (i) the  
23 North Carolina retail jurisdiction; (ii) the Virginia retail jurisdiction; and

1 (iii) Virginia non-jurisdictional customers excluding contract classes that have  
2 elected not to participate, customers in participating contract classes that have  
3 elected not to participate, and customers in participating contract classes that  
4 are exempt or have opted out.

5 My Schedule 1, Page 1 provides a general description of how DSM/EE costs  
6 are allocated or assigned to the North Carolina jurisdiction. My Schedule 1,  
7 Page 4 provides the development of jurisdictional allocation factors for DSM  
8 and EE Programs. Coincident peak and energy allocation factors are  
9 calculated as described above to allocate costs from the system to the North  
10 Carolina retail jurisdiction. For the updated EMF Test Period, the allocation  
11 factors for determining jurisdictional costs are based on the 12 months ended  
12 December 31, 2017, and are shown on Schedule 1, Page 4. For the Rate  
13 Period, the allocation factors are also based on the 12 months ended  
14 December 31, 2017, and are shown on Schedule 2, Page 2.

15 **III. ASSIGNMENT AND ALLOCATION OF**  
16 **JURISDICTIONAL COSTS TO CUSTOMER CLASSES**

17 **Q. Once costs have been determined for the North Carolina jurisdiction,**  
18 **how will the revenue requirements be assigned or allocated to the**  
19 **customer classes according to the Mechanism?**

20 A. Retail jurisdictional costs for the Company's DSM/EE Program portfolio,  
21 including allocated Common Costs, shall be assigned or allocated to North  
22 Carolina retail customer classes based on the particular classes at which each  
23 program is targeted according to Paragraph 33 of the Mechanism. The cost of

1 residential Programs is assigned to the residential class as shown in my  
2 Schedule 2, Page 1. The costs of non-residential Programs are allocated to  
3 targeted non-residential customer classes using an energy-based allocation  
4 factor as shown in my Schedule 2, Page 1.

5 My Schedule 2, Page 2 provides the development of the coincident peak and  
6 energy allocation factors for the non-residential Programs. I have developed  
7 class allocation factors for the non-residential programs for both the true-up  
8 through the EMF and the projected Rate Period consistent with the time  
9 periods used to allocate costs from the system to the jurisdiction. For the  
10 updated EMF, the allocation factors for determining customer class  
11 responsibility for jurisdictional costs are based on the 12 months ended  
12 December 31, 2017, and are shown on Schedule 2, Page 2. I have developed  
13 class allocation factors for these same programs. For the projected Rate  
14 Period, the allocation factors for determining customer class responsibility for  
15 jurisdictional costs are also based on the 12 months ended December 31,  
16 2017, and are shown on Schedule 2, Page 2.

17 **Q. How will the Test Period and Rate Period revenue requirements to be**  
18 **recovered through the EMF Rider CE and Rider C be assigned or**  
19 **allocated for the residential Programs to the customer classes?**

20 A. The total amount to be recovered through the DSM/EE EMF Rider CE for the  
21 residential Programs will be assigned to the residential class. The total  
22 revenue requirement for DSM/EE Programs Rider C for the residential  
23 Programs will also be assigned to the residential class for cost recovery

1 purposes. Please refer to my Schedule 2, Page 1 for further explanation of this  
2 assignment.

3 **Q. How will the Test Period and Rate Period revenue requirements to be**  
4 **recovered through the EMF Rider CE and Rider C be assigned or**  
5 **allocated for the non-residential Programs to the customer classes?**

6 A. The total amount to be recovered through the DSM/EE EMF Rider CE for the  
7 non-residential Programs will be allocated to the non-residential customer  
8 classes eligible to participate in such Programs. The total revenue  
9 requirement for DSM/EE Programs Rider C for the non-residential Programs  
10 will also be allocated to the non-residential customer classes eligible to  
11 participate in such Programs.

12 Regarding the development of allocation factors, these Programs are not  
13 limited to commercial customers, since other non-residential customers,  
14 including industrial customers, are eligible to participate. The allocation  
15 factors used to allocate these revenue requirements will be adjusted for  
16 customers who elect to opt out as provided for under N.C.G.S. § 62-133.9(f).  
17 In addition, no costs will be allocated to the Street and Outdoor Lighting class  
18 or the Traffic Lighting class since such classes will not be targeted by these  
19 Programs. Neither class will experience a reduction in energy consumption or  
20 demand resulting from these Programs and will, therefore, not experience a  
21 benefit due to a change in their production demand allocation factor if all  
22 other things remain the same. Other non-residential customer classes that do  
23 participate in the Programs will experience reductions in energy consumption



1 and/or demand and may receive a benefit due to a change in their production  
2 demand allocation factor. It is appropriate to not allocate any costs to  
3 customer classes that will not benefit from participation in a program or  
4 programs.

5 Page 1 of my Schedule 2 summarizes the factor used to allocate the costs of  
6 the DSM/EE commercial Programs to the customer classes.

7 **Q. Do you have a schedule that shows the allocation to the customer classes**  
8 **of the amounts to be recovered through the DSM/EE EMF Rider CE and**  
9 **DSM/EE Programs Rider C?**

10 A. Yes. My Schedule 3, Pages 1 and 2 provide the allocation to the customer  
11 classes of the amount that needs to be collected for the Test Period true-up  
12 through the DSM/EE EMF Rider CE. My Schedule 3, Pages 3 and 4 provide  
13 the allocation of the revenue requirement to the customer classes for recovery  
14 during the Rate Period through DSM/EE Programs Rider C. These total  
15 revenue requirements are obtained from Company Witness Alan J. Moore's  
16 Schedule 1 and Schedule 2 for Rider CE and Rider C, respectively.

17 **Q. To summarize, what is the total revenue requirement for DSM/EE**  
18 **Programs by customer class for recovery under the proposed DSM/EE**  
19 **EMF Rider CE and DSM/EE Rider C?**

20 A. My Schedule 3, Page 2, line 9 provides the amount to be recovered by each  
21 customer class under the proposed DSM/EE EMF Rider CE. My Schedule 3,

1 Page 4, line 2 provides the total revenue requirement by customer class under  
2 the proposed DSM/EE Rider C.

3 **Q. Please outline what is included in Schedule 4 of your testimony.**

4 A. In accordance with NCUC Rule R8-69(f)(1)(ii)(b), the total cost that the  
5 utility does not expect to incur during the Rate Period as a direct result of the  
6 DSM/EE measures in the aggregate to the North Carolina jurisdiction are  
7 shown on Pages 1 and 2 of my Schedule 4. Expenses not expected to be  
8 incurred are provided by Company Witness Deanna R. Kesler. In this  
9 Schedule, I provide the North Carolina jurisdictional allocation factors that  
10 were produced in the Company's most recent SWP&A year ending December  
11 31, 2017 cost of service study, as filed on June 15, 2018, in Docket No. E-22,  
12 Sub 532 that would be used to allocate these costs had they been incurred. As  
13 can be seen on Schedule 4, Pages 1 and 2 of my testimony, separate demand  
14 and energy weighted factors should be used to allocate the demand-related  
15 expenses not expected to be incurred and the energy-related expenses not  
16 expected to be incurred, respectively. These factors are Factor 1 (demand-  
17 weighted) and Factor 3 (energy).

18 Also included in Schedule 4 are Pages 3 through 5, which are workpapers  
19 filed in accordance with NCUC Rule R8-69(f)(1)(viii). These pages show the  
20 development of allocation factors used to allocate system expenses not  
21 expected to be incurred during the Rate Period (Pages 4 and 5).

1 Q. Does this conclude your direct testimony?

2 A. Yes, it does.

**BACKGROUND AND QUALIFICATIONS  
OF  
J. CLAYTON CROUCH**

J. Clayton Crouch began his career as a field technician for Enviroplan, Inc. while working on his B.S. degree at Point Park University. Mr. Crouch accepted an engineering position with Westinghouse Electric Corp. following graduation. He worked on nuclear power plant control systems at a number of domestic and international locations. Mr. Crouch took an educational leave of absence to finish his M.S. degree as a Graduate Student Researcher at the University of Pittsburgh. He moved to Wilmington, Delaware upon graduation and worked as a System Manager for Public Service Electric and Gas Company supporting the Salem and Hope Creek power stations.

Mr. Crouch began working for Dominion Energy Virginia in 1997 as a Senior Staff Engineer at the Surry Power Station. He transferred to the Fossil and Hydro Engineering Department and obtained a Six Sigma Master Black Belt certification while working on a number of system design improvements and environmental cost savings projects. In 2005, Mr. Crouch became the Energy Asset Advisor for the Dominion Clearinghouse. The following year, he took a promotion to Manager-Regulation and oversaw wholesale account processing, load research, and the PJM Interconnection L.L.C. (“PJM”) load serving entity settlements for the Dominion Zone. He now serves as a regulatory consultant on matters pertaining to cost allocation and cost of service in the Customer Rates Department.

Mr. Crouch has previously presented testimony before the State Corporation Commission of Virginia and the North Carolina Utilities Commission.

**DOMINION ENERGY NORTH CAROLINA**  
**ASSIGNMENT AND ALLOCATION OF COSTS TO NORTH CAROLINA JURISDICTION**  
**DOCKET NO. E-22, SUB 556**

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<u>Basis for Determining Cost for North Carolina Jurisdiction</u>					
<u>Line</u>	<u>Name of System Program</u>	<u>Program Category</u>	<u>Assignment</u>	<u>Allocation to NC Juris</u>	<u>If Allocated, Allocation Factor</u>
<b>North Carolina Programs (2)</b>					
1	Air Conditioner Cycling Program	Peak-Clipping		X	1CP
2	Commercial HVAC Upgrade Program	Energy Efficiency	X		
3	Commercial Lighting Program	Energy Efficiency	X		
4	Residential Heat Pump Tune-up Program	Energy Efficiency		X	Energy
5	Residential Heat Pump Upgrade Program	Energy Efficiency		X	Energy
6	Residential Duct Testing & Sealing Program	Energy Efficiency		X	Energy
7	Residential Home Energy Check-Up Program	Energy Efficiency		X	Energy
8	Non-Residential Duct Testing & Sealing Program	Energy Efficiency		X	Energy
9	Non-Residential Energy Audit Program	Energy Efficiency		X	Energy
10	Non-Residential Window Film Program	Energy Efficiency		X	Energy
11	Non-Residential Heating & Cooling Efficiency Program	Energy Efficiency	X		
12	Non-Residential Lighting Systems & Controls Program	Energy Efficiency	X		
13	Residential Income and Age Qualifying Home Improvement Progra	Energy Efficiency		X	Energy
14	Qualifying Small Business Improvement Program	Energy Efficiency		X	Energy
15	Residential LED Lighting - NC Only	Energy Efficiency	X		
16	Non-Residential Prescriptive Program	Energy Efficiency		X	Energy
17	Non-North Carolina Programs (3)	Non-North Carolina Programs			
18	Common Costs	All Programs	X (1)	X (1)	$\Sigma$ Prog Cost \$ $\Sigma$ Sys Prog Cost \$

Notes

- 1) Allocation of System-level Common Costs to each Program on the basis of individual Program Costs to System Program Costs. All common costs for NC-only programs are assigned to NC.
- 2) For the projected rate period, refer to Company Exhibit AJM-1, Rider C, Schedule 1, Page 2, Line 4.
- 3) For the projected rate period, refer to Company Exhibit JEB-1, Schedule 4, Page 1

DOMINION ENERGY NORTH CAROLINA  
ALLOCATION OF COMMON COSTS TO PROGRAMS  
FOR THE EMF TRUE-UP FOR RIDER CE  
DOCKET NO. E-22, SUB 584

JANUARY 1, 2017 - DECEMBER 31, 2017

Allocate Common Cost to Programs: (1)

Common Costs

Costs Applicable to All  
of the DSM/EE Program:

System Program Cost \$  
Σ System Program Cost \$

An allocation factor is developed for each Program

Line	Name of System Program	Program Category	Approved in NC Jurisdiction	Operating Cost (2)	Depreciation Expense (3)	Property Taxes (4)	Total (5)	Allocation Factors
1	Air Condenser Cycling Program	Peak-Clipping	X					
2	Residential Lighting Program	Energy Efficiency	X					
3	Residential Low Income Program (NC Only)	Energy Efficiency	X					
4	Commercial HVAC Upgrade Program (NC Trailing EMV Costs Only)	Energy Efficiency	X					
5	Commercial Lighting Program (NC Trailing EMV Costs Only)	Energy Efficiency	X					
6	Residential Heat Pump Tune-up Program	Energy Efficiency	X					
7	Residential Heat Pump Upgrade Program	Energy Efficiency	X					
8	Residential Duct Testing & Sealing Program	Energy Efficiency	X					
9	Residential Home Energy Check-up Program	Energy Efficiency	X					
10	Non-Residential Duct Testing & Sealing Program	Energy Efficiency	X					
11	Non-Residential Energy Audit Program	Energy Efficiency	X					
12	Non-Residential Lighting Systems and Controls	Energy Efficiency	X					
13	Non-Residential Heating & Cooling Efficiency	Energy Efficiency	X					
14	Non-Residential Window Film	Energy Efficiency	X					
15	Residential Income & Age Qualifying Home Improvement Program	Energy Efficiency	X					
16	Commercial Small Business Improvement	Energy Efficiency	X					
17	Residential LED	Energy Efficiency	X					
18	Non-North Carolina Programs (6)							
Sum of Program Costs								

Note

- 1) The allocation of the Common cost revenue requirement to the DSM/EE Programs is provided in the testimony of Company witness Moore.
- 2) For the true-up period ending December 31, 2017, refer to Company Exhibit AJM - 1, Rider CE, Schedule 2, Page 2, Line 1
- 3) For the true-up rate period, refer to Company Exhibit AJM-1, Rider CE, Schedule 2, Page 4, Line 2.
- 4) For the true-up rate period, refer to Company Exhibit AJM-1, Rider CE, Schedule 2, Page 3, line 6 divided by Schedule 2, Page 2, Line 4
- 5) If formula results in a negative value, the allocation should be zero because this program does not share common costs.
- 6) For the true-up rate period, refer to Company Exhibit JEB-1, Schedule 7, Page 1

**DOMINION NORTH CAROLINA POWER  
ALLOCATION OF COMMON COSTS TO PROGRAMS  
FOR THE PROJECTED RATE PERIOD FOR RIDER C  
DOCKET NO. E-22, SUB 556**

FEBRUARY 1, 2019 - JANUARY 31, 2020

**Allocate Common Cost to Programs: (1)**

Common Costs

Costs Applicable to All  
of the DSM/EE Programs

System Program Cost \$  
Σ System Program Cost \$

An allocation factor is developed for each Program.

Line	Name of System Program	Program Category	Approved in NC Jurisdiction	Projected Operating Cost (2)	Projected Depreciation Expense (3)	Projected Property Taxes (4)	Total	Rider C Program Rev Req to Total C Allocation Factors
1	Air Conditioner Cycling Program	Peak-Clipping	X					
2	Residential NC Only Low Income Program	Energy Efficiency	Concluded					
3	Commercial HVAC Upgrade Program	Energy Efficiency	NC Only					
4	Commercial Lighting Program	Energy Efficiency	NC Only					
5	Residential Heat Pump Tune-up Program	Energy Efficiency	X					
6	Residential Heat Pump Upgrade Program	Energy Efficiency	X					
7	Residential Duct Testing & Sealing Program	Energy Efficiency	X					
8	Residential Home Energy Check-Up Program	Energy Efficiency	X					
9	Non-Residential Duct Testing & Sealing Program	Energy Efficiency						
10	Non-Residential Energy Audit Program	Energy Efficiency	X					
11	Non-Residential Window Film Program	Energy Efficiency	X					
12	Non-Residential Heating & Cooling Efficiency Program	Energy Efficiency	NC Only					
13	Non-Residential Lighting Systems & Controls Program	Energy Efficiency	NC Only					
14	Residential Income and Age Qualifying Home Improvement Program	Energy Efficiency	X					
15	Qualifying Small Business Improvement Program	Energy Efficiency	X					
16	Residential LED Lighting - NC Only	Energy Efficiency	NC Only					
17	Non-Residential Prescriptive Program	Energy Efficiency	X					
18	Non-North Carolina Programs (5)							
<b>Sum of Program Cost</b>								

Note

- 1) The allocation of the Common cost revenue requirement to the DSM/EE Programs is provided in the testimony of Company witness Moore. For the projected rate period ending January 31, 2020, refer to Company Exhibit JEB - 1, Schedule 1 (also includes projected property taxes)
- 2) For the projected rate period, refer to Company Exhibit AJM, Schedule 1, Page 2, Line 1.
- 3) For the projected rate period, refer to Company Exhibit AJM-1, Rider C, Schedule 1, Page 4, Line 5
- 4) For the projected rate period, refer to Company Exhibit AJM-1, Rider C, Schedule 1, Page 3, Line 7 Divided by Schedule 1, Page 2, Line 4
- 5) For the projected rate period, refer to Company Exhibit JEB-1, Schedule 4

**DOMINION ENERGY NORTH CAROLINA  
 JURISDICTIONAL ALLOCATION FACTORS  
 FOR THE PROJECTED RATE PERIOD FOR RIDER C AND RIDER CE  
 TWELVE MONTHS ENDED DECEMBER 31, 2017  
 DOCKET NO. E-22, SUB 556**

**Dominion Energy North Carolina**

**Year ending December 31, 2017**

**1CP Methodology (NSPL) 4 Jurisdiction**

**NC DSM FACTOR**

	<b>Total DOM Zone</b>	<b>VA Juris</b>	<b>VA Non-Juris</b>	<b>FERC</b>	<b>NC Juris</b>
█ (1) CP (kW) loads at time of DOM Zone Peak (NSPL)	16,918,040	14,041,087	1,684,654	387,744	804,554
█ (2) Less Non-participating Contract Classes	2,047,899	0	1,660,155	387,744	0
█ (3) Adjusted CP loads	14,870,141	14,041,087	24,500	0	804,554
█ (4) <b>NC DSM FACTOR</b>	<b>100.0000%</b>	<b>94.4247%</b>	<b>0.1648%</b>	<b>0.0000%</b>	<b>5.4105%</b>

**NC EE FACTOR**

	<b>Total DOM Zone</b>	<b>VA Juris</b>	<b>VA Non-Juris</b>	<b>FERC</b>	<b>NC Juris</b>
█ (1) Annual Energy (MWh)	87,004,483	67,759,286	12,178,161	2,720,620	4,346,416
█ (2) Less Non-participating Contract Classes	14,722,663	0	12,002,043	2,720,620	0
█ (3) Adjusted energy	72,281,820	67,759,286	176,118	0	4,346,416
█ (4) <b>NC DSM FACTOR</b>	<b>100.0000%</b>	<b>93.7432%</b>	<b>0.2437%</b>	<b>0.0000%</b>	<b>6.0132%</b>



**DOMINION ENERGY NORTH CAROLINA  
 ALLOCATION FACTORS FOR THE COSTS OF THE APPROVED DSM PROGRAMS TO THE CUSTOMER CLASSES  
 DOCKET NO. E-22, SUB 556**

<u>Line</u>	<u>Name of Program</u>	<u>Program Category</u>	<u>Total Rider Revenue Requirement Customer Class Assignment or Allocation Factor</u>	
1	Air Conditioner Cycling Program	Peak-Clipping	Assigned - Residential Class	
2	Residential NC Only Low Income Program	Energy Efficiency	Assigned - Residential Class	
3	Commercial HVAC Upgrade Program	Energy Efficiency	Allocated to Non -Residential Customers Using Energy Factor	(1)
4	Commercial Lighting Program	Energy Efficiency	Allocated to Non -Residential Customers Using Energy Factor	(1)
5	Residential Heat Pump Tune-up Program	Energy Efficiency	Assigned - Residential Class	
6	Residential Heat Pump Upgrade Program	Energy Efficiency	Assigned - Residential Class	
7	Residential Duct Testing & Sealing Program	Energy Efficiency	Assigned - Residential Class	
8	Residential Home Energy Check-Up Program	Energy Efficiency	Assigned - Residential Class	
9	Non-Residential Duct Testing & Sealing Program	Energy Efficiency	Allocated to Non -Residential Customers Using Energy Factor	(1)
10	Non-Residential Energy Audit Program	Energy Efficiency	Allocated to Non -Residential Customers Using Energy Factor	(1)
11	Non-Residential Window Film Program	Energy Efficiency	Allocated to Non -Residential Customers Using Energy Factor	(1)
12	Non-Residential Heating & Cooling Efficiency Program	Energy Efficiency	Allocated to Non -Residential Customers Using Energy Factor	(1)
13	Non-Residential Lighting Systems & Controls Program	Energy Efficiency	Allocated to Non -Residential Customers Using Energy Factor	(1)
14	Residential Income and Age Qualifying Home Improvement Pr	Energy Efficiency	Assigned - Residential Class	
15	Qualifying Small Business Improvement Program	Energy Efficiency	Allocated to Non -Residential Customers Using Energy Factor	(1)
16	Residential LED Lighting - NC Only	Energy Efficiency	Assigned - Residential Class	
17	Non-Residential Prescriptive Program	Energy Efficiency	Allocated to Non -Residential Customers Using Energy Factor	(1)

Note

1) Energy Allocation Factor for Test Year is Adjusted for Opt-Out customers and for customer classes not participating in the program (Residential, Street and Outdoor Lights, Traffic Lights) Allocation Factors are calculated in Company Exhibit JCC-1, Schedule 2, Page 2 for the EMF true-up and for the Projected Rate Period

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DOMINION ENERGY NORTH CAROLINA  
FOR THE PROJECTED RATE PERIOD FOR RIDER C AND RIDER CE  
ADJUSTED FOR OPT - OUT CUSTOMERS AND CUSTOMER CLASSES NOT PARTICIPATING IN PROGRAMS

**Dominion Energy North Carolina**

Year ending December 31, 2017

**1CP Methodology (NSPL) NC Class**

NC DSM FACTOR	Total NC Class	Residential	SGS	LGS	6VP	Schedule NS	ST & Outdoor Lighting	Traffic Lighting
(1) CP (kW) loads at time of DOM Zone Peak (NSPL)	804,554	546,818	136,479	56,733	21,600	42,863	0	61
(2) Less Opt-out customers and directly assigned classes	638,449	546,818	523	26,584	21,600	42,863	0	61
(3) Adjusted CP loads	166,106	0	135,956	30,149	0	0	0	0
(4) Factor 1 NC DSM	100.0000%	0.0000%	81.8492%	18.1508%	0.0000%	0.0000%	0.0000%	0.0000%

NC EE FACTOR	Total NC Class	Residential	SGS	LGS	6VP	Schedule NS	ST & Outdoor Lighting	Traffic Lighting
(1) Annual Energy (MWh)	4,346,416	1,602,797	850,468	689,264	265,541	911,416	26,402	527
(2) Less Opt-out customers and directly assigned classes	3,186,232	1,602,797	4,829	374,720	265,541	911,416	26,402	527
(3) Adjusted energy	1,160,184	0	845,640	314,544	0	0	0	0
(4) Factor 3 NC DSM	100.0000%	0.0000%	72.8884%	27.1116%	0.0000%	0.0000%	0.0000%	0.0000%

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**DOMINION NORTH CAROLINA POWER  
DSM/EE EXPERIENCE MODIFICATION FACTOR (RIDER CE) FOR THE TEST PERIOD JANUARY 1, 2017 THROUGH DECEMBER 31, 2017  
ASSIGNMENT AND ALLOCATION TO CUSTOMER CLASSES  
DOCKET NO. E-22, SUB 556**

Line		NC Juris Operating Expenses From Exhibit No. AJM-1 Rider CE Sch 2 Pg 3 Ln 5	NC Jurisdiction Depreciation Expense From Exhibit No. AJM-1 Rider CE Sch 2 Pg 3 Ln 7	NC Jurisdiction Rate Base Costs From Exhibit No. AJM-1 Rider CE Sch 2 Pg 3 Ln 8	NC Juris PPI & Property Tax From Exhibit No. AJM-1 Rider CE Sch 2 Pg 3 Ln 6 & 10
1	<b>Operating Expenses, Depreciation, Rate Base Costs, PPI</b>	<b>Total</b>			
	Air Conditioner Cycling Program				
	Residential Lighting Program				
	Residential Low Income Program (NC Only)				
	Commercial HVAC Upgrade Program (NC Trailing EMV Costs Only)				
	Commercial Lighting Program (NC Trailing EMV Costs Only)				
	Residential Heat Pump Tune-up Program				
	Residential Heat Pump Upgrade Program				
	Residential Duct Testing & Sealing Program				
	Residential Home Energy Check-up Program				
	Non-Residential Duct Testing & Sealing Program				
	Non-Residential Energy Audit Program				
	Non-Residential Lighting Systems and Controls				
	Non-Residential Heating & Cooling Efficiency				
	Non-Residential Window Film				
	Residential Income & Age Qualifying Home Improvement Program				
	Commercial Small Business Improvement				
	Residential LED				
2	<b>Jurisdictional Lost Revenues</b>	<b>Jurisdictional Lost Revenues From Exhibit No. AJM-1 Rider CE Sch 2 Pg 5 Ln 3</b>			
	Air Conditioner Cycling Program				
	Residential Lighting Program				
	Residential Low Income Program (NC Only)				
	Commercial HVAC Upgrade Program (NC Trailing EMV Costs Only)				
	Commercial Lighting Program (NC Trailing EMV Costs Only)				
	Residential Heat Pump Tune-up Program				
	Residential Heat Pump Upgrade Program				
	Residential Duct Testing & Sealing Program				
	Residential Home Energy Check-up Program				
	Non-Residential Duct Testing & Sealing Program				
	Non-Residential Energy Audit Program				
	Non-Residential Lighting Systems and Controls				
	Non-Residential Heating & Cooling Efficiency				
	Non-Residential Window Film				
	Residential Income & Age Qualifying Home Improvement Program				
	Commercial Small Business Improvement				
	Residential LED				
3	<b>Variable O&amp;M Savings</b>	<b>Energy Savings (kWh) From Exhibit No. AJM-1 Rider CE Sch 2 Pg 5 Ln 1</b>			
	From Exhibit No. AJM-1 Rider CE Sch 2 Pg 5 Ln 4				
	<b>Allocation of Variable O&amp;M Savings Based on Energy Savings (kWh)</b>	<b>Allocated Variable O&amp;M Savings</b>	<b>Allocation of Variable O&amp;M Savings</b>		
	Air Conditioner Cycling Program	0	0	0.0000%	
	Residential Lighting Program	0	0	0.0000%	
	Residential Low Income Program (NC Only)	0	0	0.0000%	
	Commercial HVAC Upgrade Program (NC Trailing EMV Costs Only)	0	0	0.0000%	
	Commercial Lighting Program (NC Trailing EMV Costs Only)	0	0	0.0000%	
	Residential Heat Pump Tune-up Program	132,742	75,716	2.5563%	1.4581%
	Residential Heat Pump Upgrade Program	75,716	9,346	1.4581%	0.1800%
	Residential Duct Testing & Sealing Program	9,346	40,499	0.1800%	0.7799%
	Residential Home Energy Check-up Program	40,499	558,594	0.7799%	10.7573%
	Non-Residential Duct Testing & Sealing Program	558,594	716,462	10.7573%	13.7974%
	Non-Residential Energy Audit Program	716,462	2,027,944	13.7974%	39.0536%
	Non-Residential Lighting Systems and Controls	2,027,944	933,523	39.0536%	17.9775%
	Non-Residential Heating & Cooling Efficiency	933,523	0	17.9775%	0.0000%
	Non-Residential Window Film	0	146,423	0.0000%	2.8198%
	Residential Income & Age Qualifying Home Improvement Program	146,423	39,109	2.8198%	0.7532%
	Commercial Small Business Improvement	39,109	512,362	0.7532%	9.8669%
	Residential LED	512,362		9.8669%	
	<b>Total</b>	<b>5,192,720</b>		<b>100.0000%</b>	
4	<b>Jurisdictional Program Revenue Requirement (Ln 1 + Ln 2 + Ln 3)</b>	<b>Targeted Classes Res./Non-Res. Allocation Factors</b>			
	Air Conditioner Cycling Program	Residential			
	Residential Lighting Program	Residential			
	Residential Low Income Program (NC Only)	Residential	52.3042%	Residential	
	Commercial HVAC Upgrade Program (NC Trailing EMV Costs Only)	Non-residential	47.6958%	Non-residential	
	Commercial Lighting Program (NC Trailing EMV Costs Only)	Non-residential			
	Residential Heat Pump Tune-up Program	Residential			
	Residential Heat Pump Upgrade Program	Residential			
	Residential Duct Testing & Sealing Program	Residential			
	Residential Home Energy Check-up Program	Residential			
	Non-Residential Duct Testing & Sealing Program	Non-residential			
	Non-Residential Energy Audit Program	Non-residential			
	Non-Residential Lighting Systems and Controls	Non-residential			
	Non-Residential Heating & Cooling Efficiency	Non-residential			
	Non-Residential Window Film	Non-residential			
	Residential Income & Age Qualifying Home Improvement Program	Residential			
	Commercial Small Business Improvement	Non-residential			
	Residential LED	Residential			
	<b>Total From Exhibit No. AJM-1 Rider CE Sch 2 Pg 3 Ln 12</b>			<b>100.0000%</b>	
	<b>Total Residential</b>				
	<b>Total Non-Residential</b>				

**DOMINION ENERGY NORTH CAROLINA**  
**DSM/EE EXPERIENCE MODIFICATION FACTOR (RIDER CE) FOR THE TEST PERIOD JANUARY 1, 2017 THROUGH DECEMBER 31, 2017**  
**ASSIGNMENT AND ALLOCATION TO CUSTOMER CLASSES**  
**DOCKET NO. E-22, SUB 556**

Line		North Carolina Jurisdiction	Residential	SGS Co & Muni	LGS	6 VP	Schedule NS	ST & Outdoor Lighting	Traffic Lighting
1	Jurisdictional Program Revenue Requirement <u>From Exhibit JCC-1 Sch 3 Pg 1 Ln 4</u>								
	Residential Programs								
	Non-residential Programs								
	Jurisdictional Program Revenue Requirement AJM-1 Sch 2 Pg 1 Ln 1								
2	<u>Monthly Rider C Revenues</u>								
	Residential Programs								
	Non-residential Programs								
	Monthly Revenue From Exhibit AJM-1 Sch 2 Pg 1 Ln 4								
3	<u>(Over) / Under Recovery (Ln 1 - Ln 2)</u>								
	Residential Programs								
	Non-residential Programs								
	(Over) / Under Recovery From Exhibit AJM-1 Rider CE Sch 2 Pg 1 Ln 7								
4	<u>Deferred Income Tax</u>								
	Residential Programs								
	Non-residential Programs								
	Deferred Income Tax From Exhibit AJM-1 Rider CE Sch 2 Pg 1 Ln 9								
5	<u>Net (Over) / Under Recovery (Ln 3 - Ln 4)</u>								
	Residential Programs								
	Non-residential Programs								
	Net (Over) / Under Recovery From all Programs								
6	<u>Carrying Cost on Cumulative (Over) / Under Recovery</u>								
	Residential Programs								
	Non-residential Programs								
	From Exhibit AJM-1 Rider CE Sch 2 Pg 1 Ln 13								
7	<u>Financing Costs Rider CE (Over)-recovery</u>								
	Residential Programs								
	Non-residential Programs								
	From Exhibit AJM-1 Rider CE Sch 2 Pg 1 Ln 15								
8	<u>DSM/EE/EMF to be (refunded)/collected during the Rate Period January 1, 2018 - December 31, 2018 (Ln 3 + Ln 6+Ln7)</u>								
	Residential Programs								
	Non-residential Programs								
	DSM/EE/EMF to be (refunded)/collected From Exhibit AJM-1 Rider CE Sch 2 Pg 1 Ln 16)								
9	<u>Assignment / Allocation of DSM / EE EMF Rider CE Revenue Requirement to Customer Classes:</u>								
	<u>Residential Programs</u>								
	<u>Non-residential Programs</u>								
	Factor to Allocate Energy Efficiency Programs From Exhibit JCC-1 Sch 2 Pg 2								
	Non-residential Programs								
	<b>Check</b>								

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DOMINION ENERGY NORTH CAROLINA  
 DSM/EE (RIDER C) FOR THE PROJECTED RATE PERIOD FEBRUARY 1, 2019 THROUGH JANUARY 31, 2020  
 ASSIGNMENT AND ALLOCATION TO CUSTOMER CLASSES  
 DOCKET NO. E-22, SUB 556

Line

1	NC Jurisdiction Program Revenue Requirement	
	<u>From Exhibit JCC-1 Sch 3 Pg 3 Ln 3</u>	
	Residential Programs	\$1,009,233
	Non-residential Programs	\$1,501,068
	NC Class Revenue Requirement	<u>\$2,510,301</u>

	North Carolina Jurisdiction	Residential	SGS Co & Muni	LGS	6 VP	Schedule NS	ST & Outdoor Lighting	Traffic Lighting
2	Assignment / Allocation of DSM / EE							
	<u>Rider C Revenue Requirement to NC Customer Classes</u>							
	Residential Programs	\$1,009,233	\$1,009,233	\$0	\$0	\$0	\$0	\$0
	Non-residential Programs							
	Factor to Allocate Energy Efficiency Programs							
	From Exhibit JCC-1 Sch 2 Pg 2	100.0000%	0.0000%	72.8884%	27.1116%	0.0000%	0.0000%	0.0000%
	Non-residential Programs	\$1,501,068	\$0	\$1,094,104	\$406,964	\$0	\$0	\$0
	Check	\$2,510,301						

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**DOMINION ENERGY NORTH CAROLINA  
DOCKET NO. E-22, SUB 556**

**Rule R8-69(f) Filing Requirements and Procedure.**

- (1) Each utility shall submit to the Commission all of the following information and data in its application:
- ii) For each measure for which cost recovery is requested through the DSM/EE rider:
- b. total costs that the utility does not expect to incur during the rate period as a direct result of the measure in the aggregate and broken down by type of cost, per appropriate capacity, energy and measure unit metric, and the proposed jurisdictional allocation factors, as well as any changes in the estimate future amounts since last filed with the Commission;

In the table below, the Company shows factors that allocate the total system expenses directly attributable to the measures which the Company requests cost recovery through the DSM/EE rider that are not expected to be incurred during the rate period February 1, 2019 through January 31, 2020. The demand allocation factor is based on the summer/winter peak and average methodology and is provided for the twelve months ended December 31, 2017. The energy allocation factor is provided for the twelve months ended December 31, 2017.

Program	NC Jurisdictional Demand Allocator	NC Jurisdictional Energy Allocator
Residential Lighting (PPI Only)	4.8124%	4.9956%
Air Conditioner Cycling Program	4.8124%	4.9956%
Commercial HVAC Upgrade Program	4.8124%	4.9956%
Commercial Lighting Program	4.8124%	4.9956%
Residential Heat Pump Tune-up Program	4.8124%	4.9956%
Residential Heat Pump Upgrade Program	4.8124%	4.9956%
Residential Duct Testing & Sealing Program	4.8124%	4.9956%
Residential Home Energy Check-Up Program	4.8124%	4.9956%
Non-Residential Duct Testing & Sealing Program	4.8124%	4.9956%

**DOMINION ENERGY NORTH CAROLINA  
DOCKET NO. E-22, SUB 556**

Program	NC Jurisdictional Demand Allocator	NC Jurisdictional Energy Allocator
Non-Residential Energy Audit Program	4.8124%	4.9956%
Non-Residential Window Film Program	4.8124%	4.9956%
Non-Residential Heating & Cooling Efficiency Program	4.8124%	4.9956%
Non-Residential Lighting Systems & Controls Program	4.8124%	4.9956%
Residential Income and Age Qualifying Home Improvement Program	4.8124%	4.9956%
Qualifying Small Business Improvement Program	4.8124%	4.9956%
Residential LED Lighting - NC Only	4.8124%	4.9956%
Non-Residential Prescriptive Program	4.8124%	4.9956%





**DOMINION ENERGY NORTH CAROLINA  
DOCKET NO. E-22, SUB 556**

**Rule R8-69 (f) Filing Requirements and Procedure.**

**(1) Each utility shall submit to the Commission all of the following information and data in its application:**

**viii) All workpapers supporting the calculations and adjustments described above:**

---

Pages 3 - 4 of this Schedule 4 calculate the allocation factors listed below:

Used to Allocate System Expenses Not Expected to Be Incurred During the Rate Period

- 1) Factor 1 Summer Winter Peak and Average ("SWPA") — System to Jurisdiction
  - a. NC Juris = 4.8124%
  
- 2) Factor 3 — System to Jurisdiction
  - a. NC Juris = 4.9956%

**DOMINION ENERGY NORTH CAROLINA**  
**DOCKET NO. E-22 , SUB 556**  
 12 MONTHS ENDING DECEMBER 31, 2017  
 SUMMER WINTER PEAK AND AVERAGE

North Carolina Power							
12 Months Ending December 31, 2017							
Summer Winter Peak & Average							
FACTOR 1/61		Total System	Va Juris	Va Non-Juris	FERC	N C Juris	
(1)	Energy Production		87,004,492	67,759,296	12,178,161	2,720,619	4,346,416
(2)	Ave. Demand (Ln 1 / # hrs in year)		9,932,019	7,735,078	1,390,201	310,573	496,166
(3)	Class Ave. Demand as % of system		100.0000%	77.8802%	13.9972%	3.1270%	4.9956%
(4)	Winter Coincident Peak		16,919,040	14,041,087	1,684,654	387,744	804,554
	Monday, January 09, 2017	800					
(5)	Summer Coincident Peak		16,834,810	13,710,302	1,962,010	431,212	731,287
	Thursday, July 13, 2017	1600					
(6)	Avg. Peak Demand [(Lns 4+5)/2]		16,876,425	13,875,695	1,823,332	409,478	767,921
(7)	Avg. Peak Demand as % of system		100.0000%	82.2194%	10.8040%	2.4263%	4.5503%
(8)	Sys. Ln 2 / Sys Ln 6 =	58.8514%	5,845,136	4,552,205	818,153	182,777	292,001
	Class Ave. Dem. % Ln 3 x	58.8514%	58,8514%	45.8336%	8.2375%	1.8403%	2.9400%
(9)	1 - Sys. Line 8 =	41.1486%	6,944,406	5,709,649	750,275	168,494	315,988
	Class Ave. Pl. Dem. % Ln 7 x	41.1486%	41,1486%	33.8321%	4.4457%	0.9984%	1.8724%
(10)	Factor 1/61 (8+ 9)		100.0000%	79.6657%	12.6832%	2.8387%	4.8124%
(11)	Roaming			0.0000%	0.0000%	0.0000%	0.0000%
(12)	Factor 1/61		100.0000%	79.6657%	12.6832%	2.8387%	4.8124%

**DOMINION ENERGY NORTH CAROLINA**  
**DOCKET NO. E-22 , SUB 556**  
 12 MONTHS ENDING DECEMBER 31, 2017  
 SUMMER WINTER PEAK AND AVERAGE

North Carolina Power						
12 Months Ending December 31, 2017						
Summer Winter Peak & Average						
<b>FACTOR 3/63</b>		<b>Total System</b>	<b>Va Juris</b>	<b>Va Non-Juris</b>	<b>FERC</b>	<b>N C Juris</b>
Energy production		87,004,482	67,759,286	12,178,161	2,720,619	4,346,416
Factor 3/63		100.0000%	77.8802%	13.9972%	3.1270%	4.9956%
			0.0000%	0.0000%	0.0000%	0.0000%
Factor 3/63		100.0000%	77.8802%	13.9972%	3.1270%	4.9956%

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**DIRECT TESTIMONY  
OF  
DEBRA A. STEPHENS  
ON BEHALF OF  
DOMINION ENERGY NORTH CAROLINA  
BEFORE THE  
NORTH CAROLINA UTILITIES COMMISSION  
DOCKET NO. E-22, SUB 556**

1 **Q. Please state your name, business address, and your position with Virginia**  
2 **Electric and Power Company (“Dominion Energy North Carolina” or the**  
3 **“Company”).**

4 A. My name is Debra A. Stephens, and I am a Regulatory Specialist for  
5 Dominion Energy North Carolina. My business address is 701 East Cary  
6 Street, Richmond, Virginia 23219.

7 **Q. Please describe your area of responsibility with the Company.**

8 A. I provide support and analysis for base rate schedules and Demand Side  
9 Planning Riders for the Company’s retail jurisdictions. A statement of my  
10 background and qualifications is attached as Appendix A.

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

12 A. My testimony supports the Company’s request to recover all reasonable and  
13 prudent costs incurred in adopting and implementing the Company’s portfolio  
14 of North Carolina demand-side management (“DSM”) and energy efficiency  
15 (“EE”) Programs (“DSM/EE programs” or “Programs”), and utility  
16 incentives, through its updated Rider C, as well as the Company’s experience  
17 modification factor (“EMF”) rider, Rider CE (“Application”). The purpose of  
18 my testimony is to present the calculation of the updated DSM/EE Rider,

1 Rider C, and the EMF rider, Rider CE. Rider C is designed to recover during  
2 the February 1, 2019, through January 31, 2020, period (“Rate Period”) the  
3 Company’s reasonable and prudent costs incurred for the adoption and  
4 implementation of the Company’s DSM/EE Programs during the Rate Period.  
5 Rider CE will true up any over- or under-recovery for the period January 1,  
6 2017, through December 31, 2017 (“Test Period”). The Company is  
7 requesting the proposed riders, Rider C and Rider CE, become effective for  
8 usage on and after February 1, 2019, and I explain below the Company’s  
9 proposal regarding the Rider C and Rider CE rates to be in effect for January  
10 2019. Additionally, I provide the calculations for the monthly residential and  
11 non-residential non-fuel average base rates that have been used by Company  
12 Witness Alan J. Moore in determining gross lost revenues.

13 **Q. Ms. Stephens, are you sponsoring any exhibits or schedules in connection**  
14 **with your testimony?**

15 A. Yes. Company Exhibit DAS-1, consisting of Schedules 1 through 16, was  
16 prepared under my supervision and is accurate and complete to the best of my  
17 knowledge and belief. I also provide my supporting workpapers as required  
18 by Commission Rule R8-69(f)(i)(viii).

19 **Q. Would you please discuss the calculation of Rider C?**

20 A. Yes. The Company has calculated the Rider C rates in accordance with the  
21 following methodology. To develop the Rider C rate applicable to each of the  
22 Company’s customer classes, we must first determine forecasted kWh sales  
23 for each customer class. For the North Carolina jurisdiction, the Company

1           only forecasts kWh sales and customers by “revenue class” (*i.e.*, Residential,  
2           Commercial, Industrial, Public Authority, and Outdoor Street Lighting/Traffic  
3           Signals), and this revenue class kWh sales forecast is shown on pages 1  
4           through 3 of Schedule 1, as required by Rule R8-69(f)(1)(i). However, these  
5           revenue classes are not perfectly aligned with the Company’s customer  
6           classes. Therefore, the Company must allocate the revenue classes’ February  
7           2019 through January 2020 forecasted kWh sales down to the customer class  
8           level. This allocation was performed using 2015 through 2017 historical  
9           monthly customer and kWh usage for each customer class to capture the  
10          recent trends of kWh sales and the numbers of customers within each  
11          customer class. This allocation by revenue class (and within revenue class by  
12          rate schedule) is shown on pages 4 and 5 of my Schedule 1. The summary on  
13          page 6 shows the allocation of the 12 months ended January 31, 2020,  
14          forecasted kWh sales for each rate schedule, less the kWh sales for the  
15          industrial and large commercial customers who have “opted out” under North  
16          Carolina General Statutes § 62-133.9(f), to produce a net forecast. Pages 7  
17          and 8 categorize the net forecasted rate schedule kWh sales into the seven  
18          customer classes (*i.e.*, Residential, SGS, NS, LGS, 6VP, Outdoor/Street  
19          Lighting, and Traffic Lighting customer classes).

20          The rates for Rider C have been derived based upon these net forecasted kWh  
21          sales by customer class. Pages 9 and 10 of Schedule 1 detail the development  
22          of the Rider C rate.

1 Page 9 of Schedule 1 shows the customer class allocated revenue  
2 requirements associated with DSM/EE program costs that were provided by  
3 Company Witness J. Clayton Crouch. By dividing these class revenue  
4 requirements by their respective customer class forecasted kWh sales, we  
5 have calculated customer class rates, which are then adjusted for the North  
6 Carolina Regulatory Fee. Page 10 shows the rate schedules within their  
7 associated customer class and provides their respective Rider C rate.

8 **Q. Have you provided projected North Carolina total retail monthly sales**  
9 **for the Rate Period for the commercial and industrial customers who**  
10 **have chosen to opt out of the DSM/EE Rider, as required by Rule**  
11 **R8-69(f)(1)(vii)?**

12 A. Since the Company generally does not forecast kWh sales for individual  
13 customers, we have used actual kWh sales, from January 1, 2017, to  
14 December 31, 2017, as a proxy for the projected opt-out kWh sales for the  
15 Rate Period for customers that have opted out as of June 30, 2018. Schedule 2  
16 of my pre-filed direct testimony contains the aggregated opt-out customer  
17 sales by month.

18 **Q. Have you included the Company's proposed Rider C in Schedule 3 of**  
19 **your pre-filed direct testimony?**

20 A. Yes. Schedule 3 is comprised of the tariff sheet showing the proposed  
21 Rider C as required by Rule R8-69(f)(1)(vi), which, if approved as proposed,  
22 would be applicable for usage on and after February 1, 2019.

- 1 **Q. Would you please discuss the calculation of Rider CE?**
- 2 A. Yes. The Company has calculated the Rider CE rates in accordance with the  
3 same methodology as previously approved for calculating Rider C. The  
4 allocated class Rider CE revenue requirements used in these calculations are  
5 provided in Company Witness Crouch's Schedule 3. The forecasted kWh by  
6 class and rate schedule for use in developing the Rider CE rates are the same  
7 as described in the calculation of the Rider C rates. The results of these  
8 calculations are shown in my Schedule 4. The corresponding tariff sheet for  
9 the period February 1, 2019, to January 31, 2020, providing the Rider CE  
10 rates is shown on page 1 of my Schedule 5.
- 11 **Q. Are you submitting any proposed revised tariffs to be effective during**  
12 **January 2019?**
- 13 A. Yes. In order to effectuate the transition to a February 1 – January 31 Rate  
14 Period, as further discussed in the direct testimony of Company Witnesses  
15 Michael T. Hubbard and Moore, the Company is proposing to maintain  
16 Rider C as approved by the Commission in the Company's previous DSM/EE  
17 cost recovery proceeding, and to reduce Rider CE for all classes to zero during  
18 the period January 1, 2019, to January 31, 2019. While this proposal does not  
19 require any revision to the currently effective Rider C tariff sheet, it does  
20 require that Rider CE be revised to show a rate of zero. A tariff sheet showing  
21 that proposed change for the month of January 2019 is shown at page 2 of my  
22 Schedule 5.



1 **Q. Would you explain how the proposed Riders C and CE will impact**  
2 **customers' bills?**

3 A. For this comparison, the Company has used the base rates that went into effect  
4 January 1, 2017, in Docket No. E-22 Sub 532, and the fuel rates that went into  
5 effect February 1, 2018, in the Company's last fuel case, Docket No. E-22,  
6 Sub 546, to calculate the customers' "current bill." For Rate Schedule 1  
7 (residential), based on the proposed February 1, 2019 effective date for Riders  
8 C and CE, for a customer using 1,000 kWh per month, the weighted monthly  
9 residential bill (4 summer months and 8 base months) would increase from  
10 \$113.19 to \$113.20, or by 0.009%. For Rate Schedule 5 (small general  
11 service), based on the proposed February 1, 2019 effective date for Riders C  
12 and CE, for a customer using 12,500 kWh per month and 50 kW of demand,  
13 the weighted monthly bill (4 summer months and 8 base months) would  
14 increase from \$1,111.36 to \$1,119.87, or by 0.77%. For Rate Schedule 6P  
15 (large general service), based on the proposed February 1, 2019 effective date  
16 for Riders C and CE, for a customer using 259,200 kWh on-peak and 316,800  
17 kWh off-peak per month and 1,000 kW of demand, the monthly bill would  
18 increase from \$38,964.65 to \$39,627.05, or by 1.70%.

19 **Q. For purposes of truing up lost revenues for the Test Period, would you**  
20 **describe how the non-fuel average base rates were determined?**

21 A. Yes. We have calculated monthly non-fuel average base rates for the Test  
22 Period for each DSM program. These monthly non-fuel average base rates  
23 are provided to Company Witness Moore, who in turn applies these rates to

1 the measured and verified kWh reductions that occurred during the Test  
2 Period, as determined and provided by Company Witness Deanna R. Kesler.

3 In truing up gross lost revenues for the Residential Heat Pump Tune Up  
4 Program, the Residential Heat Pump Upgrade Program, the Residential Duct  
5 Testing and Sealing Program, the Residential Home Energy Check-Up  
6 Program, and the Residential Income and Age Qualifying Program, we used  
7 the actual participants' non-fuel base revenues and their kilowatt-hour  
8 consumption for the period of January 1, 2017, to December 31, 2017, to  
9 develop monthly average non-fuel base rates. These calculations are shown in  
10 my Schedules 6 through 10. To calculate the average rates for the Residential  
11 Retail LED Lighting program, we used the average non-fuel base rates for all  
12 customers on Rate Schedules 1, 1P, and 1T and the kilowatt-hour  
13 consumption for the period of January 1, 2017, to December 31, 2017, shown  
14 in Schedule 11.

15 **Q. Did you use the same methodology for the Non-Residential Programs in**  
16 **truing up lost revenues for the Test Period?**

17 A. Yes. We used the actual participants' non-fuel base revenues and their  
18 kilowatt-hour consumption for the applicable true-up period to develop  
19 monthly average non-fuel base rates. This analysis used the kWh  
20 consumption for those customers who participated in the Non-Residential  
21 Energy Audit, the Non-Residential Duct Testing and Sealing Program, the  
22 Non-Residential Heating & Cooling Efficiency Program, the Non-Residential  
23 Lighting Systems & Controls Program, and the Commercial Small Business

1 Improvement Program shown in Schedules 12 through 16 during the period of  
2 January 1, 2017, to December 31, 2017. No rates were calculated for the  
3 Non-Residential Window Film Program since there were no North Carolina  
4 participants in the program during 2017.

5 **Q. Does this conclude your prefiled direct testimony?**

6 **A.** Yes, it does.

**BACKGROUND AND QUALIFICATIONS  
OF  
DEBRA A. STEPHENS**

Debra A. Stephens graduated from the Virginia Polytechnic Institute and State University in 1978 with a B.S. in Marketing. She continued her education, completing a Masters in Business Administration from Virginia Polytechnic Institute and State University in 1979. In 1985, after spending five years as a Research Analyst for the Virginia Department of Planning and Budget, Ms. Stephens joined Virginia Electric and Power Company as a Statistical Analyst in the Insurance and Loss Prevention Department. In that capacity, she conducted statistical analyses related to insurance and claims, and participated in a Company-wide assessment of Corporate Risk.

In 1995, Ms. Stephens moved to the Energy Efficiency Department and became part of the Market Research Group. In that position, she worked primarily analyzing non-residential customer data to create a segmentation strategy for these customers. In January 2001, Ms. Stephens joined the Regulatory and Pricing Department as analyst supporting interval customer data. This function was moved to the Metering Department in 2002, along with the supporting staff.

Ms. Stephens returned to the State Regulation Group in 2007 as a Regulatory Analyst III. In 2015, Ms. Stephens was promoted to her current position as a Regulatory Specialist. Her responsibilities include providing support and analysis for the Company's regulatory filings in Virginia and North Carolina. Ms. Stephens has previously presented testimony before the State Corporation Commission of Virginia and the North Carolina Utilities Commission.

VIRGINIA ELECTRIC AND POWER COMPANY  
DOMINION ENERGY NORTH CAROLINA  
RIDER C  
FORECAST KWH SALES AND CUSTOMERS  
BY REVENUE CLASS  
12 MONTHS ENDED January 31, 2020

----- REVENUE CLASS=A. RESIDENTIAL -----

YR	MONTH	FORECAST CUST	FORECAST KWH
2019	2	102,945	152,881,964
2019	3	102,963	128,642,460
2019	4	102,971	99,108,376
2019	5	102,990	103,788,168
2019	6	103,017	139,857,296
2019	7	103,048	179,126,082
2019	8	103,089	175,960,873
2019	9	103,112	121,612,792
2019	10	103,139	102,460,232
2019	11	103,183	100,537,021
2019	12	103,231	155,678,878
2020	1	103,264	179,635,637
-----			-----
TOTAL			1,639,289,779

----- REVENUE CLASS=B. COMMERCIAL -----

YR	MONTH	FORECAST CUST	FORECAST KWH
2019	2	15,689	53,085,761
2019	3	15,692	55,945,546
2019	4	15,695	52,324,954
2019	5	15,699	60,369,195
2019	6	15,703	67,632,563
2019	7	15,706	76,837,607
2019	8	15,709	80,148,573
2019	9	15,712	70,016,963
2019	10	15,714	68,513,367
2019	11	15,717	58,387,393
2019	12	15,720	62,125,110
2020	1	15,722	65,047,416
-----			-----
TOTAL			770,434,448

VIRGINIA ELECTRIC AND POWER COMPANY  
 DOMINION ENERGY NORTH CAROLINA  
 RIDER C  
 FORECAST KWH SALES AND CUSTOMERS  
 BY REVENUE CLASS  
 12 MONTHS ENDED January 31, 2020

----- REVENUE CLASS=C. INDUSTRIAL -----

YR	MONTH	FORECAST CUST	FORECAST KWH
2019	2	60	126,141,854
2019	3	60	132,573,553
2019	4	60	159,639,860
2019	5	60	153,720,643
2019	6	60	146,487,647
2019	7	60	162,061,075
2019	8	60	133,287,068
2019	9	60	161,554,167
2019	10	60	145,379,430
2019	11	60	149,723,650
2019	12	60	138,994,407
2020	1	60	152,468,796
TOTAL			1,762,032,150

----- REVENUE CLASS=D. OUTDOOR LIGHTING & TRAFFIC -----

YR	MONTH	FORECAST CUST	FORECAST KWH
2019	2	395	695,097
2019	3	395	702,953
2019	4	395	651,389
2019	5	395	740,215
2019	6	395	743,236
2019	7	395	697,313
2019	8	395	730,950
2019	9	395	647,965
2019	10	395	692,882
2019	11	395	683,314
2019	12	396	659,396
2020	1	396	737,581
TOTAL			8,382,291

VIRGINIA ELECTRIC AND POWER COMPANY  
 DOMINION ENERGY NORTH CAROLINA  
 RIDER C  
 FORECAST KWH SALES AND CUSTOMERS  
 BY REVENUE CLASS  
 12 MONTHS ENDED January 31, 2020

----- REVENUE CLASS=E. PUBLIC AUTHORITY -----

YR	MONTH	FORECAST CUST	FORECAST KWH
2019	2	1,860	10,725,977
2019	3	1,859	10,633,999
2019	4	1,859	9,203,467
2019	5	1,859	9,905,348
2019	6	1,860	11,005,246
2019	7	1,861	11,602,138
2019	8	1,859	11,869,514
2019	9	1,857	10,955,178
2019	10	1,857	10,185,423
2019	11	1,856	9,233,001
2019	12	1,855	9,775,891
2020	1	1,856	11,007,875
-----			-----
TOTAL			126,103,057
			=====
			4,306,241,725

VIRGINIA ELECTRIC AND POWER COMPANY  
DOMINION ENERGY NORTH CAROLINA  
RIDER C  
FORECAST KWH SALES BY REVENUE CLASS AND RATE SCHEDULE

----- REVENUE CLASS=A. RESIDENTIAL -----

	12 MOS ENDED
RATE	01/31/2020
SCHEDULE	FORECAST KWH
1DF	2,956,867
1	1,619,642,643
1P	7,789,136
1T	1,154,403
1W	84,357
26	7,662,372
-----	
RC	1,639,289,779

----- REVENUE CLASS=B. COMMERCIAL -----

	12 MOS ENDED
RATE	01/31/2020
SCHEDULE	FORECAST KWH
5	515,322,251
5C	4,060,348
5P	125,305,173
7	1,258,580
6C	4,789,612
6P & 6L	79,745,860
10	34,099,403
26	8,488,584
-----	
RC	773,069,811

----- REVENUE CLASS=C. INDUSTRIAL -----

	12 MOS ENDED
RATE	01/31/2020
SCHEDULE	FORECAST KWH
5	15,628,825
5P	1,279,631
6P & 6L	387,138,692
6VP	258,851,484

\* SCHEDULE NS IS ACTUAL KWH FOR THE 12 MONTHS ENDING DECEMBER 2017.



VIRGINIA ELECTRIC AND POWER COMPANY  
DOMINION ENERGY NORTH CAROLINA  
RIDER C  
FORECAST KWH SALES BY REVENUE CLASS AND RATE SCHEDULE

----- REVENUE CLASS=C. INDUSTRIAL -----

(continued)

	12 MOS ENDED
RATE	01/31/2020
SCHEDULE	FORECAST KWH
10	131,864,373
NS	901,231,512
26	385,320
-----	
RC	1,696,379,838

----- REVENUE CLASS=D. OUTDOOR LIGHTING & TRAFFIC -----

	12 MOS ENDED
RATE	01/31/2020
SCHEDULE	FORECAST KWH
30T	524,363
26	7,857,928
-----	
RC	8,382,291

----- REVENUE CLASS=E. PUBLIC AUTHORITY -----

	12 MOS ENDED
RATE	01/31/2020
SCHEDULE	FORECAST KWH
5P	2,636,636
30	78,651,738
42	41,876,627
26	302,693
-----	
RC	123,467,694
=====	
	4,240,589,413

\* SCHEDULE NS IS ACTUAL KWH FOR THE 12 MONTHS ENDING DECEMBER 2017.

VIRGINIA ELECTRIC AND POWER COMPANY  
DOMINION ENERGY NORTH CAROLINA  
RIDER C  
SUMMARY OF FORECAST NET KWH SALES BY RATE SCHEDULE

RATE SCHEDULE	12 MOS ENDED	OPT OUT KWH	12 MOS ENDED
	01/31/2020 FORECAST KWH		01/31/2020 NET FORECAST KWH
1DF	2,956,867	0	2,956,867
1	1,619,642,643	0	1,619,642,643
1P	7,789,136	0	7,789,136
1T	1,154,403	0	1,154,403
1W	84,357	0	84,357
5	530,951,076	3,007,201	527,943,875
5C	4,060,348	0	4,060,348
5P	129,221,441	1,583,037	127,638,404
7	1,258,580	0	1,258,580
6C	4,789,612	0	4,789,612
6P & 6L	466,884,552	331,987,528	134,897,024
6VP	258,851,484	258,851,484	0
10	165,963,777	27,936,025	138,027,752
30	78,651,738	0	78,651,738
30T	524,363	0	524,363
42	41,876,627	0	41,876,627
NS	901,231,512	901,231,513	0
26	24,696,897	0	24,696,897
	=====	=====	=====
	4,240,589,413	1,524,596,788	2,715,992,626

\* SCHEDULE NS IS ACTUAL KWH FOR THE 12 MONTHS ENDING DECEMBER 2017.

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Aug 21 2018

VIRGINIA ELECTRIC AND POWER COMPANY  
 DOMINION ENERGY NORTH CAROLINA  
 RIDER C  
 REFLECTS FORECASTED NET KWH SALES  
 12 MONTHS ENDED January 31, 2020  
 KWH CATEGORIZED BY CUSTOMER CLASSES AND RATES SCHEDULES

----- CUSTOMER CLASS=RESIDENTIAL -----

	12 MOS ENDED
RATE	01/31/2020
SCHEDULE	NET FORECAST KWH
1	1,619,642,643
1DF	2,956,867
1P	7,789,136
1T	1,154,403
1W	84,357
-----	
CLASS	1,631,627,407

----- CUSTOMER CLASS=SMALL GENERAL SERVICE & PUBLIC AUTHORITY -----

	12 MOS ENDED
RATE	01/31/2020
SCHEDULE	NET FORECAST KWH
30	78,651,738
42	41,876,627
5	527,943,875
5C	4,060,348
5P	127,638,404
7	1,258,580
-----	
CLASS	781,429,571

----- CUSTOMER CLASS=LARGE GENERAL SERVICE -----

	12 MOS ENDED
RATE	01/31/2020
SCHEDULE	NET FORECAST KWH
10	138,027,752
6C	4,789,612
6P & 6L	134,897,024
-----	
CLASS	277,714,388

VIRGINIA ELECTRIC AND POWER COMPANY  
DOMINION ENERGY NORTH CAROLINA  
RIDER C  
REFLECTS FORECASTED NET KWH SALES  
12 MONTHS ENDED January 31, 2020  
KWH CATEGORIZED BY CUSTOMER CLASSES AND RATES SCHEDULES

----- CUSTOMER CLASS=6VP -----

	12 MOS ENDED
RATE	01/31/2020
SCHEDULE	NET FORECAST KWH
6VP	0

----- CUSTOMER CLASS=NS -----

	12 MOS ENDED
RATE	01/31/2020
SCHEDULE	NET FORECAST KWH
NS	0

----- CUSTOMER CLASS=OUTDOOR LIGHTING -----

	12 MOS ENDED
RATE	01/31/2020
SCHEDULE	NET FORECAST KWH
26	24,696,897

----- CUSTOMER CLASS=TRAFFIC LIGHTING -----

	12 MOS ENDED
RATE	01/31/2020
SCHEDULE	NET FORECAST KWH
30T	524,363
	=====
	2,715,992,626

VIRGINIA ELECTRIC AND POWER COMPANY  
 DOMINION ENERGY NORTH CAROLINA  
 RIDER C  
 ALLOCATION OF NC JURISDICTIONAL REVENUE REQUIREMENT  
 TO THE CUSTOMER CLASSES AND CALCULATION OF RIDER C CUSTOMER CLASS RATES  
 REFLECTS FORECASTED NET KWH SALES

CUSTOMER CLASS	CUST CLASS ALLOCATED REVENUE REQ(1)	12 MOS ENDED 01/31/2020 NET FORECAST KWH	CUSTOMER CLASS RATE W/OUT REG FEE	CUSTOMER CLASS RATE WITH REG FEE
RESIDENTIAL	\$1,009,233	1,631,627,407	\$0.00062	\$0.00062
SMALL GENERAL SERVICE & PUBLIC AUTHORITY	\$1,094,104	781,429,571	\$0.00140	\$0.00140
LARGE GENERAL SERVICE	\$406,964	277,714,388	\$0.00147	\$0.00147
6VP	\$0	0	0	0
NS	\$0	0	0	0
OUTDOOR LIGHTING	\$0	24,696,897	\$0.00000	\$0.00000
TRAFFIC LIGHTING	\$0	524,363	\$0.00000	\$0.00000
	=====	=====		
	\$2,510,301	2,715,992,626		

(1) FROM JCC SCHEDULE 3 PAGE 4

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**VIRGINIA ELECTRIC AND POWER COMPANY  
DOMINION ENERGY NORTH CAROLINA  
RATES SCHEDULES BY CUSTOMER CLASS  
(RIDER C RATES INCLUDE NORTH CAROLINA REGULATORY FEE)**

CUSTOMER CLASS	RATE SCHEDULE	RIDER C RATE
RESIDENTIAL	1	\$ 0.00062
	1DF	\$ 0.00062
	1P	\$ 0.00062
	1T	\$ 0.00062
	1W	\$ 0.00062
SMALL GENERAL SERVICE & PUBLIC AUTHORITY	30	\$ 0.00140
	42	\$ 0.00140
	5	\$ 0.00140
	5C	\$ 0.00140
	5P	\$ 0.00140
	7	\$ 0.00140
LARGE GENERAL SERVICE	10	\$ 0.00147
	6C	\$ 0.00147
	6P	\$ 0.00147
	6L	\$ 0.00147
	RTP With Customer Baseline Load	\$ 0.00147
	RTP Economic Development	\$ 0.00147
6VP	6VP	\$ -
NS	NS	\$ -
OUTDOOR LIGHTING	26	\$ -
TRAFFIC LIGHTING	30T	\$ -

**VIRGINIA ELECTRIC AND POWER COMPANY  
DOMINION ENERGY NORTH CAROLINA  
OPT-OUT NON-RESIDENTIAL CUSTOMERS**

<b>Month</b>	<b>Year</b>	<b>Total Monthly KWH</b>
January	2017	128,255,573
February	2017	123,276,205
March	2017	121,401,287
April	2017	134,156,079
May	2017	144,260,178
June	2017	124,780,321
July	2017	135,068,761
August	2017	133,164,939
September	2017	113,015,133
October	2017	132,315,519
November	2017	118,907,641
December	2017	115,995,157
<b>TOTAL</b>		<b>1,524,596,788</b>

Virginia Electric and Power Company

RIDER CDEMAND SIDE MANAGEMENT/ENERGY EFFICIENCY RIDER

The following Dominion Energy North Carolina filed Rate Schedules shall be increased by the applicable cents per kilowatt-hour charge.

<b>Rate Schedule</b>	<b>Cents per kWh Charge</b>
Schedule 1	0.062 ¢/kWh
Schedule 1DF	0.062 ¢/kWh
Schedule 1P	0.062 ¢/kWh
Schedule 1T	0.062 ¢/kWh
Schedule 1W	0.062 ¢/kWh
Schedule 5	0.140 ¢/kWh
Schedule 5C	0.140 ¢/kWh
Schedule 5P	0.140 ¢/kWh
Schedule 6C	0.147 ¢/kWh
Schedule 6L	0.147 ¢/kWh
Schedule 6P	0.147 ¢/kWh
Schedule 6VP	0.000 ¢/kWh
Schedule 7	0.140 ¢/kWh
Schedule LGS RTP With Customer Baseline Load	0.147 ¢/kWh
Schedule LGS – RTP Economic Development	0.147 ¢/kWh
Schedule NS	0.000 ¢/kWh
Schedule 10	0.147 ¢/kWh
Schedule 26	0.000 ¢/kWh
Schedule 30	0.140 ¢/kWh
Schedule 30T	0.000 ¢/kWh
Schedule 42	0.140 ¢/kWh

Filed 08-21-18  
Electric-North Carolina

Superseding Filing Effective For Usage On  
and After 01-01-18. This Filing Effective  
For Usage On and After 02-01-19.



VIRGINIA ELECTRIC AND POWER COMPANY  
 DOMINION ENERGY NORTH CAROLINA  
 RIDER CE  
 ALLOCATION OF NC JURISDICTIONAL REVENUE REQUIREMENT  
 TO THE CUSTOMER CLASSES AND CALCULATION OF RIDER CE CUSTOMER CLASS RATES  
 REFLECTS FORECASTED NET KWH SALES

CUSTOMER CLASS	CUST CLASS ALLOCATED REVENUE REQ(1)	12 MOS ENDED 01/31/2020 NET FORECAST KWH	CUSTOMER CLASS RATE W/OUT REG FEE	CUSTOMER CLASS RATE WITH REG FEE
RESIDENTIAL	\$962,357	1,631,627,407	\$0.00059	\$0.00059
SMALL GENERAL SERVICE & PUBLIC AUTHORITY	\$639,643	781,429,571	\$0.00082	\$0.00082
LARGE GENERAL SERVICE	\$237,922	277,714,388	\$0.00086	\$0.00086
6VP	\$0	0	0	0
NS	\$0	0	0	0
OUTDOOR LIGHTING	\$0	24,696,897	\$0.00000	\$0.00000
TRAFFIC LIGHTING	\$0	524,363	\$0.00000	\$0.00000
	=====	=====		
	\$1,839,922	2,715,992,626		

(1) FROM JCC SCHEDULE 3 PAGE 2

**VIRGINIA ELECTRIC AND POWER COMPANY  
DOMINION ENERGY NORTH CAROLINA  
RATES SCHEDULES BY CUSTOMER CLASS  
(RIDER CE RATES INCLUDE NORTH CAROLINA REGULATORY FEE)**

CUSTOMER CLASS	RATE SCHEDULE	RIDER CE RATE
RESIDENTIAL	1	\$ 0.00059
	1DF	\$ 0.00059
	1P	\$ 0.00059
	1T	\$ 0.00059
	1W	\$ 0.00059
SMALL GENERAL SERVICE & PUBLIC AUTHORITY	30	\$ 0.00082
	42	\$ 0.00082
	5	\$ 0.00082
	5C	\$ 0.00082
	5P	\$ 0.00082
	7	\$ 0.00082
LARGE GENERAL SERVICE	10	\$ 0.00086
	6C	\$ 0.00086
	6P	\$ 0.00086
	6L	\$ 0.00086
	RTP With Customer Baseline Load	\$ 0.00086
	RTP Economic Development	\$ 0.00086
6VP	6VP	\$ -
NS	NS	\$ -
OUTDOOR LIGHTING	26	\$ -
TRAFFIC LIGHTING	30T	\$ -

Virginia Electric and Power Company

RIDER CE  
DSM/EE EXPERIENCE MODIFICATION FACTOR  
(DSM/EE EMF)

The following Dominion Energy North Carolina filed Rate Schedules shall be increased by the applicable cents per kilowatt-hour charge.

Rate Schedule	Cents per kWh Charge
Schedule 1	0.059 ¢/kWh
Schedule 1DF	0.059 ¢/kWh
Schedule 1P	0.059 ¢/kWh
Schedule 1T	0.059 ¢/kWh
Schedule 1W	0.059 ¢/kWh
Schedule 5	0.082 ¢/kWh
Schedule 5C	0.082 ¢/kWh
Schedule 5P	0.082 ¢/kWh
Schedule 6C	0.086 ¢/kWh
Schedule 6L	0.086 ¢/kWh
Schedule 6P	0.086 ¢/kWh
Schedule 6VP	0.000 ¢/kWh
Schedule 7	0.082 ¢/kWh
Schedule LGS RTP With Customer Baseline Load	0.086 ¢/kWh
Schedule LGS – RTP Economic Development	0.086 ¢/kWh
Schedule NS	0.000 ¢/kWh
Schedule 10	0.086 ¢/kWh
Schedule 26	0.000 ¢/kWh
Schedule 30	0.082 ¢/kWh
Schedule 30T	0.000 ¢/kWh
Schedule 42	0.082 ¢/kWh

Filed 08-21-18  
Electric-North Carolina

Superseding Filing Effective For Usage On and After 01-01-19. This Filing Effective For Usage On and After 02-01-19.

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Virginia Electric and Power Company

RIDER CE  
DSM/EE EXPERIENCE MODIFICATION FACTOR  
(DSM/EE EMF)

The following Dominion Energy North Carolina filed Rate Schedules shall be increased by the applicable cents per kilowatt-hour charge.

Rate Schedule	Cents per kWh Charge
Schedule 1	0.000 ¢/kWh
Schedule 1DF	0.000 ¢/kWh
Schedule 1P	0.000 ¢/kWh
Schedule 1T	0.000 ¢/kWh
Schedule 1W	0.000 ¢/kWh
Schedule 5	0.000 ¢/kWh
Schedule 5C	0.000 ¢/kWh
Schedule 5P	0.000 ¢/kWh
Schedule 6C	0.000 ¢/kWh
Schedule 6L	0.000 ¢/kWh
Schedule 6P	0.000 ¢/kWh
Schedule 6VP	0.000 ¢/kWh
Schedule 7	0.000 ¢/kWh
Schedule LGS RTP With Customer Baseline Load	0.000 ¢/kWh
Schedule LGS – RTP Economic Development	0.000 ¢/kWh
Schedule NS	0.000 ¢/kWh
Schedule 10	0.000 ¢/kWh
Schedule 26	0.000 ¢/kWh
Schedule 30	0.000 ¢/kWh
Schedule 30T	0.000 ¢/kWh
Schedule 42	0.000 ¢/kWh

Filed 08-21-18  
Electric-North Carolina

Superseding Filing Effective For Usage On  
and After 01-01-18. This Filing Effective  
For Usage On and After 01-01-19.

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Aug 21 2018

DOCKET NO. E-22, SUB 556

NORTH CAROLINA DEMAND SIDE MANAGEMENT  
 AVERAGE BASE RATES FOR THE TEST PERIOD  
 EXCLUDES CUSTOMER CHARGES, ALL FUEL COMPONENTS, AND OPT-OUT CUSTOMERS  
 NORTH CAROLINA JURISDICTIONAL

RESIDENTIAL HEAT PUMP TUNE-UP PROGRAM

SUMMARY

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E) = (D)/(C)
1	2017	1	3,709,481	\$274,394	\$0.07397
2	2017	2	2,806,789	\$207,780	\$0.07403
3	2017	3	2,652,656	\$196,454	\$0.07406
4	2017	4	2,657,715	\$196,875	\$0.07408
5	2017	5	3,063,194	\$226,917	\$0.07408
6	2017	6	4,723,328	\$419,700	\$0.08886
7	2017	7	6,038,921	\$536,282	\$0.08880
8	2017	8	6,450,571	\$573,148	\$0.08885
9	2017	9	4,853,784	\$431,283	\$0.08886
10	2017	10	3,489,303	\$258,457	\$0.07407
11	2017	11	2,129,084	\$157,650	\$0.07405
12	2017	12	2,764,188	\$204,563	\$0.07400

\* Base Revenue reflects Schedule 1, 1P, and 1T non-fuel revenues, excluding Basic Customer Charge and excludes base fuel, Rider A and Rider B fuel rates.

\*\* Columns (C) & (D) are the sum of the kWh and the base revenue shown in Schedule 6 on pages 2 to 4 in Columns (C) & (D) of each residential rate table.

DOCKET NO. E-22, SUB 556

NORTH CAROLINA DEMAND SIDE MANAGEMENT  
 AVERAGE BASE RATES FOR THE TEST PERIOD  
 EXCLUDES CUSTOMER CHARGES, ALL FUEL COMPONENTS, AND OPT-OUT CUSTOMERS  
 NORTH CAROLINA JURISDICTIONAL

RESIDENTIAL HEAT PUMP TUNE-UP PROGRAM

RATE SCHEDULE 1

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E) = (D)/(C)
1	2017	1	3,685,213	\$272,899	\$0.07405
2	2017	2	2,791,321	\$206,752	\$0.07407
3	2017	3	2,637,212	\$195,323	\$0.07406
4	2017	4	2,640,448	\$195,666	\$0.07410
5	2017	5	3,041,382	\$225,471	\$0.07413
6	2017	6	4,686,657	\$416,804	\$0.08893
7	2017	7	5,998,843	\$533,312	\$0.08890
8	2017	8	6,406,772	\$569,745	\$0.08893
9	2017	9	4,822,408	\$428,874	\$0.08893
10	2017	10	3,466,162	\$256,909	\$0.07412
11	2017	11	2,114,627	\$156,644	\$0.07408
12	2017	12	2,745,636	\$203,304	\$0.07405

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.

**DOCKET NO. E-22, SUB 556**

**NORTH CAROLINA DEMAND SIDE MANAGEMENT  
 AVERAGE BASE RATES FOR THE TEST PERIOD  
 EXCLUDES CUSTOMER CHARGES, ALL FUEL COMPONENTS, AND OPT-OUT CUSTOMERS  
 NORTH CAROLINA JURISDICTIONAL**

**RESIDENTIAL HEAT PUMP TUNE-UP PROGRAM**

**RATE SCHEDULE 1P**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>Sum of kWh** (C)</b>	<b>Sum of Base* Revenue** (D)</b>	<b>Average Base Rate (E) = (D)/(C)</b>
<b>1</b>	2017	1	15,253	\$952	\$0.06241
<b>2</b>	2017	2	10,855	\$706	\$0.06504
<b>3</b>	2017	3	11,232	\$838	\$0.07461
<b>4</b>	2017	4	13,107	\$921	\$0.07027
<b>5</b>	2017	5	14,706	\$935	\$0.06358
<b>6</b>	2017	6	25,700	\$1,977	\$0.07693
<b>7</b>	2017	7	29,845	\$2,115	\$0.07087
<b>8</b>	2017	8	31,134	\$2,292	\$0.07362
<b>9</b>	2017	9	24,825	\$1,862	\$0.07501
<b>10</b>	2017	10	16,107	\$1,029	\$0.06389
<b>11</b>	2017	11	9,568	\$691	\$0.07222
<b>12</b>	2017	12	12,938	\$878	\$0.06786

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.

DOCKET NO. E-22, SUB 556

NORTH CAROLINA DEMAND SIDE MANAGEMENT  
 AVERAGE BASE RATES FOR THE TEST PERIOD  
 EXCLUDES CUSTOMER CHARGES, ALL FUEL COMPONENTS, AND OPT-OUT CUSTOMERS  
 NORTH CAROLINA JURISDICTIONAL

RESIDENTIAL HEAT PUMP TUNE-UP PROGRAM

RATE SCHEDULE 1T

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E) = (D)/(C)
1	2017	1	9,015	\$543	\$0.06023
2	2017	2	4,613	\$322	\$0.06980
3	2017	3	4,212	\$293	\$0.06956
4	2017	4	4,160	\$288	\$0.06923
5	2017	5	7,106	\$511	\$0.07191
6	2017	6	10,971	\$919	\$0.08377
7	2017	7	10,233	\$855	\$0.08355
8	2017	8	12,665	\$1,111	\$0.08772
9	2017	9	6,551	\$547	\$0.08350
10	2017	10	7,034	\$519	\$0.07378
11	2017	11	4,889	\$315	\$0.06443
12	2017	12	5,614	\$381	\$0.06787

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.



DOCKET NO. E-22, SUB 556

NORTH CAROLINA DEMAND SIDE MANAGEMENT  
 AVERAGE BASE RATES FOR THE TEST PERIOD  
 EXCLUDES CUSTOMER CHARGES, ALL FUEL COMPONENTS, AND OPT-OUT CUSTOMERS  
 NORTH CAROLINA JURISDICTIONAL

RESIDENTIAL HEAT PUMP UPGRADE PROGRAM

SUMMARY

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E) = (D)/(C)
1	2017	1	1,469,496	\$108,778	\$0.07402
2	2017	2	1,094,080	\$81,002	\$0.07404
3	2017	3	1,052,239	\$77,927	\$0.07406
4	2017	4	1,110,719	\$82,341	\$0.07413
5	2017	5	1,305,108	\$96,758	\$0.07414
6	2017	6	1,952,103	\$173,551	\$0.08890
7	2017	7	2,445,800	\$217,400	\$0.08889
8	2017	8	2,576,214	\$229,095	\$0.08893
9	2017	9	1,987,676	\$176,705	\$0.08890
10	2017	10	1,487,451	\$110,220	\$0.07410
11	2017	11	910,921	\$67,472	\$0.07407
12	2017	12	1,148,092	\$85,030	\$0.07406

\* Base Revenue reflects Schedule 1and 1P non-fuel revenues, excluding Basic Customer Charge and excludes base fuel, Rider A and Rider B fuel rates.

\*\* Columns (C) & (D) are the sum of the kWh and the base revenue shown in Schedule 7 on pages 2 to 3 in Columns (C) & (D) of each residential rate table.

DOCKET NO. E-22, SUB 556

NORTH CAROLINA DEMAND SIDE MANAGEMENT  
 AVERAGE BASE RATES FOR THE TEST PERIOD  
 EXCLUDES CUSTOMER CHARGES, ALL FUEL COMPONENTS, AND OPT-OUT CUSTOMERS  
 NORTH CAROLINA JURISDICTIONAL

RESIDENTIAL HEAT PUMP UPGRADE PROGRAM

RATE SCHEDULE 1

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E) = (D)/(C)
1	2017	1	1,466,408	\$108,572	\$0.07404
2	2017	2	1,091,458	\$80,824	\$0.07405
3	2017	3	1,049,206	\$77,721	\$0.07408
4	2017	4	1,108,514	\$82,160	\$0.07412
5	2017	5	1,301,877	\$96,545	\$0.07416
6	2017	6	1,946,953	\$173,185	\$0.08895
7	2017	7	2,439,167	\$216,910	\$0.08893
8	2017	8	2,570,250	\$228,590	\$0.08894
9	2017	9	1,981,930	\$176,254	\$0.08893
10	2017	10	1,484,576	\$110,042	\$0.07412
11	2017	11	908,027	\$67,279	\$0.07409
12	2017	12	1,146,393	\$84,926	\$0.07408

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.

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NORTH CAROLINA DEMAND SIDE MANAGEMENT  
 AVERAGE BASE RATES FOR THE TEST PERIOD  
 EXCLUDES CUSTOMER CHARGES, ALL FUEL COMPONENTS, AND OPT-OUT CUSTOMERS  
 NORTH CAROLINA JURISDICTIONAL

RESIDENTIAL HEAT PUMP UPGRADE PROGRAM

RATE SCHEDULE 1P

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E) = (D)/(C)
1	2017	1	3,088	\$206	\$0.06671
2	2017	2	2,622	\$178	\$0.06789
3	2017	3	3,033	\$206	\$0.06792
4	2017	4	2,205	\$181	\$0.08209
5	2017	5	3,231	\$213	\$0.06592
6	2017	6	5,150	\$366	\$0.07107
7	2017	7	6,633	\$490	\$0.07387
8	2017	8	5,964	\$505	\$0.08467
9	2017	9	5,746	\$451	\$0.07849
10	2017	10	2,875	\$178	\$0.06191
11	2017	11	2,894	\$193	\$0.06669
12	2017	12	1,699	\$104	\$0.06121

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.

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NORTH CAROLINA DEMAND SIDE MANAGEMENT  
 AVERAGE BASE RATES FOR THE TEST PERIOD  
 EXCLUDES CUSTOMER CHARGES, ALL FUEL COMPONENTS, AND OPT-OUT CUSTOMERS  
 NORTH CAROLINA JURISDICTIONAL

RESIDENTIAL DUCT TESTING & SEALING PROGRAM

RATE SCHEDULE 1

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E) = (D)/(C)
1	2017	1	396,996	\$29,373	\$0.07399
2	2017	2	272,215	\$20,135	\$0.07397
3	2017	3	261,127	\$19,297	\$0.07390
4	2017	4	317,922	\$23,527	\$0.07400
5	2017	5	433,064	\$32,033	\$0.07397
6	2017	6	675,358	\$59,916	\$0.08872
7	2017	7	840,782	\$74,552	\$0.08867
8	2017	8	893,645	\$79,310	\$0.08875
9	2017	9	718,582	\$63,753	\$0.08872
10	2017	10	521,568	\$38,565	\$0.07394
11	2017	11	275,534	\$20,356	\$0.07388
12	2017	12	290,703	\$21,494	\$0.07394

\* All participants were served under Schedule 1, therefore Base Revenue reflects Rate Schedule 1 non-fuel revenues excluding the Basic Customer Charge and excludes base fuel, Rider A, and Rider B fuel rates.

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NORTH CAROLINA DEMAND SIDE MANAGEMENT  
 AVERAGE BASE RATES FOR THE TEST PERIOD  
 EXCLUDES CUSTOMER CHARGES, ALL FUEL COMPONENTS, AND OPT-OUT CUSTOMERS  
 NORTH CAROLINA JURISDICTIONAL

RESIDENTIAL HOME ENERGY CHECK-UP PROGRAM

SUMMARY

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E) = (D)/(C)
1	2017	1	1,564,293	\$115,880	\$0.07408
2	2017	2	1,206,335	\$89,429	\$0.07413
3	2017	3	1,139,082	\$84,433	\$0.07412
4	2017	4	995,552	\$73,871	\$0.07420
5	2017	5	973,312	\$72,132	\$0.07411
6	2017	6	1,346,869	\$119,795	\$0.08894
7	2017	7	1,582,742	\$140,572	\$0.08882
8	2017	8	1,701,371	\$151,177	\$0.08886
9	2017	9	1,303,648	\$115,888	\$0.08890
10	2017	10	1,092,343	\$80,962	\$0.07412
11	2017	11	873,943	\$64,832	\$0.07418
12	2017	12	1,245,905	\$92,310	\$0.07409

\* Base Revenue reflects Schedule 1, 1P, and 1T non-fuel revenues, excluding Basic Customer Charge and excludes base fuel, Rider A and Rider B fuel rates.

\*\* Columns (C) & (D) are the sum of the kWh and the base revenue shown in Schedule 9 on pages 2 to 4 in Columns (C) & (D) of each residential rate table.

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NORTH CAROLINA DEMAND SIDE MANAGEMENT  
 AVERAGE BASE RATES FOR THE TEST PERIOD  
 EXCLUDES CUSTOMER CHARGES, ALL FUEL COMPONENTS, AND OPT-OUT CUSTOMERS  
 NORTH CAROLINA JURISDICTIONAL

RESIDENTIAL HOME ENERGY CHECK-UP PROGRAM

RATE SCHEDULE 1

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E) = (D)/(C)
1	2017	1	1,543,967	\$114,703	\$0.07429
2	2017	2	1,191,733	\$88,524	\$0.07428
3	2017	3	1,124,841	\$83,552	\$0.07428
4	2017	4	982,015	\$72,945	\$0.07428
5	2017	5	960,883	\$71,324	\$0.07423
6	2017	6	1,329,202	\$118,351	\$0.08904
7	2017	7	1,562,430	\$139,051	\$0.08900
8	2017	8	1,677,316	\$149,385	\$0.08906
9	2017	9	1,289,894	\$114,775	\$0.08898
10	2017	10	1,077,571	\$79,937	\$0.07418
11	2017	11	862,214	\$64,010	\$0.07424
12	2017	12	1,227,177	\$91,158	\$0.07428

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.

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NORTH CAROLINA DEMAND SIDE MANAGEMENT  
 AVERAGE BASE RATES FOR THE TEST PERIOD  
 EXCLUDES CUSTOMER CHARGES, ALL FUEL COMPONENTS, AND OPT-OUT CUSTOMERS  
 NORTH CAROLINA JURISDICTIONAL

RESIDENTIAL HOME ENERGY CHECK-UP PROGRAM

RATE SCHEDULE 1P

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E) = (D)/(C)
1	2017	1	19,287	\$1,106	\$0.05734
2	2017	2	13,820	\$846	\$0.06122
3	2017	3	13,433	\$821	\$0.06112
4	2017	4	12,882	\$879	\$0.06823
5	2017	5	11,778	\$759	\$0.06444
6	2017	6	16,924	\$1,370	\$0.08095
7	2017	7	18,950	\$1,391	\$0.07340
8	2017	8	23,151	\$1,694	\$0.07317
9	2017	9	12,785	\$1,016	\$0.07947
10	2017	10	14,026	\$960	\$0.06844
11	2017	11	11,043	\$771	\$0.06982
12	2017	12	17,947	\$1,096	\$0.06107

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.

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NORTH CAROLINA DEMAND SIDE MANAGEMENT  
 AVERAGE BASE RATES FOR THE TEST PERIOD  
 EXCLUDES CUSTOMER CHARGES, ALL FUEL COMPONENTS, AND OPT-OUT CUSTOMERS  
 NORTH CAROLINA JURISDICTIONAL

RESIDENTIAL HOME ENERGY CHECK-UP PROGRAM

RATE SCHEDULE 1T

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E) = (D)/(C)
1	2017	1	1,039	\$71	\$0.06833
2	2017	2	782	\$59	\$0.07545
3	2017	3	808	\$60	\$0.07426
4	2017	4	655	\$47	\$0.07176
5	2017	5	651	\$49	\$0.07527
6	2017	6	743	\$74	\$0.09960
7	2017	7	1,362	\$130	\$0.09545
8	2017	8	904	\$98	\$0.10841
9	2017	9	969	\$97	\$0.10010
10	2017	10	746	\$65	\$0.08713
11	2017	11	686	\$51	\$0.07434
12	2017	12	781	\$56	\$0.07170

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.



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NORTH CAROLINA DEMAND SIDE MANAGEMENT  
 AVERAGE BASE RATES FOR THE TEST PERIOD  
 EXCLUDES CUSTOMER CHARGES, ALL FUEL COMPONENTS, AND OPT-OUT CUSTOMERS  
 NORTH CAROLINA JURISDICTIONAL

RESIDENTIAL INCOME & AGE QUALIFYING HOME IMPROVEMENT PROGRAM

RATE SCHEDULE 1

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E) = (D)/(C)
1	2017	1	290,425	\$21,652	\$0.07455
2	2017	2	277,955	\$20,723	\$0.07456
3	2017	3	275,547	\$20,520	\$0.07447
4	2017	4	264,604	\$19,694	\$0.07443
5	2017	5	218,322	\$16,247	\$0.07442
6	2017	6	333,190	\$29,739	\$0.08926
7	2017	7	180,511	\$16,143	\$0.08943
8	2017	8	429,928	\$38,378	\$0.08927
9	2017	9	221,174	\$19,757	\$0.08933
10	2017	10	206,153	\$15,334	\$0.07438
11	2017	11	212,300	\$15,793	\$0.07439
12	2017	12	307,595	\$22,886	\$0.07440

\* All participants were served under Schedule 1, therefore Base Revenue reflects Rate Schedule 1 non-fuel revenues excluding the Basic Customer Charge and excludes base fuel, Rider A, and Rider B fuel rates.

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**NORTH CAROLINA DEMAND SIDE MANAGEMENT  
 AVERAGE BASE RATES FOR THE TEST PERIOD  
 EXCLUDES CUSTOMER CHARGES, ALL FUEL COMPONENTS, AND OPT-OUT CUSTOMERS  
 NORTH CAROLINA JURISDICTIONAL**

**RESIDENTIAL RETAIL LED LIGHTING PROGRAM**

**SUMMARY**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>Sum of kWh** (C)</b>	<b>Sum of Base* Revenue** (D)</b>	<b>Average Base Rate (E) = (D)/(C)</b>
<b>1</b>	2017	1	132,152,173	\$9,824,387	\$0.07434
<b>2</b>	2017	2	106,735,273	\$7,938,825	\$0.07438
<b>3</b>	2017	3	103,190,140	\$7,676,244	\$0.07439
<b>4</b>	2017	4	98,452,129	\$7,323,167	\$0.07438
<b>5</b>	2017	5	94,612,200	\$7,034,111	\$0.07435
<b>6</b>	2017	6	134,609,610	\$12,006,312	\$0.08919
<b>7</b>	2017	7	146,822,594	\$13,088,248	\$0.08914
<b>8</b>	2017	8	184,752,369	\$16,476,170	\$0.08918
<b>9</b>	2017	9	124,124,757	\$11,068,837	\$0.08918
<b>10</b>	2017	10	110,633,302	\$8,223,863	\$0.07433
<b>11</b>	2017	11	84,172,434	\$6,260,377	\$0.07438
<b>12</b>	2017	12	128,125,645	\$9,530,537	\$0.07438

\* Base Revenue reflects Schedule 1, 1P, and 1T non-fuel revenues, excluding Basic Customer Charge and excludes base fuel, Rider A and Rider B fuel rates.

\*\* Columns (C) & (D) are the sum of the kWh and the base revenue shown in Schedule 11 on pages 2 to 4 in Columns (C) & (D) of each residential rate table.

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NORTH CAROLINA DEMAND SIDE MANAGEMENT  
 AVERAGE BASE RATES FOR THE TEST PERIOD  
 EXCLUDES CUSTOMER CHARGES, ALL FUEL COMPONENTS, AND OPT-OUT CUSTOMERS  
 NORTH CAROLINA JURISDICTIONAL

RESIDENTIAL RETAIL LED LIGHTING PROGRAM

RATE SCHEDULE 1

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E) = (D)/(C)
1	2017	1	131,429,093	\$9,781,891	\$0.07443
2	2017	2	106,209,404	\$7,905,638	\$0.07443
3	2017	3	102,676,295	\$7,642,556	\$0.07443
4	2017	4	97,934,941	\$7,288,384	\$0.07442
5	2017	5	94,070,921	\$6,999,797	\$0.07441
6	2017	6	133,850,313	\$11,948,664	\$0.08927
7	2017	7	145,899,622	\$13,023,311	\$0.08926
8	2017	8	183,775,287	\$16,405,500	\$0.08927
9	2017	9	123,386,011	\$11,013,613	\$0.08926
10	2017	10	109,987,909	\$8,183,960	\$0.07441
11	2017	11	83,685,767	\$6,228,491	\$0.07443
12	2017	12	127,532,173	\$9,493,414	\$0.07444

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.

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NORTH CAROLINA DEMAND SIDE MANAGEMENT  
 AVERAGE BASE RATES FOR THE TEST PERIOD  
 EXCLUDES CUSTOMER CHARGES, ALL FUEL COMPONENTS, AND OPT-OUT CUSTOMERS  
 NORTH CAROLINA JURISDICTIONAL

RESIDENTIAL RETAIL LED LIGHTING PROGRAM

RATE SCHEDULE 1P

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E) = (D)/(C)
1	2017	1	624,256	\$36,076	\$0.05779
2	2017	2	452,003	\$28,014	\$0.06198
3	2017	3	438,480	\$28,447	\$0.06488
4	2017	4	445,736	\$29,756	\$0.06676
5	2017	5	470,534	\$29,335	\$0.06234
6	2017	6	661,760	\$49,535	\$0.07485
7	2017	7	798,806	\$54,447	\$0.06816
8	2017	8	854,704	\$59,922	\$0.07011
9	2017	9	643,859	\$47,131	\$0.07320
10	2017	10	561,102	\$33,761	\$0.06017
11	2017	11	429,261	\$27,853	\$0.06489
12	2017	12	510,842	\$31,604	\$0.06187

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.

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NORTH CAROLINA DEMAND SIDE MANAGEMENT  
 AVERAGE BASE RATES FOR THE TEST PERIOD  
 EXCLUDES CUSTOMER CHARGES, ALL FUEL COMPONENTS, AND OPT-OUT CUSTOMERS  
 NORTH CAROLINA JURISDICTIONAL

RESIDENTIAL RETAIL LED LIGHTING PROGRAM

RATE SCHEDULE 1T

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E) = (D)/(C)
1	2017	1	98,824	\$6,420	\$0.06496
2	2017	2	73,866	\$5,173	\$0.07003
3	2017	3	75,365	\$5,241	\$0.06954
4	2017	4	71,452	\$5,027	\$0.07035
5	2017	5	70,745	\$4,979	\$0.07038
6	2017	6	97,537	\$8,113	\$0.08318
7	2017	7	124,166	\$10,490	\$0.08448
8	2017	8	122,378	\$10,748	\$0.08783
9	2017	9	94,887	\$8,093	\$0.08529
10	2017	10	84,291	\$6,142	\$0.07287
11	2017	11	57,406	\$4,033	\$0.07025
12	2017	12	82,630	\$5,519	\$0.06679

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.

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**NORTH CAROLINA DEMAND SIDE MANAGEMENT  
 AVERAGE BASE RATES FOR THE TEST PERIOD  
 EXCLUDES CUSTOMER CHARGES, ALL FUEL COMPONENTS, AND OPT-OUT CUSTOMERS  
 NORTH CAROLINA JURISDICTIONAL**

**NON-RESIDENTIAL ENERGY AUDIT PROGRAM**

**SUMMARY**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>Sum of kWh** (C)</b>	<b>Sum of Base* Revenue** (D)</b>	<b>Average Base Rate (E) = (D)/(C)</b>
<b>1</b>	2017	1	4,525,068	\$322,341	\$0.07123
<b>2</b>	2017	2	4,202,690	\$299,939	\$0.07137
<b>3</b>	2017	3	4,224,266	\$303,854	\$0.07193
<b>4</b>	2017	4	4,470,986	\$314,703	\$0.07039
<b>5</b>	2017	5	4,904,294	\$342,784	\$0.06989
<b>6</b>	2017	6	5,781,537	\$420,842	\$0.07279
<b>7</b>	2017	7	6,183,438	\$464,010	\$0.07504
<b>8</b>	2017	8	6,223,596	\$467,361	\$0.07510
<b>9</b>	2017	9	5,974,411	\$438,515	\$0.07340
<b>10</b>	2017	10	5,539,042	\$396,838	\$0.07164
<b>11</b>	2017	11	4,695,915	\$350,390	\$0.07462
<b>12</b>	2017	12	4,446,033	\$324,299	\$0.07294

\* Base Revenue reflects Schedule 10, 30, 42, 5, 5P, and 6P non-fuel revenues, excluding Basic Customer Charge and excludes base fuel, Rider A and Rider B fuel rates.

\*\* Columns (C) & (D) are the sum of the kWh and the base revenue shown in Schedule 12 on pages 2 to 7 in Columns (C) & (D) of each residential rate table.

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**NORTH CAROLINA DEMAND SIDE MANAGEMENT  
 AVERAGE BASE RATES FOR THE TEST PERIOD  
 EXCLUDES CUSTOMER CHARGES, ALL FUEL COMPONENTS, AND OPT-OUT CUSTOMERS  
 NORTH CAROLINA JURISDICTIONAL**

**NON-RESIDENTIAL ENERGY AUDIT PROGRAM**

**RATE SCHEDULE 10**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>Sum of kWh** (C)</b>	<b>Sum of Base* Revenue** (D)</b>	<b>Average Base Rate (E) = (D)/(C)</b>
<b>1</b>	2017	1	666,450	\$32,405	\$0.04862
<b>2</b>	2017	2	624,788	\$25,528	\$0.04086
<b>3</b>	2017	3	606,493	\$22,678	\$0.03739
<b>4</b>	2017	4	624,365	\$21,865	\$0.03502
<b>5</b>	2017	5	676,902	\$25,000	\$0.03693
<b>6</b>	2017	6	672,559	\$29,238	\$0.04347
<b>7</b>	2017	7	738,998	\$44,750	\$0.06055
<b>8</b>	2017	8	690,969	\$38,987	\$0.05642
<b>9</b>	2017	9	744,493	\$32,439	\$0.04357
<b>10</b>	2017	10	645,993	\$30,718	\$0.04755
<b>11</b>	2017	11	689,501	\$28,808	\$0.04178
<b>12</b>	2017	12	633,948	\$26,642	\$0.04203

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.

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NORTH CAROLINA DEMAND SIDE MANAGEMENT  
 AVERAGE BASE RATES FOR THE TEST PERIOD  
 EXCLUDES CUSTOMER CHARGES, ALL FUEL COMPONENTS, AND OPT-OUT CUSTOMERS  
 NORTH CAROLINA JURISDICTIONAL

NON-RESIDENTIAL ENERGY AUDIT PROGRAM

RATE SCHEDULE 30

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E) = (D)/(C)
1	2017	1	130,162	\$8,818	\$0.06775
2	2017	2	137,238	\$8,716	\$0.06351
3	2017	3	139,562	\$10,101	\$0.07238
4	2017	4	151,427	\$10,702	\$0.07067
5	2017	5	188,723	\$13,316	\$0.07056
6	2017	6	269,819	\$19,410	\$0.07194
7	2017	7	95,760	\$6,860	\$0.07164
8	2017	8	95,040	\$7,030	\$0.07397
9	2017	9	111,600	\$8,092	\$0.07251
10	2017	10	100,800	\$6,730	\$0.06677
11	2017	11	84,960	\$5,956	\$0.07010
12	2017	12	52,560	\$3,870	\$0.07363

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.



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**NORTH CAROLINA DEMAND SIDE MANAGEMENT  
 AVERAGE BASE RATES FOR THE TEST PERIOD  
 EXCLUDES CUSTOMER CHARGES, ALL FUEL COMPONENTS, AND OPT-OUT CUSTOMERS  
 NORTH CAROLINA JURISDICTIONAL**

**NON-RESIDENTIAL ENERGY AUDIT PROGRAM**

**RATE SCHEDULE 42**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>Sum of kWh** (C)</b>	<b>Sum of Base* Revenue** (D)</b>	<b>Average Base Rate (E) = (D)/(C)</b>
<b>1</b>	2017	1	61,680	\$3,670	\$0.05950
<b>2</b>	2017	2	66,800	\$3,858	\$0.05775
<b>3</b>	2017	3	66,240	\$3,830	\$0.05782
<b>4</b>	2017	4	63,440	\$3,620	\$0.05706
<b>5</b>	2017	5	78,960	\$4,578	\$0.05798
<b>6</b>	2017	6	87,280	\$7,522	\$0.08618
<b>7</b>	2017	7	80,640	\$6,929	\$0.08593
<b>8</b>	2017	8	82,320	\$7,117	\$0.08646
<b>9</b>	2017	9	109,680	\$9,252	\$0.08435
<b>10</b>	2017	10	88,720	\$5,306	\$0.05981
<b>11</b>	2017	11	78,320	\$4,861	\$0.06207
<b>12</b>	2017	12	70,320	\$4,054	\$0.05765

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.

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NORTH CAROLINA DEMAND SIDE MANAGEMENT  
 AVERAGE BASE RATES FOR THE TEST PERIOD  
 EXCLUDES CUSTOMER CHARGES, ALL FUEL COMPONENTS, AND OPT-OUT CUSTOMERS  
 NORTH CAROLINA JURISDICTIONAL

NON-RESIDENTIAL ENERGY AUDIT PROGRAM

RATE SCHEDULE 5

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E) = (D)/(C)
1	2017	1	1,135,943	\$67,579	\$0.05949
2	2017	2	1,036,595	\$62,703	\$0.06049
3	2017	3	1,049,024	\$64,077	\$0.06108
4	2017	4	1,171,566	\$70,654	\$0.06031
5	2017	5	1,432,413	\$84,805	\$0.05920
6	2017	6	1,655,134	\$108,870	\$0.06578
7	2017	7	1,722,386	\$112,030	\$0.06504
8	2017	8	2,026,950	\$131,635	\$0.06494
9	2017	9	1,605,706	\$104,307	\$0.06496
10	2017	10	1,640,416	\$97,022	\$0.05914
11	2017	11	1,063,799	\$64,401	\$0.06054
12	2017	12	1,122,231	\$67,100	\$0.05979

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.

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RATE SCHEDULE 5P

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E) = (D)/(C)
1	2017	1	2,012,733	\$166,827	\$0.08289
2	2017	2	1,866,269	\$160,549	\$0.08603
3	2017	3	1,888,047	\$163,470	\$0.08658
4	2017	4	1,981,988	\$168,080	\$0.08480
5	2017	5	2,043,096	\$176,062	\$0.08617
6	2017	6	2,524,045	\$213,094	\$0.08443
7	2017	7	2,751,158	\$228,191	\$0.08294
8	2017	8	2,598,477	\$223,974	\$0.08619
9	2017	9	2,624,792	\$220,241	\$0.08391
10	2017	10	2,363,093	\$195,628	\$0.08278
11	2017	11	2,146,215	\$183,631	\$0.08556
12	2017	12	2,007,954	\$169,340	\$0.08433

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.

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RATE SCHEDULE 6P

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E) = (D)/(C)
1	2017	1	518,100	\$43,042	\$0.08308
2	2017	2	471,000	\$38,585	\$0.08192
3	2017	3	474,900	\$39,698	\$0.08359
4	2017	4	478,200	\$39,782	\$0.08319
5	2017	5	484,200	\$39,023	\$0.08059
6	2017	6	572,700	\$42,708	\$0.07457
7	2017	7	794,496	\$65,250	\$0.08213
8	2017	8	729,840	\$58,618	\$0.08032
9	2017	9	778,140	\$64,184	\$0.08248
10	2017	10	700,020	\$61,434	\$0.08776
11	2017	11	633,120	\$62,733	\$0.09909
12	2017	12	559,020	\$53,293	\$0.09533

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.

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**SUMMARY**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>Sum of kWh** (C)</b>	<b>Sum of Base* Revenue** (D)</b>	<b>Average Base Rate (E) = (D)/(C)</b>
<b>1</b>	2017	1	8,977,273	\$583,219	\$0.06497
<b>2</b>	2017	2	8,419,002	\$496,636	\$0.05899
<b>3</b>	2017	3	8,282,149	\$485,364	\$0.05860
<b>4</b>	2017	4	8,694,347	\$497,081	\$0.05717
<b>5</b>	2017	5	9,258,743	\$544,603	\$0.05882
<b>6</b>	2017	6	10,637,125	\$701,319	\$0.06593
<b>7</b>	2017	7	11,502,653	\$880,441	\$0.07654
<b>8</b>	2017	8	11,816,210	\$889,804	\$0.07530
<b>9</b>	2017	9	10,871,620	\$744,016	\$0.06844
<b>10</b>	2017	10	10,154,965	\$659,429	\$0.06494
<b>11</b>	2017	11	8,751,978	\$539,593	\$0.06165
<b>12</b>	2017	12	8,537,114	\$523,681	\$0.06134

\* Base Revenue reflects Schedule 10, 30, 42, 5, 5P, and 6P non-fuel revenues, excluding Basic Customer Charge and excludes base fuel, Rider A and Rider B fuel rates.

\*\* Columns (C) & (D) are the sum of the kWh and the base revenue shown in Schedule 13 on pages 2 to 7 in Columns (C) & (D) of each residential rate table.

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RATE SCHEDULE 10

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E) = (D)/(C)
1	2017	1	3,486,385	\$197,755	\$0.05672
2	2017	2	3,328,754	\$132,466	\$0.03979
3	2017	3	3,266,689	\$121,753	\$0.03727
4	2017	4	3,497,224	\$124,096	\$0.03548
5	2017	5	3,549,021	\$141,565	\$0.03989
6	2017	6	3,806,938	\$189,889	\$0.04988
7	2017	7	4,212,910	\$332,603	\$0.07895
8	2017	8	4,220,973	\$313,381	\$0.07424
9	2017	9	4,088,236	\$227,240	\$0.05558
10	2017	10	3,509,935	\$185,842	\$0.05295
11	2017	11	3,564,115	\$149,815	\$0.04203
12	2017	12	3,311,606	\$139,983	\$0.04227

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.

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**RATE SCHEDULE 30**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>Sum of kWh** (C)</b>	<b>Sum of Base* Revenue** (D)</b>	<b>Average Base Rate (E) = (D)/(C)</b>
<b>1</b>	2017	1	690,811	\$42,849	\$0.06203
<b>2</b>	2017	2	633,564	\$40,442	\$0.06383
<b>3</b>	2017	3	610,555	\$40,261	\$0.06594
<b>4</b>	2017	4	630,972	\$41,888	\$0.06639
<b>5</b>	2017	5	719,104	\$46,246	\$0.06431
<b>6</b>	2017	6	834,830	\$58,763	\$0.07039
<b>7</b>	2017	7	656,295	\$44,954	\$0.06850
<b>8</b>	2017	8	663,557	\$45,331	\$0.06832
<b>9</b>	2017	9	721,526	\$49,586	\$0.06872
<b>10</b>	2017	10	637,981	\$40,281	\$0.06314
<b>11</b>	2017	11	508,643	\$32,520	\$0.06393
<b>12</b>	2017	12	541,175	\$33,562	\$0.06202

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.

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**RATE SCHEDULE 42**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>Sum of kWh** (C)</b>	<b>Sum of Base* Revenue** (D)</b>	<b>Average Base Rate (E) = (D)/(C)</b>
<b>1</b>	2017	1	282,070	\$16,827	\$0.05966
<b>2</b>	2017	2	269,882	\$15,947	\$0.05909
<b>3</b>	2017	3	248,980	\$14,838	\$0.05960
<b>4</b>	2017	4	202,020	\$12,007	\$0.05943
<b>5</b>	2017	5	217,642	\$12,321	\$0.05661
<b>6</b>	2017	6	247,439	\$20,692	\$0.08362
<b>7</b>	2017	7	246,808	\$20,489	\$0.08302
<b>8</b>	2017	8	230,828	\$19,235	\$0.08333
<b>9</b>	2017	9	278,522	\$23,281	\$0.08359
<b>10</b>	2017	10	244,556	\$14,269	\$0.05835
<b>11</b>	2017	11	213,129	\$13,094	\$0.06144
<b>12</b>	2017	12	275,858	\$16,791	\$0.06087

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.



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RATE SCHEDULE 5

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E) = (D)/(C)
1	2017	1	2,290,804	\$139,539	\$0.06091
2	2017	2	2,085,589	\$128,097	\$0.06142
3	2017	3	2,064,185	\$128,129	\$0.06207
4	2017	4	2,202,078	\$134,332	\$0.06100
5	2017	5	2,502,077	\$150,327	\$0.06008
6	2017	6	2,975,724	\$197,933	\$0.06652
7	2017	7	3,143,551	\$206,370	\$0.06565
8	2017	8	3,552,454	\$235,224	\$0.06621
9	2017	9	2,666,495	\$176,198	\$0.06608
10	2017	10	2,908,963	\$173,072	\$0.05950
11	2017	11	1,936,520	\$117,615	\$0.06074
12	2017	12	1,997,844	\$121,512	\$0.06082

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.

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**NON-RESIDENTIAL DUCT TESTING & SEALING PROGRAM**

**RATE SCHEDULE 5P**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>Sum of kWh** (C)</b>	<b>Sum of Base* Revenue** (D)</b>	<b>Average Base Rate (E) = (D)/(C)</b>
<b>1</b>	2017	1	1,954,503	\$166,162	\$0.08501
<b>2</b>	2017	2	1,831,813	\$159,719	\$0.08719
<b>3</b>	2017	3	1,829,840	\$160,673	\$0.08781
<b>4</b>	2017	4	1,894,453	\$165,252	\$0.08723
<b>5</b>	2017	5	1,978,999	\$173,206	\$0.08752
<b>6</b>	2017	6	2,446,694	\$210,017	\$0.08584
<b>7</b>	2017	7	2,744,693	\$232,249	\$0.08462
<b>8</b>	2017	8	2,671,158	\$234,513	\$0.08779
<b>9</b>	2017	9	2,602,401	\$221,057	\$0.08494
<b>10</b>	2017	10	2,409,110	\$205,092	\$0.08513
<b>11</b>	2017	11	2,140,951	\$185,826	\$0.08680
<b>12</b>	2017	12	2,048,411	\$175,191	\$0.08553

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.

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**NON-RESIDENTIAL DUCT TESTING & SEALING PROGRAM**

**RATE SCHEDULE 6P**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>Sum of kWh** (C)</b>	<b>Sum of Base* Revenue** (D)</b>	<b>Average Base Rate (E) = (D)/(C)</b>
<b>1</b>	2017	1	272,700	\$20,087	\$0.07366
<b>2</b>	2017	2	269,400	\$19,965	\$0.07411
<b>3</b>	2017	3	261,900	\$19,710	\$0.07526
<b>4</b>	2017	4	267,600	\$19,506	\$0.07289
<b>5</b>	2017	5	291,900	\$20,938	\$0.07173
<b>6</b>	2017	6	325,500	\$24,025	\$0.07381
<b>7</b>	2017	7	498,396	\$43,776	\$0.08783
<b>8</b>	2017	8	477,240	\$42,120	\$0.08826
<b>9</b>	2017	9	514,440	\$46,654	\$0.09069
<b>10</b>	2017	10	444,420	\$40,873	\$0.09197
<b>11</b>	2017	11	388,620	\$40,723	\$0.10479
<b>12</b>	2017	12	362,220	\$36,642	\$0.10116

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.

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NON-RESIDENTIAL HEATING & COOLING EFFICIENCY

SUMMARY

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E) = (D)/(C)
1	2017	1	1,955,120	\$127,685	\$0.06531
2	2017	2	1,914,655	\$87,425	\$0.04566
3	2017	3	1,849,154	\$81,225	\$0.04393
4	2017	4	1,927,048	\$82,782	\$0.04296
5	2017	5	2,093,647	\$88,707	\$0.04237
6	2017	6	2,380,261	\$132,578	\$0.05570
7	2017	7	2,521,594	\$183,254	\$0.07267
8	2017	8	2,709,957	\$250,522	\$0.09245
9	2017	9	2,547,015	\$167,411	\$0.06573
10	2017	10	2,292,136	\$158,725	\$0.06925
11	2017	11	2,026,560	\$108,324	\$0.05345
12	2017	12	1,963,319	\$101,680	\$0.05179

\* Base Revenue reflects Schedule 10, 30, 42, 5, 5P, and 6P non-fuel revenues, excluding Basic Customer Charge and excludes base fuel, Rider A and Rider B fuel rates.

\*\* Columns (C) & (D) are the sum of the kWh and the base revenue shown in Schedule 14 on pages 2 to 7 in Columns (C) & (D) of each residential rate table.

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RATE SCHEDULE 10

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E) = (D)/(C)
1	2017	1	1,494,587	\$98,506	\$0.06591
2	2017	2	1,406,771	\$56,504	\$0.04017
3	2017	3	1,348,261	\$49,370	\$0.03662
4	2017	4	1,432,561	\$51,302	\$0.03581
5	2017	5	1,495,862	\$50,876	\$0.03401
6	2017	6	1,707,618	\$81,666	\$0.04782
7	2017	7	1,787,479	\$120,526	\$0.06743
8	2017	8	1,939,382	\$186,769	\$0.09630
9	2017	9	1,789,968	\$102,117	\$0.05705
10	2017	10	1,568,543	\$100,702	\$0.06420
11	2017	11	1,420,809	\$58,405	\$0.04111
12	2017	12	1,420,371	\$59,328	\$0.04177

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.

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RATE SCHEDULE 30

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E) = (D)/(C)
1	2017	1	82,642	\$5,518	\$0.06677
2	2017	2	87,558	\$5,484	\$0.06263
3	2017	3	90,602	\$6,397	\$0.07061
4	2017	4	99,587	\$6,952	\$0.06981
5	2017	5	128,963	\$8,654	\$0.06710
6	2017	6	171,899	\$12,096	\$0.07037
7	2017	7	-	-	-
8	2017	8	-	-	-
9	2017	9	-	-	-
10	2017	10	-	-	-
11	2017	11	-	-	-
12	2017	12	-	-	-

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.

\*\*\* Only one Schedule 30 customer participated in this program. This customer moved to Rate Schedule 6P midyear, therefore there is zero kWh for the months of July through December for Rate Schedule 30. This customer's usage will be shown in the Schedule 6P table for the remainder of the year.

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RATE SCHEDULE 42

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E) = (D)/(C)
1	2017	1	211,980	\$11,930	\$0.05628
2	2017	2	277,700	\$15,145	\$0.05454
3	2017	3	255,840	\$14,130	\$0.05523
4	2017	4	232,640	\$12,813	\$0.05508
5	2017	5	267,360	\$15,068	\$0.05636
6	2017	6	247,180	\$20,553	\$0.08315
7	2017	7	258,540	\$21,323	\$0.08247
8	2017	8	307,920	\$25,267	\$0.08206
9	2017	9	291,180	\$23,886	\$0.08203
10	2017	10	272,020	\$20,088	\$0.07385
11	2017	11	249,620	\$14,212	\$0.05693
12	2017	12	246,420	\$13,523	\$0.05488

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.

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RATE SCHEDULE 5

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E) = (D)/(C)
1	2017	1	134,471	\$8,768	\$0.06520
2	2017	2	114,626	\$7,573	\$0.06607
3	2017	3	123,331	\$8,427	\$0.06833
4	2017	4	132,820	\$8,751	\$0.06589
5	2017	5	172,982	\$11,020	\$0.06371
6	2017	6	217,084	\$14,832	\$0.06832
7	2017	7	273,059	\$18,221	\$0.06673
8	2017	8	268,175	\$17,662	\$0.06586
9	2017	9	245,387	\$16,293	\$0.06640
10	2017	10	243,733	\$14,424	\$0.05918
11	2017	11	191,651	\$11,711	\$0.06111
12	2017	12	171,728	\$10,873	\$0.06332

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.



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RATE SCHEDULE 5P

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E) = (D)/(C)
1	2017	1	31,440	\$2,963	\$0.09424
2	2017	2	28,000	\$2,719	\$0.09711
3	2017	3	31,120	\$2,901	\$0.09322
4	2017	4	29,440	\$2,964	\$0.10068
5	2017	5	28,480	\$3,089	\$0.10846
6	2017	6	36,480	\$3,431	\$0.09405
7	2017	7	33,520	\$3,352	\$0.10000
8	2017	8	34,640	\$3,442	\$0.09936
9	2017	9	31,840	\$3,302	\$0.10371
10	2017	10	34,320	\$3,163	\$0.09216
11	2017	11	30,560	\$2,966	\$0.09705
12	2017	12	30,480	\$2,781	\$0.09124

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.

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RATE SCHEDULE 6P

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E) = (D)/(C)
1	2017	1	-	-	-
2	2017	2	-	-	-
3	2017	3	-	-	-
4	2017	4	-	-	-
5	2017	5	-	-	-
6	2017	6	-	-	-
7	2017	7	168,996	\$19,832	\$0.11735
8	2017	8	159,840	\$17,382	\$0.10875
9	2017	9	188,640	\$21,813	\$0.11563
10	2017	10	173,520	\$20,348	\$0.11727
11	2017	11	133,920	\$21,030	\$0.15703
12	2017	12	94,320	\$15,175	\$0.16089

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.

\*\*\* Only one Schedule 6P customer participated in this program. This customer moved from Rate Schedule 30 to Rate Schedule 6P midyear, therefore there is zero kWh for the months of January through June on the Rate Schedule 6P table.

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 NORTH CAROLINA JURISDICTIONAL**

**NON-RESIDENTIAL LIGHTING SYSTEMS & CONTROLS**

**SUMMARY**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>Sum of kWh** (C)</b>	<b>Sum of Base* Revenue** (D)</b>	<b>Average Base Rate (E) = (D)/(C)</b>
<b>1</b>	2017	1	3,553,370	\$272,901	\$0.07680
<b>2</b>	2017	2	3,493,808	\$252,611	\$0.07230
<b>3</b>	2017	3	3,345,907	\$245,894	\$0.07349
<b>4</b>	2017	4	3,299,065	\$230,898	\$0.06999
<b>5</b>	2017	5	3,367,102	\$230,829	\$0.06855
<b>6</b>	2017	6	3,986,251	\$304,239	\$0.07632
<b>7</b>	2017	7	3,363,309	\$272,410	\$0.08099
<b>8</b>	2017	8	4,208,735	\$343,552	\$0.08163
<b>9</b>	2017	9	3,924,791	\$298,117	\$0.07596
<b>10</b>	2017	10	3,712,464	\$274,379	\$0.07391
<b>11</b>	2017	11	3,489,688	\$254,461	\$0.07292
<b>12</b>	2017	12	3,063,917	\$225,307	\$0.07354

\* Base Revenue reflects Schedule 10, 30, 42, 5, 5P, and 6P non-fuel revenues, excluding Basic Customer Charge and excludes base fuel, Rider A and Rider B fuel rates.

\*\* Columns (C) & (D) are the sum of the kWh and the base revenue shown in Schedule 15 on pages 2 to 7 in Columns (C) & (D) of each residential rate table.

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RATE SCHEDULE 10

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E) = (D)/(C)
1	2017	1	741,881	\$46,615	\$0.06283
2	2017	2	717,449	\$30,402	\$0.04238
3	2017	3	714,178	\$28,121	\$0.03938
4	2017	4	701,004	\$26,377	\$0.03763
5	2017	5	689,037	\$26,125	\$0.03792
6	2017	6	709,641	\$35,775	\$0.05041
7	2017	7	734,161	\$55,461	\$0.07554
8	2017	8	722,930	\$57,845	\$0.08001
9	2017	9	705,859	\$38,356	\$0.05434
10	2017	10	744,052	\$45,526	\$0.06119
11	2017	11	723,737	\$31,524	\$0.04356
12	2017	12	786,131	\$34,477	\$0.04386

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.

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RATE SCHEDULE 30

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E) = (D)/(C)
1	2017	1	100,918	\$6,661	\$0.06600
2	2017	2	109,686	\$6,805	\$0.06204
3	2017	3	109,302	\$7,549	\$0.06907
4	2017	4	127,023	\$8,555	\$0.06735
5	2017	5	164,555	\$10,639	\$0.06465
6	2017	6	202,199	\$14,065	\$0.06956
7	2017	7	34,744	\$2,216	\$0.06378
8	2017	8	33,068	\$2,168	\$0.06556
9	2017	9	33,824	\$2,182	\$0.06451
10	2017	10	26,928	\$1,566	\$0.05816
11	2017	11	22,628	\$1,317	\$0.05820
12	2017	12	14,444	\$942	\$0.06522

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.

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RATE SCHEDULE 42

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E) = (D)/(C)
1	2017	1	94,000	\$5,033	\$0.05354
2	2017	2	95,440	\$5,104	\$0.05348
3	2017	3	91,440	\$4,596	\$0.05026
4	2017	4	85,760	\$4,488	\$0.05233
5	2017	5	137,760	\$7,315	\$0.05310
6	2017	6	157,520	\$12,493	\$0.07931
7	2017	7	183,040	\$14,315	\$0.07821
8	2017	8	155,520	\$12,674	\$0.08149
9	2017	9	184,960	\$14,825	\$0.08015
10	2017	10	159,760	\$8,493	\$0.05316
11	2017	11	115,680	\$6,144	\$0.05311
12	2017	12	82,560	\$4,215	\$0.05105

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.

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RATE SCHEDULE 5

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E) = (D)/(C)
1	2017	1	1,155,856	\$75,949	\$0.06571
2	2017	2	1,082,431	\$72,214	\$0.06671
3	2017	3	1,072,963	\$71,638	\$0.06677
4	2017	4	1,062,804	\$70,734	\$0.06655
5	2017	5	1,070,488	\$69,975	\$0.06537
6	2017	6	1,484,474	\$109,814	\$0.07398
7	2017	7	902,116	\$61,239	\$0.06788
8	2017	8	1,521,948	\$111,924	\$0.07354
9	2017	9	1,167,473	\$84,649	\$0.07251
10	2017	10	1,069,955	\$71,110	\$0.06646
11	2017	11	1,059,070	\$70,551	\$0.06662
12	2017	12	725,108	\$45,763	\$0.06311

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.

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**NON-RESIDENTIAL LIGHTING SYSTEMS & CONTROLS**

**RATE SCHEDULE 5P**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>Sum of kWh** (C)</b>	<b>Sum of Base* Revenue** (D)</b>	<b>Average Base Rate (E) = (D)/(C)</b>
<b>1</b>	2017	1	832,465	\$68,195	\$0.08192
<b>2</b>	2017	2	738,052	\$67,266	\$0.09114
<b>3</b>	2017	3	734,149	\$65,430	\$0.08912
<b>4</b>	2017	4	755,474	\$67,243	\$0.08901
<b>5</b>	2017	5	820,512	\$68,691	\$0.08372
<b>6</b>	2017	6	1,032,542	\$86,541	\$0.08381
<b>7</b>	2017	7	837,127	\$71,331	\$0.08521
<b>8</b>	2017	8	1,114,054	\$94,695	\$0.08500
<b>9</b>	2017	9	902,035	\$75,030	\$0.08318
<b>10</b>	2017	10	889,874	\$74,133	\$0.08331
<b>11</b>	2017	11	794,153	\$67,051	\$0.08443
<b>12</b>	2017	12	653,479	\$56,171	\$0.08596

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.



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**NON-RESIDENTIAL LIGHTING SYSTEMS & CONTROLS**

**RATE SCHEDULE 6P**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>Sum of kWh** (C)</b>	<b>Sum of Base* Revenue** (D)</b>	<b>Average Base Rate (E) = (D)/(C)</b>
<b>1</b>	2017	1	628,250	\$70,448	\$0.11213
<b>2</b>	2017	2	750,750	\$70,820	\$0.09433
<b>3</b>	2017	3	623,875	\$68,560	\$0.10989
<b>4</b>	2017	4	567,000	\$53,501	\$0.09436
<b>5</b>	2017	5	484,750	\$48,084	\$0.09919
<b>6</b>	2017	6	399,875	\$45,551	\$0.11391
<b>7</b>	2017	7	672,121	\$67,848	\$0.10095
<b>8</b>	2017	8	661,215	\$64,246	\$0.09716
<b>9</b>	2017	9	930,640	\$83,075	\$0.08927
<b>10</b>	2017	10	821,895	\$73,551	\$0.08949
<b>11</b>	2017	11	774,420	\$77,874	\$0.10056
<b>12</b>	2017	12	802,195	\$83,739	\$0.10439

\* Base Revenue reflects the applicable rate schedules' non-fuel revenues, excluding Basic Customer Charge, base fuel, Rider A, and Rider B fuel rates.

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**COMMERCIAL SMALL BUSINESS IMPROVEMENT PROGRAM**

**RATE SCHEDULE 5**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>Sum of kWh** (C)</b>	<b>Sum of Base* Revenue** (D)</b>	<b>Average Base Rate (E) = (D)/(C)</b>
<b>1</b>	2017	1	39,897	\$2,446	\$0.06131
<b>2</b>	2017	2	35,897	\$2,221	\$0.06187
<b>3</b>	2017	3	33,784	\$2,085	\$0.06172
<b>4</b>	2017	4	30,355	\$1,871	\$0.06164
<b>5</b>	2017	5	35,619	\$2,188	\$0.06143
<b>6</b>	2017	6	40,094	\$2,791	\$0.06961
<b>7</b>	2017	7	56,392	\$3,866	\$0.06856
<b>8</b>	2017	8	77,480	\$5,438	\$0.07019
<b>9</b>	2017	9	23,740	\$1,614	\$0.06799
<b>10</b>	2017	10	51,401	\$3,238	\$0.06299
<b>11</b>	2017	11	20,005	\$1,172	\$0.05859
<b>12</b>	2017	12	30,526	\$1,929	\$0.06319

\* All participants were served under Schedule 5, therefore Base Revenue reflects Rate Schedule 5 non-fuel revenues excluding the Basic Customer Charge and excludes base fuel, Rider A, and Rider B fuel rates.

**Rule R8-69(f)(1)(i) – Projected NC retail sales for the rate period**

Rule R8-69 (f) Filing Requirements and Procedure.

(1) Each electric public utility shall submit to the Commission all of the following information and data in its application:

(i) Projected North Carolina retail monthly kWh sales for the rate period.

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The Company's projected North Carolina retail monthly kWh sales for the rate period, February 1, 2019 through January 31, 2020, are provided in the following table:

<b>MONTH</b>	<b>PROJKWH</b>
Feb-19	343,530,653
Mar-19	328,498,511
Apr-19	320,928,046
May-19	328,523,569
Jun-19	365,725,988
Jul-19	430,324,215
Aug-19	401,996,978
Sep-19	364,787,065
Oct-19	327,231,334
Nov-19	318,564,379
Dec-19	367,233,682
Jan-20	408,897,305
<b>TOTAL</b>	<b>4,306,241,725</b>

**Rule R8-69(f)(1)(vi) - Proposed DSM/EE and DSM/EE EMF riders**

Rule R8-69 (0) Filing Requirements and Procedure.

(1) Each electric public utility shall submit to the Commission all of the following information and data in its application:

(vi) The requested DSM/EE rider and DSM/EE EMF rider and the basis for their determination

**The Rate Design for DSM/EE Rider**

Detailed information regarding the determination of the DSM/EE factors has been provided as a part of the attached testimony of Debra A. Stephens. The following table provides a summary of the Company's requested DSM/EE rates.

<b>Customer Rate Class</b>	<b>DSM/EE Rate</b>
Residential	0.062 ¢/kWh
Small General Service & Public Authority	0.140 ¢/kWh
Large General Service	0.147 ¢/kWh
6VP	0.000 ¢/kWh
NS	0.000 ¢/kWh
Outdoor Lighting	0.000 ¢/kWh
Traffic Lighting	0.000 ¢/kWh

**The Rate Design For DSM/EE EMF Rider**

Detailed information regarding the determination of the DSM/EE EMF factors has been provided as a part of the attached testimony of Debra A. Stephens. The following table provides a summary of the Company's requested DSM/EE EMF rates.

<b>Customer Rate Class</b>	<b>DSM/EE EMF Rate</b>
Residential	0.059¢/kWh
Small General Service & Public Authority	0.082 ¢/kWh
Large General Service	0.086 ¢/kWh
6VP	0.000 ¢/kWh
NS	0.000 ¢/kWh
Outdoor Lighting	0.000 ¢/kWh
Traffic Lighting	0.000 ¢/kWh

**Rule R8-69(f)(1)(vii) - Projected NC retail sales for customers opting out of measures**

## Rule R8-69 (f) Filing Requirements and Procedure.

(1) Each electric public utility shall submit to the Commission all of the following information and data in its application:

(vii) Projected North Carolina retail monthly kwh sales for the rate period for all industrial and large commercial accounts, in the aggregate, that are not assessed the rider charges as provided in this rule.

The Company reviewed its customer records and identified that commercial customers choosing to "opt-out" consumed 33,287,749 kWh during the 12 months ended December 31, 2017. A similar review identified industrial sales of 1,491,309,032 kWh associated with customers electing to "opt-out". The following table provides the Company's estimate of North Carolina retail monthly kWh sales in the aggregate, that will not be assessed DSM/EE rider charges as provided for in Commission Rule R8-69.

<b>Month</b>	<b>Year</b>	<b>Total Monthly KWH</b>
January	2017	128,255,573
February	2017	123,276,205
March	2017	121,401,287
April	2017	134,156,079
May	2017	144,260,178
June	2017	124,780,321
July	2017	135,068,761
August	2017	133,164,939
September	2017	113,015,133
October	2017	132,315,519
November	2017	118,907,641
December	2017	115,995,157
<b>TOTAL</b>		<b>1,524,596,788</b>

**Rule R8-69(f)(1)(viii) - Supporting workpapers**

Rule RE-69 (f) Filing Requirements and Procedure.

(1) Each electric public utility shall submit to the Commission all of the following information and data in its application:

(viii) All workpapers supporting the calculations and adjustments described above workpapers supporting calculations and adjustments have been attached to this document.

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The testimony and exhibits of Debra A. Stephens are elements of this request. Information detailing the development of the Company's proposed DSM/EE and DSM/EE EMF rates are provided as a part of Ms. Stephens' testimony.

**Appendix A: Non-Participating Customers**

Non-Participant	Non-Participating Accounts
Consolidated Diesel	1
Domtar	1
Enviva Pellets	2
Flambeau Products Inc	1
Parkdale (Martin Mills)	1
KABA Ilco (Ilco-Unican)	1
Kapstone Kraft Paper	2
Lowe's Home Centers Inc	5
Nucor	1
Weyerhaeuser Paper	1
Hospira Inc	1
Wal-Mart Stores East	6