

August 15, 2017

**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 545

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 MLL-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 15, 2017  
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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  
Margaret A. Force



**Dominion<sup>®</sup>**

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Aug 15 2017

**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  
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 545**

**Filed: August 15, 2017**

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 545**

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**STATE OF NORTH CAROLINA  
UTILITIES COMMISSION  
RALEIGH**

DOCKET NO. E-22, SUB 545

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

<p>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</p>	<p>) ) ) ) ) )</p>	<p>APPLICATION FOR APPROVAL OF DEMAND-SIDE MANAGEMENT AND ENERGY EFFICIENCY COST RECOVERY RIDER</p>
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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/Program 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. 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 January 1, 2018, through December 31, 2018 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, 2016, through December 31, 2016 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 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 approved 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,

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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).

<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).

2016, in the Company's most recent cost recovery proceeding, the Commission approved the currently-effective updated Riders C and CE.<sup>7</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 R8-69 applications for DSM/EE cost recovery.<sup>8</sup> The 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>9</sup> (b) the previously approved Phase II DSM/EE programs: Non-Residential Energy Audit Program, Non-Residential Duct Testing & Sealing Program, Residential Home Energy Check-Up Program, Residential Duct Sealing Program, Residential Heat Pump Tune-Up Program, and Residential Heat Pump Upgrade Program;<sup>10</sup> (c) the previously approved Phase III

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<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 Revised Cost Recovery and Incentive Mechanism*, Docket No. E-22, Sub 464 (May 22, 2017).

<sup>9</sup> *Order Approving Program*, Docket No. E-22, Sub 465 (Feb. 22, 2011).

<sup>10</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

DSM/EE programs: Non-Residential Lighting Systems & Controls Program, Non-Residential Heating & Cooling Efficiency Program, and Non-Residential Window Film Program;<sup>11</sup> (d) the Phase IV Income and Age Qualifying Home Improvement Program;<sup>12</sup> (e) the Phase V Small Business Improvement Program;<sup>13</sup> (f) the North Carolina-only Residential LED Light Program;<sup>14</sup> and (g) the Company's proposed Phase VI Non-Residential Prescriptive Program, as filed for Commission approval on July 28, 2017.<sup>15</sup> The Company has requested that the proposed Non-Residential Prescriptive Program be approved to begin accepting participants in North Carolina on and after January 1, 2018.

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 2014, 2015, and 2016 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.

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Upgrade Program). The Phase II Programs, except for the Residential Heat Pump Upgrade Program, were closed to new customers as of February 7, 2017. *Order on Motion to Close or Suspend Programs*, Docket Nos. E-22, Subs 495, 496, 497, 498, 499, and 500 (Nov. 29, 2016). That order also granted the Company's request to suspend the Residential Heat Pump Upgrade Program. The Company filed a Motion with the Commission on July 28, 2017, in Docket No. E-100, Sub 500, to formally close the suspended Program.

<sup>11</sup> *Order Approving Program*, Docket No. E-22, Sub 507 (Oct. 27, 2014); *Order Approving Program*, Docket No. E-22, Sub 508 (Oct. 27, 2014); *Order Approving Program*, Docket No. E-22, Sub 509 (Oct. 27, 2014).

<sup>12</sup> *Order Approving Program*, Docket No. E-22, Sub 523 (Oct. 6, 2015).

<sup>13</sup> *Order Approving Program*, Docket No. E-22, Sub 538 (Oct. 26, 2016).

<sup>14</sup> *Order Approving Program*, Docket No. E-22, Sub 539 (Dec. 20, 2016).

<sup>15</sup> *In the Matter of Application of Dominion Energy North Carolina for Approval of Non-Residential Prescriptive Program*, Docket No. E-22, Sub 543 (July 28, 2017).

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, 2017 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>16</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 \$3,743,537 of DSM/EE expenses and incentives during the Rate Period. This amount includes an under-collection of \$202,430 during the Test Period and \$3,542,469 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	0.113 ¢/kWh	0.007¢/kWh	0.120 ¢/kWh
Small General Service & Public Authority	0.146 ¢/kWh	0.008¢/kWh	0.154 ¢/kWh
Large General Service	0.112 ¢/kWh	0.006¢/kWh	0.118 ¢/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

<sup>16</sup> See *Order Granting General Rate Increase*, Docket No. E-22, Sub 532 (Dec. 22, 2016).

Updated Rider C and Rider CE will be in effect for the twelve-month period from January 1, 2018, through December 31, 2018, the proposed Rate Period.

12. 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.

13. 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, Melba L. Lyons, 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 15th day of August, 2017.

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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**VERIFICATION****E-22, Sub 545**

I, Thomas P. Wohlfarth, Senior Vice President, Regulatory Affairs, for Virginia Electric and Power Company, do solemnly swear that the facts stated in the foregoing *Application for Approval of Demand-Side Management and Energy Efficiency Cost Recovery Rider*, insofar as they relate to Virginia Electric and Power Company, d/b/a Dominion Energy North Carolina, are true and correct to the best of my knowledge and belief.

Thomas P. Wohlfarth

Thomas P. Wohlfarth

COMMONWEALTH OF VIRGINIA )

)

to wit:

City of Richmond )

The foregoing instrument was sworn to and acknowledged before me this 11<sup>th</sup> day of August, 2017.

Denise Ann Tunstall

Notary Public

My registration number is 7707756 and my commission expires:

April 30, 2020



**DIRECT TESTIMONY  
OF  
MICHAEL T. HUBBARD  
ON BEHALF OF  
DOMINION ENERGY NORTH CAROLINA  
BEFORE THE  
NORTH CAROLINA UTILITIES COMMISSION  
DOCKET NO. E-22, SUB 545**

OFFICIAL COPY

Aug 15 2017

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 its authorized Phase I, II,  
16          III, IV, and V Programs, and proposed Phase VI Non-residential Prescriptive  
17          Program as well as utility incentives, through updated Rider C and the test  
18          period experience modification factor (“EMF”) rider, Rider CE

1 (“Application”). The purpose of my testimony is to: (1) provide an update on  
2 the status of the Company’s current and proposed DSM/EE Programs in North  
3 Carolina; (2) provide an overview of the Application and introduce the other  
4 witnesses supporting the Company’s cost recovery request in this case; and  
5 (3) present the Company’s cost recovery request in this proceeding to the  
6 North Carolina Utilities Commission (“NCUC” or “Commission”).

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

8 **Q. Please provide a brief overview of the Company’s approved DSM/EE**  
9 **Programs in North Carolina.**

10 A. In February 2011, the Commission approved five DSM/EE Programs, which  
11 the Company began offering to customers in the spring of 2011.<sup>1</sup> These  
12 “Phase I” DSM/EE Programs included the Company’s:

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

18 On December 31, 2011, the Company concluded the implementation phase of  
19 its Residential Lighting Program. Further, the Company concluded its North

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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).

1 Carolina-only Commercial Lighting Program and Commercial HVAC  
2 Upgrade Program on December 31, 2014.<sup>2</sup>

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

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

11 The Commission approved the six Phase II Programs in December 2013, and  
12 the Company began accepting new customers in these Programs beginning on  
13 January 1, 2014.<sup>3</sup> On August 16, 2016, as amended on October 19, 2016, the  
14 Company filed a Motion for Commission approval to close the Phase II  
15 programs to new applications as of February 7, 2017, contemporaneous with  
16 their closure to new participants in Virginia, with the exception of the  
17 Residential Heat Pump Upgrade, which the Company asked to suspend as of

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<sup>2</sup> On December 16, 2013, the Commission also 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 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).

1 February 7, 2017. The Commission granted those requests by order issued on  
2 November 29, 2016.<sup>4</sup>

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

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

8 The Commission approved the three Phase III Programs in October 2014, and  
9 the Company began accepting new customers in these Programs beginning on  
10 January 1, 2015.<sup>5</sup>

11 In July 2015, the Company requested Commission approval to implement the  
12 “Phase IV” Residential Income and Age Qualifying Home Improvement  
13 Program. After Commission approval in October 2015, this new Program  
14 opened to North Carolina customers on January 1, 2016.<sup>6</sup> The “Phase IV”  
15 Residential Income and Age Qualifying Home Improvement Program  
16 replaced the Phase I North Carolina-only Low Income Program, which  
17 concluded on December 31, 2015.<sup>7</sup>

18 In July 2016, the Company requested Commission approval to implement the  
19 “Phase V” Non-residential Small Business Improvement Program. After

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<sup>4</sup> *Order on Motion to Close or Suspend Programs*, Docket Nos. E-22, Subs 495, 496, 497, 498, 499, and 500 (Nov. 29, 2016).

<sup>5</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>6</sup> *Order Approving Program*, Docket No. E-22, Sub 523 (Oct. 6, 2015).

<sup>7</sup> *Order Granting Motion to Offer North Carolina-Only Low Income Program*, Docket No. E-22, Sub 463 (Sept. 9, 2014).

1 Commission approval in October 2016,<sup>8</sup> the Company began accepting new  
2 customers in this Program beginning on January 1, 2017.

3 In October 2016, the Company requested Commission approval to implement  
4 an instant discount type of North Carolina-only Residential Retail LED  
5 Lighting Program for a two-year period. The Commission approved the  
6 North Carolina-only Residential Retail LED Lighting Program in December  
7 2016.<sup>9</sup>

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

10 A. The approved DSM/EE Programs have been successful in North Carolina.  
11 The Company launched the Residential Lighting Program in May 2011, and  
12 over 37,000 bulbs were sold through December 31, 2011, when the program  
13 was completed. Through the Low Income Program, the Company has  
14 performed approximately 930 low income audits and repairs in North Carolina  
15 during the period June 2011 through June 30, 2015. Through the Air  
16 Conditioner Cycling Program, the Company began installing air conditioner  
17 cycling devices in August 2011, and approximately 3,865 customers are  
18 participating in the Program as of June 30, 2017.

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

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<sup>8</sup> *Order Approving Program*, Docket No. E-22, Sub 538 (Oct. 26, 2016).

<sup>9</sup> *Order Approving Program*, Docket No. E-22, Sub 539 (Dec. 20, 2016).

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 Sealing Program has resulted  
4 in testing and repair of duct work associated with approximately 554 heat  
5 pump units. Approximately 1,049 residential customers have received  
6 customized energy audit reports and direct install measures as part of the  
7 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 & Sealing Program has had approximately 250 participants in  
15 North Carolina since Program launch.

16 The Phase III Programs launched in North Carolina in January 2015. As of  
17 June 30, 2017, 84 customers have participated in the Company's Phase III  
18 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, 2017,  
21 251 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, 2017, 2  
3 customers have participated in the Company's Phase V Program, with  
4 approximately 10-15 additional projects in the queue, that may start in the  
5 near future, pending eligibility requirements.

6 As of June 30, 2017, the Company has 68 participating contractors for its  
7 North Carolina customers.

8 **Q. Please provide a status update on the recently closed DSM Phase II**  
9 **programs.**

10 A. The Company, along with its program contractors, have proceeded with  
11 closure of the DSM Phase II non-residential and residential Programs in an  
12 orderly manner, with the exception of the residential Heat Pump Upgrade  
13 Program, which I address further below. Notices of anticipated Program  
14 closure were posted on the Company's website in June 2016. Rebate  
15 payments were scheduled for completion by March 31, 2017. Program  
16 evaluation, measurement and verification will continue throughout 2017 for  
17 all DSM Phase II programs.

18 **Q. Please provide a status update on the recently-approved North Carolina-**  
19 **only Residential Retail LED Lighting Program.**

20 A. The Company and its implementation vendor, Ecova, have been working to  
21 launch the new LED Lighting Program in the Company's North Carolina  
22 service territory. As of mid-July 2017, the qualifying LED products are

1 available for purchase in numerous retail locations throughout the Company's  
2 North Carolina service territory. The implementation vendor has also  
3 performed face-to-face visits to all participating retail locations and provided  
4 training kits on how to install the bulbs for any interested customers. The  
5 Company has also updated its website content to assist interested customers in  
6 locating a participating retailer in the Residential Retail LED Lighting  
7 Program.

8 **Q. Has the Company proposed additional Programs for Commission**  
9 **approval and deployment in North Carolina?**

10 A. Yes. On July 28, 2017, the Company requested Commission approval of the  
11 Phase VI Non-Residential Prescriptive Program. This Program was recently  
12 approved for deployment in the Company's Virginia jurisdiction,<sup>10</sup> and will be  
13 offered on a system-wide basis after January 1, 2018, if approved by the  
14 Commission for deployment in North Carolina. The Program would offer  
15 incentives to non-residential customers in the Company's North Carolina  
16 service territory, for the installation of a variety of energy saving measures,  
17 including refrigeration evaporator fans (reach-in and walk-in coolers and  
18 freezers), commercial ENERGY STAR appliances, commercial refrigeration,  
19 commercial ice maker (ENERGY STAR), advanced power strip,  
20 cooler/freezer strip curtain, HVAC tune up, vending machine controls, kitchen  
21 fan variable speed drives, and commercial duct testing and sealing measures.

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<sup>10</sup> *Petition of Virginia Electric and Power Company for approval to implement new demand-side management programs and for approval of two updated rate adjustment clauses pursuant to § 56-585.1 A 5 of the Code of Virginia*, Final Order, Case No. PUE-2016-00111 (June 1, 2017).

1 The exact incentive levels will be determined in consultation with the  
2 Company's implementation contractor, taking current market conditions into  
3 account, with dollar amounts that reflect the energy saved per measure and are  
4 tied to the average incentive amount requested for Commission approval.

5 **Q. Has the Company recently evaluated deploying other DSM/EE Programs**  
6 **on either a system-wide or North Carolina-only basis?**

7 A. Yes. The Company's Energy Conservation group works continuously to  
8 identify and develop additional cost-effective DSM and EE Programs for  
9 deployment in the Company's Virginia and North Carolina service territories.  
10 As the Commission is aware, the Company has designed its DSM/EE  
11 programs to be managed and operated on a consolidated, system basis in order  
12 to minimize program expenses while optimizing program deployment.  
13 Specifically, the Company develops its DSM/EE program portfolio to be  
14 deployed in "phases," with program approval first being sought in Virginia  
15 and, if approved in Virginia, then sought in North Carolina. The Company  
16 uses outside implementation vendors to operate its DSM/EE programs on a  
17 system/jurisdictional basis. This approach has allowed North Carolina and  
18 Virginia to benefit from the efficiencies gained through consolidated operation  
19 of the programs, as program expenses have been allocated between the  
20 jurisdictions.

21 Notably, in 2016, the Company designed and requested State Corporation  
22 Commission of Virginia ("VSCC") approval to implement a proposed Phase  
23 VI Residential Home Energy Assessment Program along with the Non-

1 residential Prescriptive Program, as well as requested a two-year extension of  
2 the DSM Phase II Residential Heat Pump Upgrade Program and a five-year  
3 extension of the Virginia-only Non-residential Distributed Generation  
4 Program. Ultimately, the VSCC denied approval of the Residential Home  
5 Energy Assessment Program as well as the continuation of the Residential  
6 Heat Pump Upgrade Program,<sup>11</sup> resulting in these system-wide Program  
7 designs no longer being considered for deployment in North Carolina.

8 Consistent with prior direction by this Commission, the Company recently  
9 evaluated the possibility of implementing the Residential Home Energy  
10 Assessment Program and the currently-suspended Residential Heat Pump  
11 Upgrade Program on a North Carolina-only basis, including analyzing the cost  
12 effectiveness of a potential North Carolina-only program design. After  
13 receiving input from the Company's program design consultant regarding the  
14 feasibility of North Carolina-only versions of these Program designs and  
15 evaluating their cost-effectiveness, as well as engaging in discussions with the  
16 Public Staff regarding their cost effectiveness, the Company has determined  
17 that bringing forward North Carolina-only Residential Home Energy  
18 Assessment and Residential Heat Pump Upgrade Programs would not be cost-  
19 effective for the Company's customers at this time.

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<sup>11</sup> *Id.*

- 1    **Q.    Does the Company have any additional plans to evaluate the Residential**  
2           **Home Energy Assessment and Residential Heat Pump Upgrade**  
3           **Programs?**
- 4    A.    Yes. The EC group is currently evaluating a new, modified Residential Home  
5           Energy Assessment Program for potential inclusion in its 2017 Virginia DSM  
6           filing as a future system-wide Program. The Company will continue to work  
7           with its program design consultant to focus on redesign of the Residential  
8           Home Energy Assessment Program in order to determine whether a cost-  
9           effective design can be developed and brought forward on a system level in  
10          the upcoming Virginia regulatory filing in the fall of 2017.
- 11          Specific to the Residential Heat Pump Upgrade Program, the Company filed a  
12          Motion with the Commission on July 28, 2017, to formally close the  
13          suspended Program. The Company plans to issue a request for proposal in the  
14          fall of 2017, to request a re-design of the Residential Heat Pump Upgrade  
15          Program and then will evaluate whether to bring the redesigned Program  
16          forward in a future DSM/EE deployment phase.

1   **Q.     Approval to deploy the current system-wide DSM Phase IV Residential**  
2       **Income and Age Qualifying Home Improvement Program in the**  
3       **Company's Virginia Jurisdiction is limited to a three-year period ending**  
4       **April 2018. Please describe the Company's plans to evaluate**  
5       **continuation of this Program on either a system-wide or North Carolina-**  
6       **only basis.**

7   **A.     While the Phase IV Residential Income and Age Qualifying Home**  
8       **Improvement Program was designed and has been deployed on a system-wide**  
9       **basis, its approval in Virginia was limited to a period of three years, which**  
10      **will conclude in April 2018.<sup>12</sup> Recognizing the potential that the system-wide**  
11      **Program deployment will conclude (unless approved to be extended in**  
12      **Virginia), the Company is in the process of evaluating the cost effectiveness**  
13      **of a North Carolina-only Income and Age Qualifying Home Improvement**  
14      **Program extension for one year. If the North Carolina-only Program is**  
15      **reasonably cost effective, the Company plans to file a program application**  
16      **with the Commission to deploy the Income and Age Qualifying Home**  
17      **Improvement Program on a North Carolina-only basis in 2018. This one-year**  
18      **program offering would fill a gap between closure of the DSM Phase IV**  
19      **Income and Age Qualifying Home Improvement Program in late 2017/early**  
20      **2018 and the potential availability of a system-wide Income and Age**  
21      **Qualifying Home Improvement Program, which could then be reopened if**  
22      **ultimately approved to be extended in Virginia.**

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<sup>12</sup> In the Matter of Petition of Virginia Electric and Power Company for approval to implement new demand-side management programs and for approval of two updated rate adjustment clauses pursuant to § 56-585.1 A 5 of the Code of Virginia, VSCC Case No. PUE-2014-00071 (April 24, 2015).

1 **II. OVERVIEW OF APPLICATION**

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

3 A. In this Application, the Company is filing its annual update and requesting  
4 approval of an updated Rider C revenue requirement for January 1, 2018,  
5 through December 31, 2018, the proposed rate period ("Rate Period"), as well  
6 as seeking true up of January 1, 2016, through January 31, 2016 ("Test  
7 Period"), costs through the Company's EMF rider, Rider CE.

8 **Q. Please provide a brief overview of the Company's approach to cost**  
9 **recovery for its North Carolina DSM/EE Programs as set forth in this**  
10 **Application.**

11 A. The costs of the Company's approved DSM/EE Programs have been  
12 recovered during each annual R8-69 cost recovery proceeding in accordance  
13 with the Agreement and Stipulation of Settlement agreed to between the  
14 Public Staff and the Company in the Company's initial 2010 cost recovery  
15 proceeding ("Stipulation"), as well as the Cost Recovery and Incentive  
16 Mechanism attached as Stipulation Exhibit 1 to the Stipulation.<sup>13</sup> In the fall  
17 of 2014, in accordance with provisions of the original Stipulation, the  
18 Commission undertook a review of the Stipulation and Cost Recovery and  
19 Incentive Mechanism. On May 7, 2015, after receiving comments from the  
20 Company and the Public Staff, the Commission approved a revised Cost  
21 Recovery and Incentive Mechanism that governed cost recovery in the 2015

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<sup>13</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).

1 and 2016 annual proceedings.<sup>14</sup> The 2015 Mechanism Order also required the  
2 Company and the Public Staff to file by March 1, 2017, as extended, an  
3 updated performance incentive proposal for Commission review and  
4 approval. On April 20, 2017, the Company and the Public Staff filed a Joint  
5 Proposal for New PPI, with a revised Mechanism attached as Appendix A  
6 (the “Mechanism”). The Commission issued an Order approving the revised  
7 Mechanism on May 22, 2017, which governs cost recovery for the instant  
8 Application.<sup>15</sup> The revised Mechanism amends the PPI to a “portfolio  
9 performance incentive” applicable to measures installed beginning with  
10 Vintage Year 2017, including the Rate Period in this proceeding. The  
11 Company has developed its Application and pre-filed testimony in accordance  
12 with the procedures set forth in the Mechanism, as recently approved by the  
13 Commission.

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

15 A. Yes. Deanna R. Kesler, Regulatory Consultant, Demand-Side Planning, will  
16 provide certain information required by NCUC Rule R8-69(f)(1)(ii)(a), (b),  
17 (d), and (e), as well as the Utility Cost Test (“UCT”), and supporting  
18 documentation for the PPI Test Period and Rate Period calculations made  
19 pursuant to the Mechanism. Company Witness Kesler will also present the  
20 Company’s evaluation, measurement and verification (“EM&V”) cost  
21 projections, and lost energy sales from EE Programs during the EMF Test

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<sup>14</sup> *Order Approving Revised Cost Recovery and Incentive Mechanism and Granting Waiver*, Docket No. E-22, Sub 464 (May 7, 2015) (“2015 Mechanism Order”).

<sup>15</sup> *Order Approving Revised Cost Recovery and Incentive Mechanism*, Docket No. E-22, Sub 464 (May 22, 2017).

1 Period. Jarvis E. Bates, Energy Conservation Compliance Manager, will  
2 support the projected costs associated with the Company's DSM/EE Programs  
3 for the Rate Period, actual costs associated with the Company's DSM/EE  
4 Programs during the Test Period, as well as provide information on the  
5 Company's event sponsorship and consumer education initiatives during the  
6 Test Period and customer opt-outs pursuant to Commission Rule R8-69(d)(2).  
7 Alan J. Moore, Regulatory Analyst III, will present the revenue requirements  
8 associated with the DSM/EE Programs for the Rate Period and EMF revenue  
9 requirements associated with the DSM/EE Programs for the Test Period.  
10 Melba L. Lyons, Regulatory Analyst III, will explain the proposed assignment  
11 and allocation of costs to the North Carolina jurisdiction for the DSM/EE  
12 Programs. Debra A. Stephens, Regulatory Advisor, will present the  
13 calculation of the proposed updated Rider C and EMF Rider CE.

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

16 A. Yes. The Company has developed its Plan using a least cost modeling  
17 methodology of reliable supply-side and demand-side options, pursuant to  
18 North Carolina statutory and Commission policies. The Company's  
19 operational DSM/EE Programs and proposed system-wide Non-Residential  
20 Prescriptive Program were included in Company's 2017 Plan Update, as filed  
21 on May 1, 2017, in Docket No. E-100, Sub 147.

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

3    A.     The Company requests to recover a Rate Period PPI representing, as  
4           introduced above, a projected portfolio performance incentive as approved in  
5           the revised Mechanism. The Company also requests recovery of the Test  
6           Period PPI for vintage year 2016 and prior years, which has been derived  
7           based upon the traditional individualized program-based approach, and is  
8           being calculated consistent with the 2015 Mechanism Order and the  
9           methodology approved by the Commission in the Company's previous annual  
10          cost recovery proceedings. Company Witness Bates supports calculation of a  
11          streamlined projected PPI, as allowed in Paragraph 56 of the Mechanism, as  
12          well as the true up of the PPI based upon actual installed measurement units  
13          during the vintage year 2016, as required by Paragraph 60 of the Mechanism.

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

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

20          The current Rider CE will true up the Company's recovery of net lost  
21          revenues during the Test Period, as supported by Company Witness Moore's

1 testimony.<sup>16</sup> The Company will then true up net lost revenues for the current  
2 Rate Period based upon its actual test period experience in the 2018 cost  
3 recovery proceeding through EMF Rider CE.

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

6 A. No. Consistent with Paragraph 47 of the Mechanism, the Company has  
7 evaluated its North Carolina activities for potential found revenues using the  
8 decision tree set forth in Attachment A of the Mechanism.<sup>17</sup> Specifically, the  
9 Company's EC, Rates, and Customer Solutions departments (which  
10 collectively oversee Dominion Energy North Carolina's tariffs, Programs, and  
11 utility-funded activities) evaluated the Company's North Carolina activities  
12 during the Test Period to determine whether its activities may be causing  
13 customers to increase demand or energy consumption, resulting in found  
14 revenues. The Company's review of its North Carolina activities under the  
15 decision tree has not identified any activities that resulted in found revenues  
16 during the Test Period and has not identified any activities that would result in  
17 projected found revenues during the Rate Period.

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<sup>16</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.

<sup>17</sup> The Company has informally used a decision tree methodology to review its North Carolina activities for found revenues since 2011.

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

2     **Q.     Please summarize the components of updated Rider C and Rider CE and**  
3           **resulting revenue requirements proposed to be recovered in this**  
4           **proceeding.**

5     A.    In accordance with Rule R8-69 and the Mechanism, updated Rider C will  
6           recover the Company's North Carolina allocated share (including 100%  
7           assigned cost of the North Carolina-only Programs) of the following  
8           components during the Rate Period: (i) the Company's projected costs of  
9           implementing the approved DSM/EE Programs during the Rate Period; (ii) the  
10          Company's projected Common Costs to be incurred during the Rate Period;  
11          and (iii) the Company's streamlined projected PPI. The Company's updated  
12          Rider C revenue requirement for the Rate Period is \$3,542,469, as further  
13          detailed in Schedule 1 of Company Witness Moore's testimony.

14          In accordance with Rule R8-69 and the Mechanism, the Company's EMF  
15          Rider CE will true up and recover any under-recovery or refund any over-  
16          recovery of the Company's North Carolina allocated share (including 100%  
17          assigned cost of the North Carolina-only Programs) of the following  
18          components: (i) the Company's Test Period costs of implementing the  
19          approved DSM/EE Programs; (ii) the Company's Test Period Common Costs;  
20          (iii) the Company's Test Period Net Lost Revenues; and (iv) the Company's  
21          Test Period PPI. The Company's Rider CE revenue requirement during the  
22          Rate Period is \$202,430 as further detailed in Schedule 2 of Company  
23          Witness Moore's testimony.

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

2    **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 545**

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 Kesler and I am a Regulatory Consultant in Demand-Side  
5           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 (formerly DNV KEMA Energy & Sustainability). This includes ensuring  
2 EM&V data is collected and made available to DNV GL for review and  
3 analysis, reviewing EM&V processes and reports, and coordinating all  
4 pertinent EM&V activities.

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

6 A. My testimony supports Dominion Energy North Carolina's request to recover  
7 all reasonable and prudent costs incurred in adopting and implementing the  
8 Company's portfolio of DSM/EE Programs as well as utility incentives,  
9 through its updated Rider C, as well as the Company's experience  
10 modification factor ("EMF") rider, Rider CE ("Application"). The purpose of  
11 my testimony is to support the true up of lost revenues and the Company's  
12 EM&V cost projections, as well as to provide certain information required by  
13 North Carolina Utilities Commission ("NCUC" or "Commission") Rule R8-  
14 69(f)(1)(ii)(a), (b), (d), and (e), with respect to the Company's DSM/EE  
15 Programs. Regarding EM&V, my testimony will: (i) show the energy  
16 savings for the previously-approved EE Programs over the EMF period  
17 January 1, 2016, through December 31, 2016 ("Test Period"), for purposes of  
18 calculating the Company's EMF; (ii) support the Company's EM&V costs  
19 over the January 1, 2018 through December 31, 2018 rate period (the "Rate  
20 Period") for the North Carolina jurisdiction, as well as the Test Period; and  
21 (iii) provide information on Air Conditioner Cycling Program activation  
22 events that occurred during the Test Period as required by Rule R8-  
23 69(f)(1)(iii)(g). My testimony will also provide the Utility Cost Test ("UCT")

1 and supporting documentation for the Program Performance Incentive (“PPI”)  
2 calculations for the Test Period and the Portfolio Performance Incentive for  
3 the Rate Period.

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

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

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

14 1. Schedule 1 of my pre-filed direct testimony provides the Company’s  
15 total revenue requirement, avoided costs, and 2018 summer and winter  
16 peak and energy savings per unit measure for the Company’s DSM/EE  
17 Programs, as required by Rule R8-69(f)(1)(ii)(a), (b), (d), and (e) and  
18 calculated consistent with the Mechanism.

19 2. Schedule 2 provides a UCT calculation for each Program and the  
20 portfolio of Programs for the projected vintage year 2018, as defined  
21 in Paragraph 14 of the Mechanism.

- 1                   3. Schedule 3 provides a comparison of the forecasted energy and  
2                   summer and winter capacity reductions for the Company's ongoing  
3                   Phase I Air Conditioner Cycling Program and Phase III, IV, & V  
4                   DSM/EE Programs, as required by Rule R8-69(f)(1)(iii)(h).
- 5                   4. Schedule 4 provides the cost-effectiveness test evaluations required by  
6                   Paragraph 41 of the Mechanism.
- 7                   5. Schedule 5 provides the Company's actually-incurred EM&V costs  
8                   during the Test Period, as well as projected EM&V costs during the  
9                   2018 Rate Period.
- 10                  6. Schedule 6 supports the calculation of estimated energy savings for all  
11                  DSM/EE Phase I, II, III, and IV programs over the Test Period for the  
12                  EMF Rider, which is based on actual EM&V data collected and  
13                  analyzed by DNV GL.
- 14                  7. Schedule 7 presents the date, weather conditions, event trigger, and  
15                  customer enrollment and activation data for the Air Conditioner  
16                  Cycling Program during the Test Period.

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

18   A.     My Schedule 1 first presents the system-level revenue requirement per  
19           appropriate capacity, energy, and measure unit metric, for each on-going  
20           Phase I,<sup>1</sup> Phase III,<sup>2</sup> Phase IV,<sup>3</sup> and Phase V<sup>4</sup> DSM/EE Programs, as well as

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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).

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

15 **Q. By the terms of the Mechanism, how was the UCT developed in support**  
16 **of the Rate Period PPI calculation?**

17 A. The UCT used to support the calculation of the Rate Period PPI for each  
18 vintage year was developed in accordance with Paragraphs 13-14 of the

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<sup>2</sup> The Company's Phase III programs are the Non-residential Heating and Cooling Efficiency Program (Docket No. E-22, Sub 507), Non-Residential Lighting Systems and Controls Program (Docket No. E-22, Sub 508), and Non-Residential Window Film Program (Docket No. E-22, Sub 509).

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

<sup>4</sup> The Company's Phase V programs are the Small Business Improvement Program (Docket No. E-22, Sub 538) and the Residential Retail LED Lighting Program (Docket No. E-22, Sub 539).

<sup>5</sup> As discussed by Company Witness Michael T. Hubbard, the Company filed for Commission approval of the Phase VI Non-residential Prescriptive Program on July 28, 2017 (Docket No. E-22, Sub 543).

1 Mechanism. The Strategist model, a computer modeling and resource  
2 optimization tool, was used to calculate a projected UCT based on the 2018  
3 vintage year, using the base case assumptions consistent with the Company's  
4 most recent 2017 Integrated Resource Plan Update, as filed with the  
5 Commission on May 1, 2017, in Docket No. E-22, Sub 147 ("2017 Plan  
6 Update").

7 **Q. Please explain the role of the Total Resource Cost ("TRC") Test in**  
8 **calculating PPI under the Mechanism for vintage years 2016 and earlier.**

9 A. As described by Company Witness Michael T. Hubbard, the Commission  
10 approved amendments to the Mechanism on May 22, 2017,<sup>6</sup> which transitions  
11 the PPI to a portfolio-based incentive calculation beginning with vintage year  
12 2017. The TRC is one of the four cost/benefit tests required by the  
13 Mechanism to be applied in evaluating DSM/EE Programs, and is used in  
14 calculating the PPI under the traditional individualized program-based  
15 approach (which is applicable for the vintage years 2016 and prior) that are  
16 eligible for Test Period recovery as well as the portfolio-based approach  
17 applicable to the Rate Period. Pursuant to Paragraph 51 of the pre-existing  
18 Mechanism, each individual DSM/EE program is required to have a vintage  
19 year TRC above 1.00 or that program is presumed ineligible for a PPI. Each  
20 of the Company's Program's vintage year TRC test results recoverable during  
21 the Test Period had a TRC value above 1.00 except for the Residential Income

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

3 **Q. Please explain the role of the UCT Test in calculating PPI under the**  
4 **Mechanism for vintage year 2018 for recovery during the Rate Period.**

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

13 My Schedule 2 presents the 2018 vintage year UCT and TRC cost/benefit  
14 portfolio scores, as well as the individual program scores pursuant to  
15 Paragraphs 52-53 of the Mechanism.

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

17 A. My Schedule 3 presents forecasted energy and summer and winter capacity  
18 reductions at the generator for the Company's ongoing Phase I, Phase III,  
19 Phase IV, and Phase V DSM/EE Programs during the Rate Period.  
20 Specifically, Schedule 3 provides a comparison of the Phase I, Phase III,  
21 Phase IV, and Phase V Programs forecasted in the Company's 2016 Plan and  
22 2017 Plan Update. Generally, differences in the forecasted energy and

1 capacity reductions can be explained by differences in program modeling  
2 assumptions, such as penetrations and load shapes. These differences arise in  
3 part from data collected through the EM&V process, changes to  
4 implementation schedules and jurisdictional requirements.

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

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

10 In accordance with Paragraph 41, the Company has not developed going-  
11 forward cost/benefit analyses for the Company's Phase V Small Business  
12 Improvement Program or for the North Carolina-only Residential Retail LED  
13 Lighting Program, which have 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 the Rate**  
2       **Period 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       the Rate Period, as well as the Company's actual EM&V costs during the Test  
5       Period for the North Carolina jurisdiction. The Company intends to continue  
6       to file its annual EM&V Report with the Commission on May 1 each year.

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

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

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

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

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

21   A.     Yes, it does.

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

Ms. Kesler has held various positions with Dominion Energy North Carolina 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 Master's 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**  
**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	10,673	99,738	N/A	\$ 107	N/A
Non-Residential Window Film Program	2,435	44,119	48,818	N/A	\$ 50
Non-Residential Heating & Cooling Efficiency Program	2,561	52,660	138,013	N/A	\$ 19
Non-Residential Lighting Systems & Controls Program	7,261	32,688	210,465	N/A	\$ 34
Residential Income and Age Qualifying Home Improvement Program	-	1,258	6,360	N/A	\$ -
Non-Residential Small Business Improvement Program	6,779	2,193	14,929	N/A	\$ 454
North Carolina-only Residential Retail LED Lighting Program	1,129	1,010	7,114	N/A	\$ 159
Non-Residential Prescriptive Program	6,410	9,053	59,230	N/A	\$ 108

*Note: 1) Exclusive of net lost revenues*

*Note: 2) Based on Individual Program Evaluation*

**Avoided Costs per Appropriate Unit**  
**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	\$ 3,518	99,738	N/A	\$ 35	\$ -
Non-Residential Window Film Program	\$ 3,921	44,119	48,818	\$ 89	\$ 80
Non-Residential Heating & Cooling Efficiency Program	\$ 7,578	52,660	138,013	\$ 144	\$ 55
Non-Residential Lighting Systems & Control Program	\$ 9,042	32,688	210,465	\$ 277	\$ 43
Residential Income and Age Qualifying Home Improvement	\$ 301	1,258	6,360	\$ 239	\$ 47
Non-Residential Small Business Improvement Program	\$ 602	2,193	14,929	\$ 274	\$ 40
North Carolina-only Residential Retail LED Lighting Program	\$ 302	1,010	7,114	\$ 299	\$ 43
Non-Residential Prescriptive Program	\$ 2,406	9,053	59,230	\$ 266	\$ 41

*Note: Based on Individual Program Evaluation*

**2017 Summer/Winter Peak & Energy Savings (System-Level at the Meter)**  
**R8-69(f)(1)(ii)(d)(e)**

Program	Summer MW Reductions (2018)	Winter MW Reductions (2018)	GWh Reductions (2018)
AC Cycling Program	99.74	0.00	0.00
Non-Residential Window Film Program	44.12	0.00	48.82
Non-Residential Heating & Cooling Efficiency Program	52.66	26.99	138.01
Non-Residential Lighting Systems & Control Program	32.69	32.54	210.46
Residential Income and Age Qualifying Home Improvement Program	1.26	1.61	6.36
Non-Residential Small Business Improvement Program	2.19	0.96	14.93
North Carolina-only Residential Retail LED Lighting Program	1.01	0.34	7.11
Non-Residential Prescriptive Program	9.05	3.61	59.23

*Note: Based on Individual Program Evaluation*

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

	2018 Pen. Benefits	2018 Pen. Costs		2018 Vintage Year C/B Scores	
Year	Total Benefits (000s)	Total Costs (000s)	Annual Net Benefits (000s)	UCT Ratio	TRC Ratio
<b>NPV</b>	<b>\$ 58,090</b>	<b>\$ 1,890</b>	<b>\$56,200.00</b>	30.73	16.95
2017	\$ -	\$ -	\$ -		
2018	\$ 2,267	\$ 2,010	\$258		
2019	\$ 4,236	\$ -	\$ 4,236		
2020	\$ 4,467	\$ -	\$ 4,467		
2021	\$ 4,494	\$ -	\$ 4,494		
2022	\$ 6,757	\$ -	\$ 6,757		
2023	\$ 6,826	\$ -	\$ 6,826		
2024	\$ 7,293	\$ -	\$ 7,293		
2025	\$ 7,035	\$ -	\$ 7,035		
2026	\$ 7,148	\$ -	\$ 7,148		
2027	\$ 6,562	\$ -	\$ 6,562		
2028	\$ 6,828	\$ -	\$ 6,828		
2029	\$ 8,237	\$ -	\$ 8,237		
2030	\$ 7,445	\$ -	\$ 7,445		
2031	\$ 7,540	\$ -	\$ 7,540		
2032	\$ 7,942	\$ -	\$ 7,942		
2033	\$ 3,572	\$ -	\$ 3,572		

*Note: Based on Individual Program Evaluation*

**Non-Residential Lighting Systems and Controls Program UCT**Program Life 9.00

	2018 Pen. Benefits	2018 Pen. Costs		2018 Vintage Year C/B Scores	
Year	Total Benefits (000s)	Total Costs (000s)	Annual Net Benefits (000s)	UCT Ratio	TRC Ratio
<b>NPV</b>	<b>\$ 25,816</b>	<b>\$ 6,011</b>	<b>\$19,804.28</b>	4.29	2.71
2017	\$ -	\$ -	\$ -		
2018	\$ 1,699	\$ 6,391	-\$4,691		
2019	\$ 3,208	\$ -	\$ 3,208		
2020	\$ 3,296	\$ -	\$ 3,296		
2021	\$ 3,363	\$ -	\$ 3,363		
2022	\$ 4,353	\$ -	\$ 4,353		
2023	\$ 4,410	\$ -	\$ 4,410		
2024	\$ 4,628	\$ -	\$ 4,628		
2025	\$ 4,601	\$ -	\$ 4,601		
2026	\$ 4,790	\$ -	\$ 4,790		
2027	\$ 2,104	\$ -	\$ 2,104		

*Note: Based on Individual Program Evaluation*

**AC Cycling Program UCT**Program Life 15.00

	2018 Pen. Benefits	2018 Pen. Costs		2018 Vintage Year C/B Scores	
Year	Total Benefits (000s)	Total Costs (000s)	Annual Net Benefits (000s)	UCT Ratio	TRC Ratio
<b>NPV</b>	<b>\$ 4,370</b>	<b>\$ 6,073</b>	<b>-\$1,702.47</b>	0.73	1.15
2017	\$ -	\$ -	\$ -		
2018	\$ 119	\$ 4,266	-\$4,147		
2019	\$ 202	\$ 240	\$ (38)		
2020	\$ 213	\$ 240	\$ (27)		
2021	\$ 217	\$ 240	\$ (23)		
2022	\$ 584	\$ 240	\$ 344		
2023	\$ 592	\$ 240	\$ 352		
2024	\$ 619	\$ 240	\$ 379		
2025	\$ 615	\$ 240	\$ 375		
2026	\$ 658	\$ 240	\$ 418		
2027	\$ 532	\$ 240	\$ 292		
2028	\$ 488	\$ 240	\$ 248		
2029	\$ 712	\$ 240	\$ 472		
2030	\$ 645	\$ 240	\$ 405		
2031	\$ 583	\$ 240	\$ 343		
2032	\$ 565	\$ 240	\$ 325		
2033	\$ 231	\$ -	\$ 231		

*Note: Based on Individual Program Evaluation*

**Non Residential Window Film****Program Life 10.00**

	2018 Pen. Benefits	2018 Pen. Costs		2018 Vintage Year C/B Scores	
Year	Total Benefits (000s)	Total Costs (000s)	Annual Net Benefits (000s)	UCT Ratio	TRC Ratio
<b>NPV</b>	<b>\$ 26,310</b>	<b>\$ 2,138</b>	<b>\$24,171.49</b>	12.30	6.45
2017	\$ -	\$ -	\$ -		
2018	\$ 1,379	\$ 2,273	-\$894		
2019	\$ 2,395	\$ -	\$ 2,395		
2020	\$ 2,614	\$ -	\$ 2,614		
2021	\$ 2,595	\$ -	\$ 2,595		
2022	\$ 4,602	\$ -	\$ 4,602		
2023	\$ 4,625	\$ -	\$ 4,625		
2024	\$ 5,016	\$ -	\$ 5,016		
2025	\$ 4,719	\$ -	\$ 4,719		
2026	\$ 4,774	\$ -	\$ 4,774		
2027	\$ 4,171	\$ -	\$ 4,171		
2028	\$ 1,790	\$ -	\$ 1,790		

***Note: Based on Individual Program Evaluation***

**Income and Age Qualifying Home Improvement**  
Program Life 14.00

	2018 Pen. Benefits	2018 Pen. Costs		2018 Pen. Benefits	
Year	Total Benefits (000s)	Total Costs (000s)	Annual Net Benefits (000s)	UCT Ratio	TRC Ratio
<b>NPV</b>	<b>\$ 885</b>	<b>\$ 4,681</b>	<b>-\$3,795.69</b>	0.19	0.19
2017	\$ -	\$ -	\$ -		
2018	\$ 37	\$ 4,976	-\$4,940		
2019	\$ 73	\$ -	\$ 73		
2020	\$ 74	\$ -	\$ 74		
2021	\$ 76	\$ -	\$ 76		
2022	\$ 101	\$ -	\$ 101		
2023	\$ 103	\$ -	\$ 103		
2024	\$ 108	\$ -	\$ 108		
2025	\$ 140	\$ -	\$ 140		
2026	\$ 109	\$ -	\$ 109		
2027	\$ 105	\$ -	\$ 105		
2028	\$ 107	\$ -	\$ 107		
2029	\$ 126	\$ -	\$ 126		
2030	\$ 117	\$ -	\$ 117		
2031	\$ 120	\$ -	\$ 120		
2032	\$ 59	\$ -	\$ 59		

*Note: Based on Individual Program Evaluation*

**Small Business Improvement Program**Program Life 14.00

	2018 Pen. Benefits	2018 Pen. Costs		2018 Vintage Year C/B Scores	
Year	Total Benefits (000s)	Total Costs (000s)	Annual Net Benefits (000s)	UCT Ratio	TRC Ratio
NPV	\$ 4,980	\$ 6,259	-\$1,278.57	0.80	0.61
2017	\$ -	\$ -	\$ -		
2018	\$ 227	\$ 6,654	-\$6,427		
2019	\$ 423	\$ -	\$ 423		
2020	\$ 460	\$ -	\$ 460		
2021	\$ 443	\$ -	\$ 443		
2022	\$ 569	\$ -	\$ 569		
2023	\$ 572	\$ -	\$ 572		
2024	\$ 615	\$ -	\$ 615		
2025	\$ 636	\$ -	\$ 636		
2026	\$ 613	\$ -	\$ 613		
2027	\$ 606	\$ -	\$ 606		
2028	\$ 616	\$ -	\$ 616		
2029	\$ 704	\$ -	\$ 704		
2030	\$ 666	\$ -	\$ 666		
2031	\$ 691	\$ -	\$ 691		
2032	\$ 318	\$ -	\$ 318		

*Note: Based on Individual Program Evaluation*

**North Carolina-only Residential Retail LED Lighting Program**Program Life 20.00

	2018 Pen. Benefits	2018 Pen. Costs		2018 Vintage Year C/B Scores	
Year	Total Benefits (000s)	Total Costs (000s)	Annual Net Benefits (000s)	UCT Ratio	TRC Ratio
<b>NPV</b>	<b>\$ 3,555</b>	<b>\$ 1,052</b>	<b>\$2,503.38</b>	3.38	2.12
2017	\$ -	\$ -	\$ -		
2018	\$ 123	\$ 1,118	-\$995		
2019	\$ 231	\$ -	\$ 231		
2020	\$ 236	\$ -	\$ 236		
2021	\$ 242	\$ -	\$ 242		
2022	\$ 307	\$ -	\$ 307		
2023	\$ 309	\$ -	\$ 309		
2024	\$ 335	\$ -	\$ 335		
2025	\$ 359	\$ -	\$ 359		
2026	\$ 334	\$ -	\$ 334		
2027	\$ 326	\$ -	\$ 326		
2028	\$ 333	\$ -	\$ 333		
2029	\$ 380	\$ -	\$ 380		
2030	\$ 361	\$ -	\$ 361		
2031	\$ 374	\$ -	\$ 374		
2032	\$ 388	\$ -	\$ 388		
2033	\$ 399	\$ -	\$ 399		
2034	\$ 415	\$ -	\$ 415		
2035	\$ 428	\$ -	\$ 428		
2036	\$ 443	\$ -	\$ 443		
2037	\$ 462	\$ -	\$ 462		
2038	\$ 210	\$ -	\$ 210		

*Note: Based on Individual Program Evaluation*

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

	2018 Pen. Benefits	2018 Pen. Costs		2018 Vintage Year C/B Scores	
Year	Total Benefits (000s)	Total Costs (000s)	Annual Net Benefits (000s)	UCT Ratio	TRC Ratio
<b>NPV</b>	<b>\$ 11,776</b>	<b>\$ 5,970</b>	<b>\$5,806.36</b>	1.97	1.44
2017	\$ -	\$ -	\$ -		
2018	\$ 1,155	\$ 6,346	-\$5,191		
2019	\$ 2,168	\$ -	\$ 2,168		
2020	\$ 2,237	\$ -	\$ 2,237		
2021	\$ 2,268	\$ -	\$ 2,268		
2022	\$ 2,928	\$ -	\$ 2,928		
2023	\$ 2,992	\$ -	\$ 2,992		
2024	\$ 1,387	\$ -	\$ 1,387		

*Note: Based on Individual Program Evaluation*

**PORTFOLIO**  
Program Life 20.00

	2018 Pen. Benefits	2018 Pen. Costs		2018 Pen. Benefits	
Year	Total Benefits (000s)	Total Costs (000s)	Annual Net Benefits (000s)	UCT Ratio	TRC Ratio
<b>NPV</b>	<b>\$ 134,947</b>	<b>\$ 34,074</b>	<b>\$100,873.01</b>	3.96	3.10
2017	\$ -	\$ -	\$ -		
2018	\$ 6,971	\$ 34,034	-\$27,063		
2019	\$ 12,926	\$ 240	\$ 12,686		
2020	\$ 13,420	\$ 240	\$ 13,180		
2021	\$ 13,728	\$ 240	\$ 13,488		
2022	\$ 20,160	\$ 240	\$ 19,920		
2023	\$ 20,375	\$ 240	\$ 20,135		
2024	\$ 19,879	\$ 240	\$ 19,639		
2025	\$ 17,827	\$ 240	\$ 17,587		
2026	\$ 18,205	\$ 240	\$ 17,965		
2027	\$ 14,187	\$ 240	\$ 13,947		
2028	\$ 10,125	\$ 240	\$ 9,885		
2029	\$ 9,858	\$ 240	\$ 9,618		
2030	\$ 9,140	\$ 240	\$ 8,900		
2031	\$ 9,263	\$ 240	\$ 9,023		
2032	\$ 9,569	\$ 240	\$ 9,329		
2033	\$ 4,203	\$ -	\$ 4,203		
2034	\$ 415	\$ -	\$ 415		
2035	\$ 428	\$ -	\$ 428		
2036	\$ 443	\$ -	\$ 443		
2037	\$ 462	\$ -	\$ 462		
2038	\$ 210	\$ -	\$ 210		

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

Programs	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Air Conditioner Cycling Program	0	0	0	0	0	0	0	0	0	0
Non-Residential Window Film Program	52,613	88,318	104,885	107,318	109,800	111,531	112,726	113,916	115,073	116,190
Non-Residential Lighting Systems & Controls Program	113,622	166,114	194,205	198,620	203,123	206,192	208,025	209,853	211,634	213,352
Non-Residential Heating and Cooling Efficiency Program	81,824	131,454	156,422	159,586	162,808	165,248	166,992	168,731	170,426	172,061
Income and Age Qualifying Home Improvement Program	3,930	6,018	8,107	10,196	12,284	13,380	13,523	13,665	13,802	13,933
Small Business Improvement Program	15,659	28,980	45,033	63,832	73,452	74,546	75,368	76,188	76,986	77,755

**2016 Integrated Resource Plan Forecasted Energy Savings (MWh) (System-Level at the Generator)**

Programs	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Air Conditioner Cycling Program	0	0	0	0	0	0	0	0	0	0
Non-Residential Window Film Program	23,349	43,787	66,553	77,784	79,338	80,461	81,236	82,017	82,794	83,559
Non-Residential Lighting Systems & Controls Program	47,417	69,438	93,554	106,452	108,480	109,926	110,870	111,823	112,769	113,702
Non-Residential Heating and Cooling Efficiency Program	13,073	21,012	29,068	32,736	33,250	33,651	33,973	34,299	34,623	34,943
Income and Age Qualifying Home Improvement Program	4,325	7,346	10,367	13,389	16,410	17,924	18,100	18,278	18,454	18,627
Small Business Improvement Program	5,090	15,734	29,117	45,246	64,134	73,384	74,108	74,838	75,563	76,278

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

Programs	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Air Conditioner Cycling Program	0	0	0	0	0	0	0	0	0	0
Non-Residential Window Film Program	29,264	44,531	38,332	29,534	30,462	31,071	31,490	31,898	32,280	32,632
Non-Residential Lighting Systems & Controls Program	66,205	96,676	100,651	92,168	94,642	96,266	97,155	98,031	98,865	99,651
Non-Residential Heating and Cooling Efficiency Program	68,751	110,442	127,353	126,850	129,559	131,597	133,019	134,432	135,803	137,118
Income and Age Qualifying Home Improvement Program	(395)	(1,328)	(2,260)	(3,193)	(4,126)	(4,544)	(4,577)	(4,613)	(4,652)	(4,694)
Small Business Improvement Program	10,569	13,246	15,915	18,586	9,318	1,162	1,259	1,349	1,422	1,477

*Notes:*

- Difference values are the 2017 Integrated Resource Plan Update Energy Savings less the 2016 Integrated Resource Plan Energy Savings.
- Subsequent to the development of the 2016 and 2017 IRPs, the North Carolina-only Residential Retail LED Lighting Program was approved by the North Carolina Utilities Commission. This program will be included in the 2018 case.

**2017 Forecasted Coincident Capacity Savings (kW) (System-Level at the Generator)**

Programs	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
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 Window Film Program	48,251	81,037	96,316	98,550	100,830	102,422	103,519	104,611	105,675	106,701
Non-Residential Lighting Systems & Controls Program	18,195	26,505	30,582	31,277	31,986	32,451	32,740	33,027	33,307	33,577
Non-Residential Heating and Cooling Efficiency Program	31,619	50,245	58,729	59,917	61,126	62,013	62,667	63,319	63,954	64,566
Income and Age Qualifying Home Improvement Program	779	1,177	1,575	1,973	2,372	2,553	2,581	2,608	2,634	2,659
Small Business Improvement Program	4,556	8,382	12,990	18,382	21,006	21,315	21,550	21,784	22,012	22,232

**2016 Forecasted Coincident Capacity Savings (kW) (System-Level at the Generator)**

Programs	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Air Conditioner Cycling Program	121,107	121,107	121,107	121,107	121,107	121,107	121,107	121,107	121,107	121,107
Non-Residential Window Film Program	5,346	9,948	15,057	17,438	17,786	18,033	18,207	18,382	18,556	18,727
Non-Residential Lighting Systems & Controls Program	13,546	19,722	26,523	29,860	30,429	30,821	31,086	31,353	31,618	31,879
Non-Residential Heating and Cooling Efficiency Program	8,118	13,049	18,053	20,332	20,651	20,901	21,101	21,303	21,504	21,703
Income and Age Qualifying Home Improvement Program	1,059	1,772	2,485	3,198	3,910	4,231	4,273	4,315	4,357	4,397
Small Business Improvement Program	1,510	4,558	8,386	12,996	18,390	20,893	21,099	21,307	21,513	21,717

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

Programs	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Air Conditioner Cycling Program	-43,112	-43,112	-43,112	-43,112	-43,112	-43,112	-43,112	-43,112	-43,112	-43,112
Non-Residential Window Film Program	42,905	71,089	81,259	81,112	83,043	84,389	85,312	86,229	87,119	87,974
Non-Residential Lighting Systems & Controls Program	4,649	6,783	4,059	1,417	1,557	1,630	1,654	1,674	1,689	1,697
Non-Residential Heating and Cooling Efficiency Program	23,501	37,196	40,676	39,585	40,475	41,112	41,567	42,016	42,449	42,863
Income and Age Qualifying Home Improvement Program	-280	-595	-910	-1,224	-1,539	-1,678	-1,693	-1,707	-1,723	-1,739
Small Business Improvement Program	3,046	3,824	4,604	5,387	2,616	422	451	477	499	515

*Notes:*

- Difference values are the 2017 Integrated Resource Plan Capacity Savings less the 2016 Integrated Resource Plan Capacity Savings
- Subsequent to the development of the 2016 and 2017 IRPs, the North Carolina-only Residential Retail LED Lighting Program was approved by the North Carolina Utilities Commission. This program will be included in the 2018 case.

	<b>Air Conditioner Cycling Program</b>			
	<b>Participant</b>	<b>Utility</b>	<b>TRC</b>	<b>RIM</b>
Total NPV Benefits	\$ 50,834	\$ 113,472	\$ 113,472	\$ 113,472
Total NPV Costs	\$ -	\$ 157,289	\$ 102,003	\$ 157,289
Net Benefits NPV	\$ 50,834	\$ (43,817)	\$ 11,468	\$ (43,817)
Benefit/Cost Ratio	N/A	0.72	1.11	0.72
	<b>Non-Residential Window Film Program</b>			
	<b>Participant</b>	<b>Utility</b>	<b>TRC</b>	<b>RIM</b>
Total NPV Benefits	\$ 80,832	\$ 131,118	\$ 131,118	\$ 131,118
Total NPV Costs	\$ 15,720	\$ 10,985	\$ 19,167	\$ 92,952
Net Benefits NPV	\$ 65,112	\$ 120,133	\$ 111,951	\$ 38,166
Benefit/Cost Ratio	5.14	11.94	6.84	1.41
	<b>Non-Residential Heating and Cooling Efficiency Program</b>			
	<b>Participant</b>	<b>Utility</b>	<b>TRC</b>	<b>RIM</b>
Total NPV Benefits	\$ 209,057	\$ 220,882	\$ 220,882	\$ 220,882
Total NPV Costs	\$ 10,682	\$ 8,071	\$ 12,941	\$ 233,912
Net Benefits NPV	\$ 198,375	\$ 212,810	\$ 207,941	\$ (13,030)
Benefit/Cost Ratio	19.57	27.37	17.07	0.94
	<b>Non-Residential Lighting Systems &amp; Controls Program</b>			
	<b>Participant</b>	<b>Utility</b>	<b>TRC</b>	<b>RIM</b>
Total NPV Benefits	\$ 318,895	\$ 215,977	\$ 215,977	\$ 215,977
Total NPV Costs	\$ 54,727	\$ 69,129	\$ 86,125	\$ 383,625
Net Benefits NPV	\$ 264,168	\$ 146,848	\$ 129,852	\$ (167,648)
Benefit/Cost Ratio	5.83	3.12	2.51	0.56
	<b>Income and Age Qualifying Home Improvement Program</b>			
	<b>Participant</b>	<b>Utility</b>	<b>TRC</b>	<b>RIM</b>
Total NPV Benefits	\$ 19,769	\$ 11,336	\$ 11,336	\$ 11,336
Total NPV Costs	\$ -	\$ 54,314	\$ 54,314	\$ 76,331
Net Benefits NPV	\$ 19,769	\$ (42,979)	\$ (42,979)	\$ (64,995)
Benefit/Cost Ratio	N/A	0.21	0.21	0.15

*Note: Based on Individual Program Evaluation*

	Portfolio			
	Participant	Utility	TRC	RIM
Total NPV Benefits	\$ 659,617	\$ 671,758	\$ 671,758	\$ 671,758
Total NPV Costs	\$ 81,129	\$ 234,749	\$ 209,511	\$ 857,053
Net Benefits NPV	\$ 578,488	\$ 437,008	\$ 462,247	\$ (185,295)
Benefit/Cost Ratio	8.13	2.86	3.21	0.78

**CONFIDENTIAL INFORMATION REDACTED****Schedule 5**

<b>DSM Program</b>	<b>Actual NC EM&amp;V Costs During Rate Period (12 Months Ended Dec 2016)</b>
Residential Air Conditioner Cycling	
Commercial NC Only Lighting	
Commercial NC Only HVAC	
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	

<b>DSM Program</b>	<b>Projected NC EM&amp;V Costs During 2018</b>
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 and Age Qualifying	
Non Residential Small Business Improvement	
Non-Residential Prescriptive Program	

				2012											
Phase I EE Programs: Net Energy Savings (kWh) (Cumulative by Month)	Rate Code	Rate Schedule	Percentage	1	2	3	4	5	6	7	8	9	10	11	12
				Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Residential Low Income:															
			100.0%	2,510	4,612	6,046	6,715	6,715	6,715	6,715	6,715	6,715	6,715	6,715	6,715
Residential Low Income Sub-Total:				2,510	4,612	6,046	6,715	6,715	6,715	6,715	6,715	6,715	6,715	6,715	6,715
Commercial Lighting Program:															
	168	Schedule 5	62.7%	-	131	131	131	131	14,679	16,203	17,060	17,060	17,060	23,002	23,002
	170	Schedule 5P	10.5%	-	51	286	286	286	286	286	286	286	286	286	286
	176	Schedule 6P (TOU)	8.5%	5,275	5,275	5,275	5,275	5,275	5,275	5,275	5,275	5,275	5,275	5,275	5,275
	183	Schedule 10 (Variable Pricing)	11.9%	-	-	-	-	-	-	-	-	-	-	-	-
	184	Schedule 30 - Public Authority	1.5%	-	-	-	1,145	1,145	1,145	1,145	1,145	1,145	1,145	1,145	1,145
	188	Schedule 42	0.7%	-	-	-	593	593	593	633	633	633	633	633	633
	195	Schedule 26 -NC Outdoor Lighting	4.2%	-	-	-	72	72	72	72	72	72	72	72	72
Commercial Lighting Sub-Total:				5,275	5,457	5,692	7,503	7,503	22,051	23,615	24,472	24,472	24,472	30,414	30,414
Commercial HVAC Program:															
	168	Schedule 5	11.8%	-	1,089	1,089	1,089	1,089	1,089	1,089	1,089	1,089	1,089	1,089	1,089
	176	Schedule 6P (TOU)	11.4%	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047
	183	Schedule 10 (Variable Pricing)	62.5%	-	-	-	-	-	-	-	-	-	5,761	5,761	5,761
	184	Schedule 30 - Public Authority	14.3%	1,317	1,317	1,317	1,317	1,317	1,317	1,317	1,317	1,317	1,317	1,317	1,317
Commercial HVAC Sub-Total:				2,364	3,453	3,453	3,453	3,453	3,453	3,453	3,453	3,453	9,214	9,214	9,214
Total:				10,149	13,521	15,191	17,670	17,670	32,219	33,783	34,639	34,639	40,400	46,342	46,342

				2013											
Phase I EE Programs: Net Energy Savings (kWh) (Cumulative by Month)	Rate Code	Rate Schedule	Percentage	1	2	3	4	5	6	7	8	9	10	11	12
				Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Residential Low Income:															
			100.0%	7,461	8,091	8,776	8,864	9,056	9,056	9,081	10,141	10,731	11,540	12,337	12,972
Residential Low Income Sub-Total:				7,461	8,091	8,776	8,864	9,056	9,056	9,081	10,141	10,731	11,540	12,337	12,972
Commercial Lighting Program:															
	168	Schedule 5	62.7%	23,002	23,002	23,002	23,002	23,002	23,002	23,002	23,002	23,002	23,002	23,002	23,002
	170	Schedule 5P	10.5%	286	286	286	286	286	286	286	286	286	286	286	286
	176	Schedule 6P (TOU)	8.5%	5,275	5,275	5,275	5,275	5,275	5,275	5,275	5,275	5,275	5,275	5,275	5,275
	183	Schedule 10 (Variable Pricing)	11.9%	-	-	-	-	-	-	-	-	-	-	-	-
	184	Schedule 30 - Public Authority	1.5%	1,145	1,145	1,145	1,145	1,145	1,145	1,145	1,145	1,145	1,145	1,145	1,145
	188	Schedule 42	0.7%	633	633	633	633	633	633	633	633	633	633	633	633
	195	Schedule 26 -NC Outdoor Lighting	4.2%	72	72	72	72	72	72	72	72	72	72	72	72
Commercial Lighting Sub-Total:				30,414	30,414	30,414	30,414	30,414	30,414	30,414	30,414	30,414	30,414	30,414	30,414
Commercial HVAC Program:															
	168	Schedule 5	11.8%	1,089	1,089	1,089	1,089	1,089	1,089	1,089	1,089	1,089	1,089	1,089	1,089
	176	Schedule 6P (TOU)	11.4%	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047
	183	Schedule 10 (Variable Pricing)	62.5%	5,761	5,761	5,761	5,761	5,761	5,761	5,761	5,761	5,761	5,761	5,761	5,761
	184	Schedule 30 - Public Authority	14.3%	1,317	1,317	1,317	1,317	1,317	1,317	1,317	1,317	1,317	1,317	1,317	1,317
Commercial HVAC Sub-Total:				9,214	9,214	9,214	9,214	9,214	9,214	9,214	9,214	9,214	9,214	9,214	9,214
Total:				47,088	47,718	48,404	48,492	48,683	48,683	48,709	49,769	50,359	51,168	51,964	52,599

				2014											
Phase I EE Programs: Net Energy Savings (kWh) (Cumulative by Month)	Rate Code	Rate Schedule	Percentage	1	2	3	4	5	6	7	8	9	10	11	12
				Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Residential Low Income:															
			100.0%	13,370	13,910	14,143	14,687	15,047	15,446	16,071	16,556	17,141	17,651	17,932	17,932
Residential Low Income Sub-Total:				13,370	13,910	14,143	14,687	15,047	15,446	16,071	16,556	17,141	17,651	17,932	17,932
Commercial Lighting Program:															
	168	Schedule 5	62.7%	23,002	23,002	23,002	23,002	36,232	36,232	43,201	43,201	51,958	51,958	59,303	60,674
	170	Schedule 5P	10.5%	286	286	286	286	286	286	286	286	286	286	10,184	10,184
	176	Schedule 6P (TOU)	8.5%	5,275	5,275	5,275	5,275	5,275	5,275	5,275	5,275	5,275	5,275	8,274	8,274
	183	Schedule 10 (Variable Pricing)	11.9%	-	-	-	-	-	11,565	11,565	11,565	11,565	11,565	11,565	11,565
	184	Schedule 30 - Public Authority	1.5%	1,145	1,145	1,145	1,145	1,145	1,145	1,145	1,145	1,145	1,145	1,415	1,415
	188	Schedule 42	0.7%	633	633	633	633	633	633	633	633	633	633	633	633
	195	Schedule 26 -NC Outdoor Lighting	4.2%	72	72	72	72	72	72	72	72	2,590	2,590	4,058	4,058
Commercial Lighting Sub-Total:				30,414	30,414	30,414	30,414	43,644	55,209	62,177	62,177	73,453	73,453	95,431	96,801
Commercial HVAC Program:															
	168	Schedule 5	11.8%	1,089	1,089	1,089	1,089	1,089	1,089	1,089	1,089	1,089	1,089	1,089	1,089
	176	Schedule 6P (TOU)	11.4%	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047
	183	Schedule 10 (Variable Pricing)	62.5%	5,761	5,761	5,761	5,761	5,761	5,761	5,761	5,761	5,761	5,761	5,761	5,761
	184	Schedule 30 - Public Authority	14.3%	1,317	1,317	1,317	1,317	1,317	1,317	1,317	1,317	1,317	1,317	1,317	1,317
Commercial HVAC Sub-Total:				9,214	9,214	9,214	9,214	9,214	9,214	9,214	9,214	9,214	9,214	9,214	9,214
Total:				52,997	53,538	53,770	54,315	67,905	79,868	87,462	87,947	99,808	100,317	122,577	123,947

				2015											
Phase I EE Programs: Net Energy Savings (kWh) (Cumulative by Month)	Rate Code	Rate Schedule	Percentage	1	2	3	4	5	6	7	8	9	10	11	12
				Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Residential Low Income:															
			100.0%	19,449	21,451	23,896	26,503	28,383	30,362	32,320	34,821	37,668	40,108	42,126	43,926
Residential Low Income Sub-Total:				19,449	21,451	23,896	26,503	28,383	30,362	32,320	34,821	37,668	40,108	42,126	43,926
Commercial Lighting Program:															
	168	Schedule 5	62.7%	60,674	60,674	60,674	60,674	60,674	60,674	60,674	60,674	60,674	60,674	60,674	60,674
	170	Schedule 5P	10.5%	10,184	10,184	10,184	10,184	10,184	10,184	10,184	10,184	10,184	10,184	10,184	10,184
	176	Schedule 6P (TOU)	8.5%	8,274	8,274	8,274	8,274	8,274	8,274	8,274	8,274	8,274	8,274	8,274	8,274
	183	Schedule 10 (Variable Pricing)	11.9%	11,565	11,565	11,565	11,565	11,565	11,565	11,565	11,565	11,565	11,565	11,565	11,565
	184	Schedule 30 - Public Authority	1.5%	1,415	1,415	1,415	1,415	1,415	1,415	1,415	1,415	1,415	1,415	1,415	1,415
	188	Schedule 42	0.7%	633	633	633	633	633	633	633	633	633	633	633	633
	195	Schedule 26 -NC Outdoor Lighting	4.2%	4,058	4,058	4,058	4,058	4,058	4,058	4,058	4,058	4,058	4,058	4,058	4,058
Commercial Lighting Sub-Total:				96,801	96,801	96,801	96,801	96,801	96,801	96,801	96,801	96,801	96,801	96,801	96,801
Commercial HVAC Program:															
	168	Schedule 5	11.8%	1,089	1,089	1,089	1,089	1,089	1,089	1,089	1,089	1,089	1,089	1,089	1,089
	176	Schedule 6P (TOU)	11.4%	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047
	183	Schedule 10 (Variable Pricing)	62.5%	5,761	5,761	5,761	5,761	5,761	5,761	5,761	5,761	5,761	5,761	5,761	5,761
	184	Schedule 30 - Public Authority	14.3%	1,317	1,317	1,317	1,317	1,317	1,317	1,317	1,317	1,317	1,317	1,317	1,317
Commercial HVAC Sub-Total:				9,214	9,214	9,214	9,214	9,214	9,214	9,214	9,214	9,214	9,214	9,214	9,214
Total:				125,465	127,466	129,911	132,519	134,398	136,378	138,335	140,837	143,683	146,123	148,141	149,941

Phase I EE Programs: Net Energy Savings (kWh) (Cumulative by Month)	Rate Code	Rate Schedule	Percentage	2016												2016 Total
				1	2	3	4	5	6	7	8	9	10	11	12	
				Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	
Residential Low Income:			100.0%	43,926	43,926	43,926	43,926	43,926	43,926	43,926	43,926	43,926	43,926	43,926	43,926	527,110
Residential Low Income Sub-Total:				43,926	43,926	43,926	43,926	43,926	43,926	43,926	43,926	43,926	43,926	43,926	43,926	527,110
Commercial Lighting Program:																
	168	Schedule 5	62.7%	60,674	60,674	60,674	60,674	60,674	60,674	60,674	60,674	60,674	60,674	60,674	60,674	728,084
	170	Schedule 5P	10.5%	10,184	10,184	10,184	10,184	10,184	10,184	10,184	10,184	10,184	10,184	10,184	10,184	122,210
	176	Schedule 6P (TOU)	8.5%	8,274	8,274	8,274	8,274	8,274	8,274	8,274	8,274	8,274	8,274	8,274	8,274	99,285
	183	Schedule 10 (Variable Pricing)	11.9%	11,565	11,565	11,565	11,565	11,565	11,565	11,565	11,565	11,565	11,565	11,565	11,565	138,779
	184	Schedule 30 - Public Authority	1.5%	1,415	1,415	1,415	1,415	1,415	1,415	1,415	1,415	1,415	1,415	1,415	1,415	16,975
	188	Schedule 42	0.7%	633	633	633	633	633	633	633	633	633	633	633	633	7,594
	195	Schedule 26 - NC Outdoor Lighting	4.2%	4,058	4,058	4,058	4,058	4,058	4,058	4,058	4,058	4,058	4,058	4,058	4,058	48,691
Commercial Lighting Sub-Total:				96,801	96,801	96,801	96,801	96,801	96,801	96,801	96,801	96,801	96,801	96,801	96,801	1,161,618
Commercial HVAC Program:																
	168	Schedule 5	11.8%	1,089	1,089	1,089	1,089	1,089	1,089	1,089	1,089	1,089	1,089	1,089	1,089	13,067
	176	Schedule 6P (TOU)	11.4%	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	1,047	12,560
	183	Schedule 10 (Variable Pricing)	62.5%	5,761	5,761	5,761	5,761	5,761	5,761	5,761	5,761	5,761	5,761	5,761	5,761	69,133
	184	Schedule 30 - Public Authority	14.3%	1,317	1,317	1,317	1,317	1,317	1,317	1,317	1,317	1,317	1,317	1,317	1,317	15,806
Commercial HVAC Sub-Total:				9,214	9,214	9,214	9,214	9,214	9,214	9,214	9,214	9,214	9,214	9,214	9,214	110,566
Total:				149,941	149,941	149,941	149,941	149,941	149,941	149,941	149,941	149,941	149,941	149,941	149,941	1,799,293

**NOTES:**

1. Net energy savings (kWh) are based on DNV GL's analysis of EM&V data from actual program participants.
2. 2016 Energy savings (kWh) are inclusive of EE measures installed on, or after, January 1, 2012 through December 31, 2016 that are accumulated and realized between January 1, 2016 through December 31, 2016.

				2014											
Phase II EE Programs: Net Energy Savings (kWh) (Cumulative by Month)	Rate Code	Rate Schedule	2016 Percentage	1 Jan.	2 Feb.	3 March	4 April	5 May	6 June	7 July	8 Aug.	9 Sept.	10 Oct.	11 Nov.	12 Dec.
Residential Heat Pump Tune Up Program:															
	163	Schedule 1	99.2%	-	-	-	-	102	192	234	572	799	2,325	7,371	11,311
	164	Schedule 1P	0.4%	-	-	-	-	-	-	-	-	-	-	-	38
	165	Schedule 1T	0.2%	-	-	-	-	-	-	-	-	-	51	51	51
	166	Schedule 1DF	0.2%	-	-	-	-	-	-	-	-	41	41	52	122
Residential Heat Pump Tune Up Sub-Total:			100.0%	0	0	0	0	102	192	234	572	840	2,416	7,474	11,521
Residential Heat Pump Upgrade Program:															
	163	Schedule 1	99.1%	-	-	-	-	-	299	299	787	1,546	2,242	3,513	5,390
	164	Schedule 1P	0.1%	-	-	-	-	-	-	-	-	-	-	-	-
	166	Schedule 1DF	0.9%	-	-	-	-	-	-	-	-	-	-	86	86
Residential Heat Pump Upgrade Sub-Total:			100.0%	0	0	0	0	0	299	299	787	1,546	2,242	3,598	5,476
Residential Home Energy Check Up Program:															
	163	Schedule 1	98.3%	-	-	-	-	-	-	-	-	-	-	-	-
	164	Schedule 1P	0.6%	-	-	-	-	-	-	-	-	-	-	-	-
	165	Schedule 1T	0.0%	-	-	-	-	-	-	-	-	-	-	-	-
	166	Schedule 1DF	0.9%	-	-	-	-	-	-	-	-	-	-	-	-
	195	Schedule 26	0.2%	-	-	-	-	-	-	-	-	-	-	-	-
Residential Home Energy Check Up Sub-Total:			100.0%	0	0	0	0	0	0	0	0	0	0	0	0
Residential Duct Sealing Program:															
	163	Schedule 1	99.9%	-	-	-	-	-	-	-	-	-	-	-	-
	166	Schedule 1DF	0.1%	-	-	-	-	-	-	-	-	-	-	-	-
Residential Duct Sealing Sub-Total:			100.0%	0	0	0	0	0	0	0	0	0	0	0	0
Non-Residential Duct Sealing and Testing Program:															
	168	Schedule 5	47.4%	-	-	-	-	-	-	-	-	-	-	9,126	12,561
	170	Schedule 5P	13.3%	-	-	-	-	-	-	-	-	-	-	21,464	21,464
	176	Schedule 6P	4.9%	-	-	-	-	-	-	-	-	-	-	-	-
	182	Schedule 7	0.2%	-	-	-	-	-	-	-	-	-	-	-	-
	183	Schedule 10 (Variable Pricing)	16.1%	-	-	-	-	-	-	-	-	-	-	7,967	7,967
	184	Schedule 30	11.3%	-	-	-	-	-	-	-	-	-	-	-	-
	188	Schedule 42	6.8%	-	-	-	-	-	-	-	-	-	-	-	-
Non-Residential Duct Sealing and Testing Sub-Total:			100.0%	0	0	0	0	0	0	0	0	0	0	38,558	41,993
Non-Residential Energy Audit Program:															
	168	Schedule 5	21.2%	-	-	-	-	-	-	-	-	-	-	-	-
	170	Schedule 5P	55.8%	-	-	-	-	-	-	-	-	-	2,800	28,406	28,406
	176	Schedule 6P	0.8%	-	-	-	-	-	-	-	-	-	-	-	-
	183	Schedule 10 (Variable Pricing)	21.9%	-	-	-	-	-	-	-	-	-	2,652	12,238	12,238
	184		0.0%	-	-	-	-	-	-	-	-	-	-	-	-
	188		0.0%	-	-	-	-	-	-	-	-	-	-	-	-
	195	Schedule 26	0.2%	-	-	-	-	-	-	-	-	-	-	-	-
Non-Residential Energy Audit Sub-Total:			100.0%	0	0	0	0	0	0	0	0	0	5,452	40,644	40,644
Total:				-	-	-	-	102	492	533	1,358	2,386	10,110	90,274	99,634

Phase II EE Programs: Net Energy Savings (kWh) (Cumulative by Month)	Rate Code	Rate Schedule	2016 Percentage	2015											
				1 Jan.	2 Feb.	3 March	4 April	5 May	6 June	7 July	8 Aug.	9 Sept.	10 Oct.	11 Nov.	12 Dec.
<b>Residential Heat Pump Tune Up Program:</b>															
	163	Schedule 1	99.2%	19,801	25,553	30,420	37,050	42,894	52,813	58,175	61,323	67,568	70,820	72,754	73,673
	164	Schedule 1P	0.4%	38	38	38	85	137	200	200	200	265	265	265	265
	165	Schedule 1T	0.2%	51	91	91	91	91	134	134	173	173	173	173	173
	166	Schedule 1DF	0.2%	122	122	170	170	170	181	181	181	181	181	181	181
<b>Residential Heat Pump Tune Up Sub-Total:</b>			<b>100.0%</b>	<b>20,012</b>	<b>25,804</b>	<b>30,719</b>	<b>37,396</b>	<b>43,292</b>	<b>53,329</b>	<b>58,691</b>	<b>61,877</b>	<b>68,186</b>	<b>71,438</b>	<b>73,373</b>	<b>74,292</b>
<b>Residential Heat Pump Upgrade Program:</b>															
	163	Schedule 1	99.1%	6,094	7,240	7,390	8,312	9,188	10,227	11,114	11,520	12,553	13,130	13,476	13,584
	164	Schedule 1P	0.1%	-	-	-	-	-	-	-	10	10	10	10	10
	166	Schedule 1DF	0.9%	86	86	86	86	86	86	86	86	111	111	111	111
<b>Residential Heat Pump Upgrade Sub-Total:</b>			<b>100.0%</b>	<b>6,180</b>	<b>7,326</b>	<b>7,476</b>	<b>8,398</b>	<b>9,273</b>	<b>10,313</b>	<b>11,200</b>	<b>11,616</b>	<b>12,674</b>	<b>13,252</b>	<b>13,597</b>	<b>13,705</b>
<b>Residential Home Energy Check Up Program:</b>															
	163	Schedule 1	98.3%	-	12,316	23,090	30,624	43,744	54,751	58,826	59,055	60,707	60,976	60,976	61,051
	164	Schedule 1P	0.6%	-	70	125	227	227	263	346	392	392	392	392	392
	165	Schedule 1T	0.0%	-	-	-	-	-	-	31	31	31	31	31	31
	166	Schedule 1DF	0.9%	-	-	90	268	324	514	543	543	543	543	543	543
	195	Schedule 26	0.2%	-	62	62	62	123	123	123	123	123	123	123	123
<b>Residential Home Energy Check Up Sub-Total:</b>			<b>100.0%</b>	<b>0</b>	<b>12,448</b>	<b>23,367</b>	<b>31,181</b>	<b>44,419</b>	<b>55,651</b>	<b>59,869</b>	<b>60,144</b>	<b>61,796</b>	<b>62,065</b>	<b>62,065</b>	<b>62,140</b>
<b>Residential Duct Sealing Program:</b>															
	163	Schedule 1	99.9%	23	674	2,386	3,639	5,161	6,348	6,616	6,616	6,616	6,636	6,636	6,636
	166	Schedule 1DF	0.1%	-	-	-	-	-	-	-	-	-	-	-	-
<b>Residential Duct Sealing Sub-Total:</b>			<b>100.0%</b>	<b>23</b>	<b>674</b>	<b>2,386</b>	<b>3,639</b>	<b>5,161</b>	<b>6,348</b>	<b>6,616</b>	<b>6,616</b>	<b>6,616</b>	<b>6,636</b>	<b>6,636</b>	<b>6,636</b>
<b>Non-Residential Duct Sealing and Testing Program:</b>															
	168	Schedule 5	47.4%	14,034	15,147	15,854	42,666	47,026	76,939	80,670	91,494	91,494	94,025	96,996	96,996
	170	Schedule 5P	13.3%	21,464	21,464	22,452	25,136	25,136	26,588	28,343	28,819	28,819	28,819	28,819	28,819
	176	Schedule 6P	4.9%	-	-	-	-	-	-	11,200	11,200	11,200	11,200	11,200	11,200
	182	Schedule 7	0.2%	-	-	-	-	-	-	458	458	458	458	458	458
	183	Schedule 10 (Variable Pricing)	16.1%	36,875	36,875	36,875	36,875	36,875	36,875	36,875	36,875	36,875	36,875	36,875	36,875
	184	Schedule 30	11.3%	-	-	-	18,416	23,194	23,194	23,194	23,194	23,194	23,194	23,194	23,194
	188	Schedule 42	6.8%	-	-	-	4,764	12,979	13,638	13,638	13,638	13,638	13,638	13,638	13,638
<b>Non-Residential Duct Sealing and Testing Sub-Total:</b>			<b>100.0%</b>	<b>72,373</b>	<b>73,485</b>	<b>75,181</b>	<b>127,857</b>	<b>145,209</b>	<b>177,234</b>	<b>194,376</b>	<b>205,677</b>	<b>205,677</b>	<b>208,207</b>	<b>211,178</b>	<b>211,178</b>
<b>Non-Residential Energy Audit Program:</b>															
	168	Schedule 5	21.2%	-	-	-	-	-	150	7,514	11,854	11,854	11,854	11,854	11,854
	170	Schedule 5P	55.8%	28,406	28,406	28,406	28,406	28,406	28,406	29,230	29,230	29,230	29,230	29,230	29,230
	176		0.8%	-	-	-	-	-	-	-	-	-	-	-	-
	183	Schedule 10 (Variable Pricing)	21.9%	12,238	12,238	12,238	12,238	12,238	12,238	12,238	12,238	12,238	12,238	12,238	12,238
	184		0.0%	-	-	-	-	-	-	-	-	-	-	-	-
	188		0.0%	-	-	-	-	-	-	-	-	-	-	-	-
	195	Schedule 26	0.2%	-	-	-	-	-	-	113	113	113	113	113	113
<b>Non-Residential Energy Audit Sub-Total:</b>			<b>100.0%</b>	<b>40,644</b>	<b>40,644</b>	<b>40,644</b>	<b>40,644</b>	<b>40,644</b>	<b>40,794</b>	<b>48,242</b>	<b>53,436</b>	<b>53,436</b>	<b>53,436</b>	<b>53,436</b>	<b>53,436</b>
<b>Total:</b>				<b>139,232</b>	<b>160,382</b>	<b>179,772</b>	<b>249,114</b>	<b>287,998</b>	<b>343,669</b>	<b>378,995</b>	<b>399,366</b>	<b>408,385</b>	<b>415,034</b>	<b>420,285</b>	<b>421,386</b>

				2016												2016 Total
Phase II EE Programs: Net Energy Savings (kWh) (Cumulative by Month)	Rate Code	Rate Schedule	2016 Percentage	1 Jan.	2 Feb.	3 March	4 April	5 May	6 June	7 July	8 Aug.	9 Sept.	10 Oct.	11 Nov.	12 Dec.	
Residential Heat Pump Tune Up Program:																
	163	Schedule 1	99.2%	75,511	78,551	80,773	83,708	85,385	88,749	90,752	92,927	93,887	94,888	96,267	97,472	1,058,869
	164	Schedule 1P	0.4%	265	265	265	265	350	350	350	350	350	350	350	350	3,859
	165	Schedule 1T	0.2%	173	173	173	173	173	209	209	209	209	209	209	209	2,329
	166	Schedule 1DF	0.2%	181	181	181	181	213	213	213	213	213	213	257	268	2,525
Residential Heat Pump Tune Up Sub-Total:			100.0%	76,130	79,170	81,392	84,326	86,120	89,521	91,524	93,699	94,659	95,660	97,083	98,299	1,067,582
Residential Heat Pump Upgrade Program:																
	163	Schedule 1	99.1%	13,844	15,104	15,645	16,243	16,827	18,250	19,012	20,380	20,863	21,620	22,635	22,783	223,206
	164	Schedule 1P	0.1%	10	10	10	10	10	10	10	10	10	10	10	10	122
	166	Schedule 1DF	0.9%	137	137	137	144	144	174	174	174	174	174	174	174	1,916
Residential Heat Pump Upgrade Sub-Total:			100.0%	13,991	15,251	15,792	16,398	16,981	18,434	19,196	20,564	21,047	21,804	22,819	22,967	225,244
Residential Home Energy Check Up Program:																
	163	Schedule 1	98.3%	61,177	61,211	61,211	61,211	61,211	61,211	61,211	61,211	61,211	61,211	61,211	61,211	734,497
	164	Schedule 1P	0.6%	392	392	392	392	392	392	392	392	392	392	392	392	4,698
	165	Schedule 1T	0.0%	31	31	31	31	31	31	31	31	31	31	31	31	367
	166	Schedule 1DF	0.9%	543	543	543	543	543	543	543	543	543	543	543	543	6,518
	195	Schedule 26	0.2%	123	123	123	123	123	123	123	123	123	123	123	123	1,480
Residential Home Energy Check Up Sub-Total:			100.0%	62,266	62,300	62,300	62,300	62,300	62,300	62,300	62,300	62,300	62,300	62,300	62,300	747,560
Residential Duct Sealing Program:																
	163	Schedule 1	99.9%	6,651	7,140	8,595	9,529	10,023	10,365	10,658	10,822	10,837	10,875	10,875	10,875	117,246
	166	Schedule 1DF	0.1%	-	-	-	-	-	-	14	14	14	14	14	14	83
Residential Duct Sealing Sub-Total:			100.0%	6,651	7,140	8,595	9,529	10,023	10,365	10,658	10,822	10,837	10,875	10,875	10,875	117,328
Non-Residential Duct Sealing and Testing Program:																
	168	Schedule 5	47.4%	96,996	99,062	99,062	99,095	99,980	100,258	104,916	116,970	117,524	119,242	125,837	125,837	1,304,780
	170	Schedule 5P	13.3%	28,819	28,819	28,819	29,468	29,868	30,073	30,073	30,073	30,073	30,073	35,000	35,000	366,156
	176	Schedule 6P	4.9%	11,200	11,200	11,200	11,200	11,200	11,200	11,200	11,200	11,200	11,200	11,200	11,200	134,397
	182	Schedule 7	0.2%	458	458	458	458	458	458	458	458	458	458	458	458	5,492
	183	Schedule 10 (Variable Pricing)	16.1%	36,875	36,875	36,875	36,875	36,875	36,875	36,875	36,875	36,875	36,875	36,875	36,875	442,496
	184	Schedule 30	11.3%	23,194	23,194	23,194	23,194	23,194	23,194	28,711	28,711	28,711	28,711	28,711	28,711	311,429
	188	Schedule 42	6.8%	13,638	13,638	13,638	13,638	13,638	13,638	16,174	17,747	17,747	17,747	17,747	17,747	186,737
Non-Residential Duct Sealing and Testing Sub-Total:			100.0%	211,178	213,244	213,244	213,927	215,212	215,695	228,406	242,034	242,588	244,306	255,828	255,828	2,751,488
Non-Residential Energy Audit Program:																
	168	Schedule 5	21.2%	11,854	11,854	11,854	11,854	11,854	11,854	11,854	11,999	11,999	12,844	12,844	12,844	145,508
	170	Schedule 5P	55.8%	29,230	29,230	29,230	29,230	29,230	29,230	29,230	29,230	29,230	38,795	38,795	42,501	383,157
	176		0.8%	-	-	-	-	-	-	-	-	-	-	-	5,685	5,685
	183	Schedule 10 (Variable Pricing)	21.9%	12,238	12,238	12,238	12,238	12,238	12,238	12,238	12,238	12,238	13,387	13,387	13,387	150,307
	184		0.0%	-	-	-	-	-	-	-	20	20	20	20	20	100
	188		0.0%	-	-	-	-	-	-	-	-	17	17	17	17	66
	195	Schedule 26	0.2%	113	113	113	113	113	113	113	113	113	113	113	113	1,361
Non-Residential Energy Audit Sub-Total:			100.0%	53,436	53,436	53,436	53,436	53,436	53,436	53,436	53,617	53,617	65,176	65,176	74,567	686,183
Total:				423,651	430,540	434,758	439,915	444,072	449,750	465,519	483,018	485,047	500,119	514,079	524,835	5,595,387

**NOTES:**

1. Net energy savings (kWh) are based on DNV GL's analysis of EM&V data from actual program participants.
2. 2016 Energy savings (kWh) are inclusive of EE measures installed on, or after, January 1, 2014 through December 31, 2016 that are accumulated and realized between January 1, 2016 through December 31, 2016.

Phase III EE Programs: Net Energy Savings (kWh) (Cumulative by Month)	Rate Code	Rate Schedule	Percentage	2015											
				1	2	3	4	5	6	7	8	9	10	11	12
				Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
<b>Non-Residential Heating and Cooling Efficiency:</b>															
	168	Schedule 5					2,214								
	168	Schedule 5	65.1%	-	-	-	2,214	2,214	2,214	2,214	2,214	2,214	2,214	2,214	2,214
	183	Schedule 10 (Variable Pricing)						3,103							
	183	Schedule 10 (Variable Pricing)	19.1%	-	-	-	-	3,103	3,103	3,103	3,103	3,103	3,103	3,103	3,103
	184	Schedule 30													
	184	Schedule 30	1.0%	-	-	-	-	-	-	-	-	-	-	-	-
	188	Schedule 42													
	188	Schedule 42	14.8%	-	-	-	-	-	-	-	-	-	-	-	-
<b>Non-Residential Heating and Cooling Efficiency Sub-Total:</b>				-	-	-	2,214	5,317	5,317	5,317	5,317	5,317	5,317	5,317	5,317
<b>Non-Residential Lighting Systems and Controls:</b>															
	168	Schedule 5					1,886						10,079	840	660
	168	Schedule 5	31.2%	-	-	-	1,886	1,886	1,886	1,886	1,886	1,886	11,965	12,805	13,466
	170	Schedule 5P										6,919	10,823		1,712
	170	Schedule 5P	33.3%	-	-	-	-	-	-	-	-	6,919	17,741	17,741	19,453
	176	Schedule 6P													
	176	Schedule 6P	0.8%	-	-	-	-	-	-	-	-	-	-	-	-
	183	Schedule 10 (Variable Pricing)													
	183	Schedule 10 (Variable Pricing)	32.9%	-	-	-	-	-	-	-	-	-	-	-	-
	188	Schedule 42													
	188	Schedule 42	1.8%	-	-	-	-	-	-	-	-	-	-	-	-
<b>Non-Residential Lighting Systems and Controls Sub-Total:</b>				-	-	-	1,886	1,886	1,886	1,886	1,886	8,805	29,707	30,547	32,919
<b>Total:</b>				-	-	-	4,100	7,203	7,203	7,203	7,203	14,121	35,024	35,864	38,236

				2016												2016 Total
Phase III EE Programs: Net Energy Savings (kWh) (Cumulative by Month)	Rate Code	Rate Schedule	Percentage	1	2	3	4	5	6	7	8	9	10	11	12	
				Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	
Non-Residential Heating and Cooling Efficiency:																
	168	Schedule 5					640		13,412					208		
	168	Schedule 5	65.1%	2,214	2,214	2,214	2,854	2,854	16,266	16,266	16,266	16,266	16,266	16,474	16,474	126,629
	183	Schedule 10 (Variable Pricing)														
	183	Schedule 10 (Variable Pricing)	19.1%	3,103	3,103	3,103	3,103	3,103	3,103	3,103	3,103	3,103	3,103	3,103	3,103	37,233
	184	Schedule 30									374					
	184	Schedule 30	1.0%	-	-	-	-	-	-	-	374	374	374	374	374	1,868
	188	Schedule 42						3,590								
	188	Schedule 42	14.8%	-	-	-	-	3,590	3,590	3,590	3,590	3,590	3,590	3,590	3,590	28,718
Non-Residential Heating and Cooling Efficiency Sub-Total:				5,317	5,317	5,317	5,957	9,547	22,959	22,959	23,332	23,332	23,332	23,540	23,540	194,448
Non-Residential Lighting Systems and Controls:																
	168	Schedule 5		934	2,452		15,781		1,487	6,408	23,478	3,644	3,953	3,960		
	168	Schedule 5	31.2%	14,399	16,851	16,851	32,632	32,632	34,119	40,526	64,004	67,648	71,601	75,561	75,561	542,386
	170	Schedule 5P				4,624			14,643		30,463		3,853	6,940	18,873	
	170	Schedule 5P	33.3%	19,453	19,453	24,077	24,077	24,077	38,720	38,720	69,183	69,183	73,037	79,976	98,849	578,807
	176	Schedule 6P									2,855					
	176	Schedule 6P	0.8%	-	-	-	-	-	-	-	2,855	2,855	2,855	2,855	2,855	14,273
	183	Schedule 10 (Variable Pricing)				54,460							6,265		8,551	
	183	Schedule 10 (Variable Pricing)	32.9%	-	-	54,460	54,460	54,460	54,460	54,460	54,460	54,460	60,725	60,725	69,276	571,945
	188	Schedule 42							1,040				7,860			
	188	Schedule 42	1.8%	-	-	-	-	-	1,040	1,040	1,040	1,040	8,901	8,901	8,901	30,864
Non-Residential Lighting Systems and Controls Sub-Total:				33,853	36,305	95,388	111,169	111,169	128,339	134,747	191,543	195,187	217,118	228,017	255,441	1,738,275
Total:				39,169	41,621	100,705	117,126	120,716	151,298	157,705	214,875	218,519	240,450	251,558	278,981	1,932,723

**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. 2016 Energy savings (kWh) are inclusive of program measures installed on, or after, January 1, 2015 through December 31, 2016.

Phase IV EE Programs: Net Energy Savings (kWh) (Cumulative by Month)	Rate Code	Rate Schedule	Percentage	2016												2016 Total
				1	2	3	4	5	6	7	8	9	10	11	12	
				Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	
Residential Income and Age Qualifying Home Improvement:																
	160											253		226		
	160		7.8%	-	-	-	-	-	-	-	-	253	253	479	479	1,464
	163	Schedule 1									689	498	182	998	2,145	2,010
	163	Schedule 1	89.3%	-	-	-	-	-	-	-	689	1,187	1,370	2,368	4,513	6,523
	168	Schedule 5									89					
	168	Schedule 5	2.9%	-	-	-	-	-	-	-	89	89	89	89	89	537
Residential Income and Age Qualifying Home Improvement Sub-Total:				-	-	-	-	-	-	-	779	1,277	1,712	2,710	5,082	7,092
Total:				-	-	-	-	-	-	-	779	1,277	1,712	2,710	5,082	7,092

**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. 2016 Energy savings (kWh) are inclusive of program measures installed on, or after, January 1, 2016 through December 31, 2016.

Date	Weather Conditions °F	Event Trigger	Control Mode	Number of Customers Controlled	Number of Customers Enrolled
5-Jul-16	89	Peak Shaving	AC Units	94,691	107,869
6-Jul-16	91	Peak Shaving	AC Units	94,497	107,773
7-Jul-16	93	Peak Shaving	AC Units	94,269	107,528
8-Jul-16	91	Peak Shaving	AC Units	93,996	107,268
13-Jul-16	90	Peak Shaving	AC Units	93,753	107,037
14-Jul-16	95	Peak Shaving	AC Units	93,443	106,845
15-Jul-16	91	Peak Shaving	AC Units	93,130	106,567
18-Jul-16	93	Peak Shaving	AC Units	92,995	106,331
21-Jul-16	87	Peak Shaving	AC Units	82,116	106,067
22-Jul-16	91	Peak Shaving	AC Units	87,353	105,982
25-Jul-16	95	Peak Shaving	AC Units	92,435	105,964
26-Jul-16	94	Peak Shaving	AC Units	92,188	105,795
11-Aug-16	92	Peak Shaving	AC Units	89,609	105,016
12-Aug-16	93	Peak Shaving	AC Units	89,476	104,940
15-Aug-16	95	Peak Shaving	AC Units	89,380	104,932
16-Aug-16	95	Peak Shaving	AC Units	89,275	104,799
17-Aug-16	95	Peak Shaving	AC Units	89,101	104,676
18-Aug-16	89	Peak Shaving	AC Units	93,818	104,479
26-Aug-16	98	Peak Shaving	AC Units	93,526	104,086
29-Aug-16	90	Peak Shaving	AC Units	52,957	104,036
30-Aug-16	92	Peak Shaving	AC Units	52,938	103,976
31-Aug-16	90	Peak Shaving	AC Units	52,925	103,939
8-Sep-16	91	Peak Shaving	AC Units	93,180	103,664
9-Sep-16	94	Peak Shaving	AC Units	93,121	103,664

## 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 545**

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Aug 15 2017

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.**

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

17   **A.    My testimony supports the Company’s request to recover all reasonable and**  
18       **prudent costs incurred in adopting and implementing the Company’s portfolio**

1 of DSM/EE Programs and utility incentives, through its updated Rider C, as  
2 well as the Company's experience modification factor ("EMF") rider, Rider  
3 CE ("Application"). In my testimony, I provide cost projections, including  
4 Common Costs, for the Company's DSM/EE Programs for the period January  
5 1, 2018, through December 31, 2018 (the "Rate Period"), as well as actual  
6 costs incurred during the EMF period January 1, 2016, through December 31,  
7 2016 ("Test Period"). My testimony also presents the Portfolio Performance  
8 Incentive ("PPI") for each Program in accordance with the revised Cost  
9 Recovery and Incentive Mechanism ("Mechanism") approved by the  
10 Commission on May 22, 2017, in Docket No. E-22, Sub 464. I also calculate  
11 the PPI EMF true-up for vintage year 2016 in accordance with the terms of the  
12 Mechanism. Additionally, my testimony lists the commercial and industrial  
13 customers that have elected to "opt out" of the Company's DSM/EE Programs  
14 as required by NCUC Rule R8-69(d)(2).

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

17 A. Yes. Company Exhibit JEB-1, consisting of Schedules 1-7 (with all schedules  
18 provided in public and confidential versions filed under seal), was prepared  
19 under my direction and supervision and is accurate and complete to the best of  
20 my knowledge and belief. My Schedules 1-5 support the development of the  
21 projected Rate Period revenue requirement: Schedule 1 provides summary  
22 system-level Program and system-level Common Costs; Schedule 2 provides  
23 details for system-level Program Costs; Schedule 3 provides details for

1 system-level Common Costs; Schedule 4 provides DSM Projected Program  
2 Costs which are used by Company Witness Melba L. Lyons for purposes of  
3 allocating Common Costs; and Schedule 5 provides the streamlined  
4 calculation of the Projected PPI for qualifying Programs. Schedule 6 provides  
5 actual cost information in support of the PPI true-up. Schedule 7 provides  
6 actual cost information in support of the Test Period EMF revenue  
7 requirement developed by Company Witness Alan J. Moore and includes  
8 actual system-level Program and system-level Common Costs incurred during  
9 the Test Period.

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

12 A. The Company is seeking cost recovery for adopting and implementing:  
13 (a) the previously-approved Phase I DSM/EE program: Residential Air  
14 Conditioner Cycling Program;<sup>1</sup> (b) the previously-approved Phase II DSM/EE  
15 programs: Non-residential Energy Audit Program, Non-residential Duct  
16 Testing & Sealing Program, Residential Home Energy Check-Up Program,  
17 Residential Duct Sealing Program, Residential Heat Pump Tune-Up Program,  
18 Residential Heat Pump Upgrade Program;<sup>2</sup> (c) the previously-approved Phase  
19 III DSM/EE programs: Non-residential Lighting Systems and Controls, Non-  
20 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.

<sup>2</sup> Docket Nos. E-22, Subs 495, 496, 497, 498, 499, and 500. By Order issued on November 29, 2016, the Commission approved closure of the Phase II Programs as of February 7, 2017, with the exception of the Residential Heat Pump Upgrade Program, regarding which the Commission approved the Company's request to close as of February 7, 2017. On July 28, 2017, the Company motioned the Commission to close the currently-suspended Residential Heat Pump Upgrade Program.

1 Film;<sup>3</sup> (d) the previously-approved Phase IV Income and Age Qualifying  
2 Home Improvement Program;<sup>4</sup> (e) the previously-approved Phase V Non-  
3 Residential Small Business Improvement Program<sup>5</sup> and Residential Retail  
4 LED Lighting program;<sup>6</sup> (f) and the proposed Phase VI Non-Residential  
5 Prescriptive Program.<sup>7</sup> Due to the Company's Phase II Program closures, as  
6 explained by Company Witness Michael T. Hubbard, only limited wind down  
7 and evaluation, measurement and verification ("EM&V") costs are projected  
8 to be incurred during the Rate Period.

9 **Q. What costs are being projected for the Phase IV Income and Age**  
10 **Qualifying Home Improvement Program?**

11 A. As discussed by Witness Hubbard, the Company is reviewing the option of  
12 offering a North Carolina-only program in 2018 while the Company seeks  
13 approval in Virginia of an extension of the current system program, which  
14 ends in 2017. The approval in Virginia is anticipated in mid-2018. At this  
15 point, no costs are being projected for 2018; however, the Company will  
16 seek cost recovery through a future EMF true-up if the North-Carolina only  
17 program is offered in 2018.

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<sup>3</sup> Docket No. E-22, Subs 507, 508, and 509.

<sup>4</sup> Docket No. E-22, Sub 523.

<sup>5</sup> Docket No. E-22, Sub 538.

<sup>6</sup> Docket No. E-22, Sub 539.

<sup>7</sup> Docket No. E-22, Sub 543.

- 1    **Q.     What is the nature of the costs for the DSM/EE Programs?**
- 2    A.     The costs are primarily categorized as direct “Program Costs” and indirect
- 3           “Common Costs.” These Program Costs and Common Costs are those solely
- 4           associated with the EC department, which was assigned the responsibility to
- 5           separately identify and track DSM/EE costs related to the proposed Programs.
- 6           The projected Program Costs are those costs that are directly attributable to
- 7           individual Programs and primarily include costs based on signed vendor
- 8           contracts. Program Costs include design, implementation, marketing,
- 9           information technology hardware and software, call center, customer
- 10          incentives, equipment, startup costs, vendor margins, data collection and
- 11          reporting, promotional events, management and field operations, EM&V
- 12          costs, and similar vendor and/or internal costs. The majority of these Program
- 13          Costs are based on contracts with the Company’s five main Program vendors,
- 14          Enertouch, Inc., d/b/a GoodCents Solutions (“GoodCents”), Converge, Inc.,
- 15          Ecova, Honeywell, and Nexant. The Company will also incur certain indirect
- 16          Common Costs that are part of implementation of the DSM/EE Programs,
- 17          which are not specifically associated with any individual DSM Program.
- 18          These costs include certain customer communication costs, department labor
- 19          costs, dues and association costs, and external vendor costs. Company
- 20          Witness Alan Moore further addresses deferral of DSM/EE Program costs in
- 21          his prefiled direct testimony.

1    **Q.     How is the information on Program and Common Costs provided by you**  
2       **used by the other witnesses in this proceeding?**

3    A.     The Company is seeking to recover reasonable and prudent costs that are  
4       projected for implementation of the DSM/EE Programs during the Rate  
5       Period. As discussed above, such costs include the Program Costs and  
6       Common Costs. Schedule 1 of my prefiled direct testimony shows both  
7       Program Costs and Common Costs, at the system level, associated with  
8       implementation of the Phase I, Phase II, Phase III, Phase IV, Phase V, and  
9       proposed Phase VI DSM/EE Programs for the Rate Period. Company Witness  
10      Moore uses these costs to develop the revenue requirement in support of this  
11      Application. Company Witness Lyons then explains the assignment and  
12      allocation of these costs to the North Carolina jurisdictional customers, using  
13      penetration and participant percentages from my Schedule 4, which are  
14      provided pursuant to NCUC Rule R8-9(f)(1)(ii)(a). Finally, Company  
15      Witness Debra A. Stephens developed the DSM/EE Rider, Rider C, for  
16      recovery of the projected costs.

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

20   A.     Through Rider CE, the Company is seeking to true up all DSM/EE Program  
21       and Common Costs incurred during the Test Period with the revenues  
22       received through Rider C. Company Witness Moore uses the actually-  
23       incurred Test Period DSM/EE Program and Common Costs set forth in my

1 Schedules 6 and 7 to develop the EMF revenue requirement to be recovered  
2 through Rider CE. Company Witness Lyons then explains the assignment and  
3 allocation of these costs to the North Carolina jurisdictional customers.  
4 Finally, Company Witness Stephens calculated Rider CE for recovery of these  
5 costs.

6 **Q. Please describe the recent changes to the PPI provisions in the**  
7 **Mechanism.**

8 A. As further discussed by Witnesses Hubbard and Deanna R. Kesler, the  
9 Mechanism has historically provided for a PPI based upon the performance of  
10 each individual program, which would be eligible for an incentive if the  
11 Program achieved a UCT above 1.0. Through the recent revisions to the  
12 Mechanism agreed to between the Company and the Public Staff and  
13 approved by the Commission on May 22, 2017, the Mechanism now provides  
14 for a “portfolio performance incentive” applicable to measures installed  
15 beginning with vintage year 2017, including the Rate Period in this  
16 proceeding. Paragraphs 49 – 61 of the Mechanism govern calculation and  
17 recovery of the PPI.

18 **Q. Please describe Schedule 5 of your prefiled direct testimony, which**  
19 **calculates the projected Rate Period PPI consistent with the Mechanism.**

20 A. My Schedule 5 calculates the projected Rate Period PPI in a manner  
21 consistent with Paragraphs 49 – 61 of the revised Mechanism, and consistent  
22 with the Company’s approach approved in the 2016 cost recovery proceeding,

1 Docket No. E-22, Sub 536 (“2016 DSM Case”). Specifically, my Schedule 5  
2 utilizes two PPI components.

3 First, PPI “actual” results from pertinent vintage years (2016 and prior in this  
4 current case) are calculated using the methodology identical to past DSM  
5 cases.

6 Second, Projected PPI “estimates” for year 2018, the Rate Period in this  
7 current case, and for vintage year 2017, are calculated in accordance  
8 with Paragraph 55(b) of the Mechanism.

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

11 A. Paragraph 55(b) of the Mechanism provides that the Company may utilize a  
12 reasonable, simplified approach to estimated net dollar savings associated  
13 with measurement units installed in future vintage years for purposes of  
14 projecting the Rate Period PPI. The Company’s approach for producing the  
15 projected Rate Period PPI relies on the two components of the calculation.  
16 For the first component, the Company uses the data supporting its PPI  
17 calculation in the prior year’s DSM cost recovery proceeding to isolate the  
18 “actual” PPI dollar amount for the prior vintage year and then continues to use  
19 that amount in this current case as the first component of the projected PPI  
20 total revenue requirement. Consistent with the Company’s approach in the  
21 2016 DSM Case, the second component of the PPI estimate is calculated  
22 using the current case’s operating expense revenue requirement times 1% to

1 produce a dollar amount for “estimated” PPI. Adding the “actual” PPI dollar  
2 amount to the “estimated” PPI dollar amount for the rate year thus produces a  
3 streamlined and reasonably conservative estimate of the projected Rate Period  
4 PPI for each Program. This data would naturally refresh with every new  
5 DSM/EE cost recovery proceeding.

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

8 A. My Schedule 6 calculates the projected Rate Period PPI in a manner  
9 consistent with Paragraph 59 of the revised Mechanism. I have obtained the  
10 number of actual installed measurement units and the verified kW and kWh  
11 savings associated with each Program for vintage year 2016 from the  
12 Company’s most recently filed EM&V Report, as filed May 1, 2017, in  
13 Docket No. E-22, Sub 536. Coupled with the Company’s actual costs for  
14 vintage year 2016, this information is used to calculate the actual net  
15 cost/benefit results for each Program. I then developed a comparison of actual  
16 results versus projected cost/benefit results that are used to derive a trued-up  
17 PPI. Once a PPI true-up for a given vintage year has been completed based  
18 upon final EM&V data filed with the Commission, the Company finalizes its  
19 PPI true-up for that vintage year.

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

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

9       The EC Department also relies heavily on the Dominion website to provide  
10      general education to our customers through tips, videos, online energy audit  
11      tools, among other channels. The EC program pages have garnered  
12      approximately 300,000 visits in the current Test Period. In addition, the  
13      Company's DSM II and DSM III implementation vendor, Honeywell, has  
14      created its own program web pages for detailed tracking on marketing efforts.  
15      Honeywell's program pages have garnered over 116,000 hits during the Test  
16      Period. In addition, the EC Department took advantage of other high-  
17      coverage, low-cost channels, such as social media. Dominion is continually  
18      growing social media presence on both Facebook and Twitter gaining, since  
19      creation, over 63,000 fans and 53,000 followers, respectively. The EC  
20      department has also partnered with several local television stations, airing  
21      stories on the conservation programs and customer success stories. Whenever  
22      possible, the EC department attempts to utilize low-cost options to  
23      communicate general education to our customers.

- 1   **Q.     Please elaborate on the status of DSM/EE opt-out customers.**
- 2   A.     As required to be listed by NCUC Rule R8-69(d)(2), the following customers
- 3         have elected to opt-out of the Company's DSM/EE Programs pursuant to
- 4         North Carolina General Statute § 62-133.9(f) and NCUC R8-69(d):
- 5         Weyerhaeuser (1 account); Nucor Steel-Hertford (1 account); KapStone Paper
- 6         and Packaging Company (2 accounts); KABA Ilco (1 account); Consolidated
- 7         Diesel (1 account); Domtar Paper Company LLC (1 account); Enviva Pellets
- 8         (2 accounts); Flambeau Products Corp. (1 account); Lowes Home Center, Inc.
- 9         (5 accounts); Hospira, Inc. and Parkdale America LLC (1 account). Company
- 10        Witness Stephens' prefiled direct testimony provides projected North Carolina
- 11        total retail monthly sales for the Rate Period for accounts who have chosen to
- 12        opt-out of the DSM/EE Rider, as required by R8-69(f)(1)(vii).
- 13   **Q.     Does that conclude your prefiled direct testimony?**
- 14   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.

## Demand Side Management (DSM)

Projected System Costs

Program &amp; Common Costs

Rate Yr: Jan 2018 to Dec 2018

Dollars

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E-22 Sub 545

Company Exhibit JEB-1

Schedule 1

Page 1 of 1

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
	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2018 Rate Year
Programs (2)													
Phase I (O&M and Capital)													
1													
2													
3													
4													
5													
6	Phase I Total	384,593	384,593	384,593	384,593	1,414,593	1,414,593	1,414,593	1,414,593	384,593	384,593	384,593	384,593
7	Phase II (O&M Only)												8,735,118
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19	Phase II Total	52,788	52,788	52,788	52,788	-	-	-	-	-	-	-	263,942
20	Phase III (O&M Only)												
21													
22													
23													
24													
25													
26	Phase III Total	889,436	889,436	889,436	889,436	889,436	889,436	889,436	889,436	889,436	889,436	889,436	10,673,233
27	Phase IV (O&M Only)												
28													
29													
30													
31													
32													
33	Phase V Total	647,661	647,661	647,661	647,661	647,661	647,661	647,661	647,661	647,661	647,661	647,661	7,771,927
34	Phase VI (O&M Only)												
35													
36													
37													
38	DSM Phases I, II, III, IV, V, and VI Total	2,503,325	2,503,325	2,503,325	2,503,325	3,533,325	3,480,537	3,480,537	3,480,537	2,450,537	2,450,537	2,450,537	33,790,384
39													
40	Program O&M Total	2,419,992	2,419,992	2,419,992	2,419,992	3,449,992	3,397,203	3,397,203	3,397,203	2,367,203	2,367,203	2,367,203	32,790,384
41	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	1,000,000
42													
43	Common Costs (O&M Only)												
44	Total	139,515	139,515	139,515	139,515	139,515	139,515	139,515	139,515	139,515	139,515	139,515	1,674,183
45													
46	Program and Common O&M Total	2,559,507	2,559,507	2,559,507	2,559,507	3,589,507	3,536,719	3,536,719	3,536,719	2,506,719	2,506,719	2,506,719	34,464,567
47	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	1,000,000
48	Grand Total	\$ 2,642,840	\$ 2,642,840	\$ 2,642,840	\$ 2,642,840	\$ 3,672,840	\$ 3,620,052	\$ 3,620,052	\$ 3,620,052	\$ 2,590,052	\$ 2,590,052	\$ 2,590,052	\$ 35,464,567
49													
50													
51	Notes:												
52	1. System = Total of All Jurisdictions												
53	2. Res. = Residential; Com. = Commercial; Non Res. = Non Residential												
54	3. Costs exclude PPI & Lost Revenues												
55													

Aug 15 2017

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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	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018
	Phase I	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Rate Year
1														
2														
3														
4														
5														
6														
7														
9														
10	Total all Program Costs													
11	O&M	301,260	301,260	301,260	301,260	1,331,260	1,331,260	1,331,260	1,331,260	301,260	301,260	301,260	301,260	7,735,118
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	\$ 384,593	\$ 384,593	\$ 384,593	\$ 384,593	\$ 1,414,593	\$ 1,414,593	\$ 1,414,593	\$ 1,414,593	\$ 384,593	\$ 384,593	\$ 384,593	\$ 384,593	\$ 8,735,118
14														
15	Notes:													
16	1. System = Total of All Jurisdictions													
17	2. Res. = Residential; Com. = Commercial; Non Res. = Non Residential													
18	3. Costs exclude PPI & Lost Revenues													
19														
20														

Demand Side Management (DSM)

Projected System Costs

Program Cost Details - Phase II

Rate Yr: Jan 2018 to Dec 2018

Dollars

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E-22 Sub 545

Company Exhibit JEB-1

Schedule 2

Page 2 of 6

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
	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Rate Year
1	Phase II												
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													
23													
24													
25													
26													
27													
28													
29													
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31													
32													
33													
34													
35													
36													
37													
38													
39													
40													
41													
42													
43	Total all Program Costs												
44	Grand Total	\$	52,788	\$	52,788	\$	52,788	\$	52,788	\$	-	\$	-
45													\$
46	Notes:												
47	1. System = Total of All Jurisdictions												
48	2. Res. = Residential; Com. = Commercial; Non Res. = Non Residential												
49	3. Costs exclude PPI & Lost Revenues												
50													

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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
	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018
Programs	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Rate Year
Phase III													
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													
23	Grand Total	\$ 889,436	\$ 889,436	\$ 889,436	\$ 889,436	\$ 889,436	\$ 889,436	\$ 889,436	\$ 889,436	\$ 889,436	\$ 889,436	\$ 889,436	\$ 10,673,233
24													
25													
26	Notes:												
27		1. System = Total of All Jurisdictions											
28		2. Res. = Residential; Com. = Commercial; Non Res. = Non Residential											
29		3. Costs exclude PPI & Lost Revenues											
30													

Projected System Costs

Schedule 2

Program Cost Details - Phase IV

Page 4 of 6

Rate Yr: Jan 2018 to Dec 2018

Dollars

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
	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018
Programs	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Rate Year
Phase IV													
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15	Notes:												
16	1. System = Total of All Jurisdictions												
17	2. Res. = Residential; Com. = Commercial; Non Res. = Non Residential												
18	3. Costs exclude PPI & Lost Revenues												
19	4. Placeholder for 2018 NC Only Program. Will seek recovery in future EMF true up.												
20													

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
	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018
Programs	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Rate Year
Phase V													

1	
2	
3	
4	
5	
6	
7	
8	
9	

10	
11	
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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

Projected System Costs

Schedule 2

Program Cost Details - Phase VI

Page 6 of 6

Rate Yr: Jan 2018 to Dec 2018

Dollars

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
2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Rate Year

Programs  
Phase VI

1	
2	
3	
4	
5	
6	
7	
8	
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10	
11	
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13	
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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

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
		2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Rate Year
1	Common Costs													
2	Energy Conservation Labor													
3	Customer Communication	9,652	9,652	9,652	9,652	9,652	9,652	9,652	9,652	9,652	9,652	9,652	9,652	115,824
4	Consultant Support													
5	Dues & Associations	7,958	7,958	7,958	7,958	7,958	7,958	7,958	7,958	7,958	7,958	7,958	7,958	95,500
6	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
7	Total Common Costs	\$ 139,515	\$ 139,515	\$ 139,515	\$ 139,515	\$ 139,515	\$ 139,515	\$ 139,515	\$ 139,515	\$ 139,515	\$ 139,515	\$ 139,515	\$ 139,515	\$ 1,674,183
8														
9														
10														
11	Notes:													
12		1. System = Total of All Jurisdictions												
13														
14														
15														

Demand Side Management (DSM)

Program Cost Details - Non NC DSM Programs

These are programs not in the NC Jurisdiction

Rate Yr: Jan 2018 to Dec 2018

Dollars

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E-22 Sub 545

Company Exhibit JEB-1

Schedule 4

Page 1 of 1

	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	
Row	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Rate Year	
5	DSM Phase II Program													
6														
7														
8														
9	Total	\$ 50,537	\$ 50,537	\$ 50,537	\$ 50,537	\$ 50,537	\$ 107,666	\$ 107,666	\$ 107,666	\$ 107,666	\$ 50,537	\$ 50,537	\$ 50,537	\$ 834,965
10														
11														
12	Notes:													
13		1. System = Total of All Jurisdictions												
14		2. Res. = Residential; Com. = Commercial; Non Res. = Non Residential												
15		3. All the costs on this page are only for the purpose of allocating projected common costs among programs. Dominion Energy North Carolina is not requesting any cost recovery for DSM Phase II DG program.												
16		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, PPI, lost revenues, etc.												
17														

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Company Exhibit JEB-3

Schedule 5


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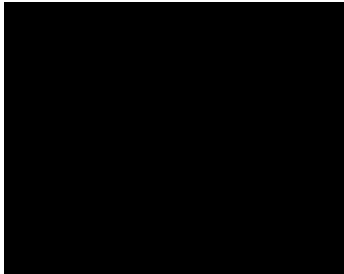
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Projected by Program Total				Year 2018	Year 2018	Year 2018	Year 2018	Year 2018	Year 2018	Year 2018	Year 2018	Year 2018	Year 2018	Year 2018	Year 2018	Total
				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
DSM I	Res	Lighting		3,388	3,388	3,388	3,388	3,388	3,388	3,388	3,388	3,388	3,388	3,388	3,388	40,653
DSM I	Res	Air Conditioner Cycling		710	710	710	710	710	710	710	710	710	710	710	710	8,520
DSM I	Res	Low Income		-	-	-	-	-	-	-	-	-	-	-	-	-
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	27,365
DSM I	Com	HVAC		435	435	435	435	435	435	435	435	435	435	435	435	5,215
DSM I	Com	Lighting NC		367	367	367	367	367	367	367	367	367	367	367	367	4,399
DSM I	Com	HVAC Upgrade NC		-	-	-	-	-	-	-	-	-	-	-	-	-
DSM II	Res	Heat Pump Tune-Up		-	-	-	-	-	-	-	-	-	-	-	-	-
DSM II	Res	Heat Pump Upgrade		288	288	288	288	288	288	288	288	288	288	288	288	3,455
DSM II	Res	Duct Sealing		-	-	-	-	-	-	-	-	-	-	-	-	-
DSM II	Res	Home Energy Check-Up		16	16	16	16	16	16	16	16	16	16	16	16	194
DSM II	Non Res.	Duct Testing & Sealing		8,288	8,288	8,288	8,288	8,288	8,288	8,288	8,288	8,288	8,288	8,288	8,288	99,455
DSM II	Non Res.	Energy Audit		527	527	527	527	527	527	527	527	527	527	527	527	6,319
DSM III	Non Res.	Lighting Systems & Controls		4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375	4,375	52,499
DSM III	Non Res.	Heating & Cooling Efficiency		2,770	2,770	2,770	2,770	2,770	2,770	2,770	2,770	2,770	2,770	2,770	2,770	33,235
DSM III	Non Res.	Window Film		813	813	813	813	813	813	813	813	813	813	813	813	9,761
DSM IV	Res.	Income and Age Qualifying Home Improve		-	-	-	-	-	-	-	-	-	-	-	-	-
DSM V	Non Res.	Qualifying Small Business Improvement		627	627	627	627	627	627	627	627	627	627	627	627	7,522
DSM V	Res.	LED Lighting - NC Only		932	932	932	932	932	932	932	932	932	932	932	932	11,181
DSM VI	Non Res.	Prescriptive		319	319	319	319	319	319	319	319	319	319	319	319	3,828
Projected				Total	26,134	26,134	26,134	26,134	26,134	26,134	26,134	26,134	26,134	26,134	26,134	313,603

From DSM E-22, Sub 536			
Company Exhibit No. JEB-1			
Schedule 1			
Page 1 of 1			
Year 2017			
Res.		\$	4,666
Res.			-
Res.			-
Res.			-
Res.			-
Non Res.			-
Non Res.			-
Non Res.			1,267
Non Res.			1,225
Non Res.			3,473
Non Res.		<u>3,509</u>	
Total	\$	23,379,253	14,140

From DSM E-22, Sub 543						
Company Exhibit No. JEB-1						
Schedule 1						
Page 1 of 1						
Year 2018						
<b>System Program Projected Direct Costs</b>						
Res.	Air Conditioner Cycling		\$	3,854		
Res.	Heat Pump Tune-Up		-			
Res.	Heat Pump Upgrade		-			
Res.	Duct Sealing		-			
Res.	Home Energy Check-Up		-			
Non Res.	Duct Testing & Sealing		-			
Non Res.	Energy Audit		-			
Non Res.	Window Film		1,371			
Non Res.	Heating & Cooling Efficiency		1,212			
Non Res.	Lighting Systems & Controls		3,854			
Non Res.	Qualifying Small Business Improvement		4,013			
Res.	LED Lighting - NC Only		11,181			
Non Res.	Prescriptive		3,828			
			\$	25,062,140	\$	29,313

Demand Side Management  
Program Performance Incentive (PPI) Trueup for Year 2016  
AC Cycling Program  
Dollars

E-22 Sub 545

Company Exhibit JEB-1  
Schedule 6  
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Row		
	Col1 Vintage Year 2016 Planned	Col2 Vintage Year 2016 Actual
1		
2		
3	System Net Benefit	(\$14,137)
4	Jurisdictional Allocation %	4.9820%
5		
6	NC Net Benefit	(\$704)
7	NC DR Program Incentive %	8.0%
8	NC DR Program Incentive %	(\$56)
9		
10	Years to Spread Benefit	10
11	Financial Rate	6.29%
12	Amortized Benefit	(\$8)

**Notes:**

- 1 Jurisdictional allocation factors are from Rate Department.
- 2 From the NC Stipulation: 8% 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 "KW verified per unit savings" from EM&V filing
- 3 Counts from EM&V filing.

**System Costs:**

- 1 Program costs include direct costs.

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Demand Side Management  
Program Performance Incentive (PPI) Trueup for Year 2016  
Res Heat Pump Tune Up  
Dollars  
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E-22 Sub 545

Company Exhibit JEB-1  
Schedule 6  
Page 2 of 10

Row		
	Col1 Vintage Year 2016 Planned	Col2 Vintage Year 2016 Actual
1		
2		
3	System Net Benefit	(\$2,482,300)
4	Jurisdictional Allocation %	6.0314%
5		
6	NC Net Benefit	(\$149,717)
7	NC EE Program Incentive %	13.0%
8	NC EE Program Incentive \$	\$0 (\$19,463)
9		
10	Years to Spread Benefit	10
11	Financial Rate	6.29%
12	Amortized Benefit	\$4,409 (\$2,680)

**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.

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Demand Side Management  
Program Performance Incentive (PPI) Trueup for Year 2016  
Res Heat Pump Upgrade  
Dollars  
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E-22 Sub 545

Company Exhibit JEB-1  
Schedule 6  
Page 3 of 10

Row		
	Col1 Vintage Year 2016 Planned	Col2 Vintage Year 2016 Actual
1		
2		
3	System Net Benefit	(\$1,965,896)
4	Jurisdictional Allocation %	6.0314%
5		
6	NC Net Benefit	(\$118,571)
7	NC EE Program Incentive %	13.0%
8	NC EE Program Incentive \$	(\$15,414)
9		
10	Years to Spread Benefit	10
11	Financial Rate	6.29%
12	Amortized Benefit	(\$2,123)

**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  
Res Home Energy Check Up  
Dollars

E-22 Sub 545

Company Exhibit JEB-1  
Schedule 6  
Page 4 of 10

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Row		
	Col1	Col2
	Vintage Year 2016 Planned	Vintage Year 2016 Actual
1		
2		
3	System Net Benefit	\$9,667
4	Jurisdictional Allocation %	6.0314%
5		
6	NC Net Benefit	\$583
7	NC EE Program Incentive %	13.0%
8	NC EE Program Incentive \$	\$76
9		
10	Years to Spread Benefit	10
11	Financial Rate	6.29%
12	Amortized Benefit	\$10

**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  
Res Duct Sealing  
Dollars  
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E-22 Sub 545

Company Exhibit JEB-1  
Schedule 6  
Page 5 of 10

Row			Col1	Col2
			Vintage Year 2016 Planned	Vintage Year 2016 Actual
1				
2				
3				
4	System Net Benefit			(\$451,237)
5	Jurisdictional Allocation %			6.0314%
6	NC Net Benefit			(\$27,216)
7	NC EE Program Incentive %	13.0%		13.0%
8	NC EE Program Incentive \$	\$0		(\$3,538)
9				
10	Years to Spread Benefit	10		10
11	Financial Rate	6.29%		6.29%
12	Amortized Benefit	\$1,133		(\$487)

**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.

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Demand Side Management  
Program Performance Incentive (PPI) Trueup for Year 2016  
Non Res Audit  
Dollars  
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Company Exhibit JEB-1  
Schedule 6  
Page 6 of 10

Row		
	Col1 Vintage Year 2016 Planned	Col2 Vintage Year 2016 Actual
1		
2		
3	System Net Benefit	\$1,344,234
4	Jurisdictional Allocation %	6.0314%
5		
6	NC Net Benefit	\$81,076
7	NC EE Program Incentive %	13.0%
8	NC EE Program Incentive \$	\$10,540
9		
10	Years to Spread Benefit	10
11	Financial Rate	6.29%
12	Amortized Benefit	\$1,451

**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.

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Demand Side Management  
Program Performance Incentive (PPI) Trueup for Year 2016  
Non Res Duct  
Dollars  
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E-22 Sub 545

Company Exhibit JEB-1  
Schedule 6  
Page 7 of 10

Row		
	Col1 Vintage Year 2016 Planned	Col2 Vintage Year 2016 Actual
1		
2		
3	System Net Benefit	\$51,225,907
4	Jurisdictional Allocation %	6.0314%
5		
6	NC Net Benefit	\$3,089,639
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	\$3,804

**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.

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

E-22 Sub 545

Company Exhibit JEB-1  
Schedule 6  
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Row		
	Col1 Vintage Year 2016 Planned	Col2 Vintage Year 2016 Actual
1		
2		
3	System Net Benefit	\$28,100,569
4	Jurisdictional Allocation %	6.0314%
5		
6	NC Net Benefit	\$1,694,858
7	NC EE Program Incentive %	13.0%
8	NC EE Program Incentive \$	\$220,332
9		
10	Years to Spread Benefit	10
11	Financial Rate	6.29%
12	Amortized Benefit	\$30,342

**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  
Non Res HVAC  
Dollars  
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Company Exhibit JEB-1  
Schedule 6  
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Row		
	Col1 Vintage Year 2016 Planned	Col2 Vintage Year 2016 Actual
1		
2		
3	System Net Benefit	\$12,169,876
4	Jurisdictional Allocation %	6.0314%
5		
6	NC Net Benefit	\$734,014
7	NC EE Program Incentive %	13.0%
8	NC EE Program Incentive \$	\$95,422
9		
10	Years to Spread Benefit	10
11	Financial Rate	6.29%
12	Amortized Benefit	\$13,141

**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.

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Demand Side Management  
Program Performance Incentive (PPI) Trueup for Year 2016  
Non Res Window Film  
Dollars

E-22 Sub 545

Company Exhibit JEB-1  
Schedule 6  
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Row		
	Col1 Vintage Year 2016 Planned	Col2 Vintage Year 2016 Actual
1		
2		
3	System Net Benefit	(\$223,239)
4	Jurisdictional Allocation %	6.0314%
5		
6	NC Net Benefit	(\$13,464)
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	\$1,100

**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.

Aug 15 2017

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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
1		Year 2016	Year 2016	Year 2016	Year 2016	Year 2016	Year 2016	Year 2016	Year 2016	Year 2016	Year 2016	Year 2016	Year 2016	12 Month
2		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
3	Program Costs O&M													
4														
5														
6														
7														
8														
9														
10		169,560	126,827	179,613	96,325	185,342	1,350,693	1,413,207	1,400,062	1,147,614	170,272	64,164	(89,029)	6,214,650
11														
12														
13														
14														
15														
16														
17														
18		1,348,136	1,166,787	1,540,916	1,494,225	1,574,810	2,500,928	2,192,786	3,882,183	2,028,029	1,720,598	2,107,023	(1,096,388)	20,460,031
19														
20														
21														
22														
23		591,608	414,512	714,573	541,057	796,127	1,056,454	842,074	1,156,878	777,123	649,852	852,713	720,174	9,113,143
24														
25														
26														
27														
28														
29														
30														
31														
32														
33		226,110	66,470	210,038	220,108	221,670	317,264	247,753	337,479	491,414	382,352	390,388	436,543	3,547,590
34														
35	Common Costs	156,521	145,964	101,562	112,283	117,743	86,347	119,232	148,013	162,446	129,825	118,816	28,432	1,427,184
36														
37	Total All O&M Costs	\$ 2,647,376	\$ 2,135,486	\$ 3,045,729	\$ 2,780,737	\$ 3,147,443	\$ 5,762,674	\$ 5,338,695	\$ 8,027,974	\$ 5,284,010	\$ 3,699,760	\$ 4,855,950	\$ 447,688	\$ 47,173,521
38														
39	Notes:													
40	1													
41	2													
42	3													
43	4													

**DIRECT TESTIMONY  
OF  
ALAN J. MOORE  
ON BEHALF OF  
DOMINION ENERGY NORTH CAROLINA  
BEFORE THE  
NORTH CAROLINA UTILITIES COMMISSION  
DOCKET NO. E-22, SUB 545**

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Aug 15 2017

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 NCUC Rule R8-69, the Company's Rider C revenue requirement  
4           includes projected costs associated with: (a) the previously-approved Phase I  
5           Air Conditioner Cycling Program;<sup>1,2</sup> (b) the previously-approved Phase II  
6           DSM/EE programs: Non-residential Energy Audit Program, Non-residential  
7           Duct Testing & Sealing Program, Residential Home Energy Check-Up  
8           Program, Residential Duct Sealing Program, Residential Heat Pump Tune-Up  
9           Program, and Residential Heat Pump Upgrade Program;<sup>3</sup> (c) the previously-  
10          approved Phase III DSM/EE programs: Non-residential Lighting Systems &  
11          Controls Program, Non-residential Heating & Cooling Efficiency Program,  
12          and Non-residential Window Film Program;<sup>4</sup> (d) the previously-approved  
13          Phase IV DSM/EE program: Residential Income and Age Qualifying Home  
14          Improvement Program;<sup>5</sup> (e) the previously-approved Phase V Small Business  
15          Improvement Program;<sup>6</sup> the Residential Retail LED Lighting program;<sup>7</sup> and  
16          the proposed Phase VI Non-Residential Prescriptive Program.<sup>8</sup>

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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> As of December 31, 2015, the Company closed the North Carolina-only Low Income Program. (Docket No. E-22, Sub 463.) All other Phase I programs except the Residential Air Conditioner Cycling Program have previously been concluded.

<sup>3</sup> Docket No. E-22, Subs 495, 496, 497, 498, 499, and 500. By Order issued on November 29, 2016, the Commission approved closure of the Phase II Programs as of February 7, 2017, with the exception of Residential Heat Pump Upgrade, regarding which the Commission approved suspension of February 7, 2017. On July 28, 2017, the Company filed a motion in Docket No. E-22, Sub 500 requesting Commission approval to close the suspended Residential Heat Pump Upgrade Program.

<sup>4</sup> Docket No. E-22, Subs 507, 508, and 509.

<sup>5</sup> Docket No. E-22, Sub 523.

<sup>6</sup> Docket No. E-22, Sub 538.

<sup>7</sup> Docket No. E-22, Sub 539.

<sup>8</sup> Docket No. E-22, Sub 543.

1 Pursuant to Paragraph 28 of the revised Cost Recovery and Incentive  
2 Mechanism (“Mechanism”) approved by the North Carolina Utilities  
3 Commission’s (“NCUC” or “Commission”) May 22, 2017 Order issued in  
4 Docket No. E-22, Sub 464, the Rider CE revenue requirement includes a true-  
5 up of the Company’s DSM/EE Rider C rates in effect for the Phase I, Phase II,  
6 Phase III, and Phase IV Programs during the 12-month period of January 1,  
7 2016, through December 31, 2016 (“Test Period”).

8 The Rider C and Rider CE revenue requirements presented in this filing are  
9 developed in accordance with the revised Mechanism. Development of these  
10 revenue requirements are also consistent with the revenue requirements  
11 approved in the Company’s 2012 – 2016 DSM/EE cost recovery proceedings,  
12 except as modified to comply with the new Mechanism.

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

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

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

3     A.     The pre-filed direct testimony of Company Witness Jarvis E. Bates provides  
4     the projected costs and Portfolio Performance Incentive (“PPI”) related to  
5     each of the previously-identified DSM/EE Programs. I have used those cost  
6     projections pursuant to NCUC Rule R8-69 to calculate the expected revenue  
7     requirement for Rider C, from January 1, 2018, through December 31, 2018,  
8     the proposed rate period (the “Rate Period”) in this case. In particular, in  
9     order to calculate the projected revenue requirement for Rider C, I  
10    incorporated the following cost components: (1) operating expenses projected  
11    to be incurred during the Rate Period; (2) capital costs (including related  
12    depreciation expense) projected to be incurred during the Rate Period; and  
13    (3) PPI projected for the Rate Period pursuant to the revised Mechanism. As  
14    noted by Company Witness Michael T. Hubbard, and consistent with the  
15    Company’s last three cost recovery proceedings,<sup>9</sup> the Company is not  
16    projecting net lost revenues for the Rate Period in this proceeding. Each of  
17    these other cost components will be discussed in more detail later in my  
18    testimony.

19         For the DSM/EE EMF Rider CE, I have incorporated actual costs (both  
20         capital and O&M components) and PPI as provided by Company Witness  
21         Bates for the 12-month Test Period ending December 31, 2016. I have also

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<sup>9</sup> Docket Nos. E-22, Subs 513, 524, and 536.

1 included measured net lost revenues in the Rider CE revenue requirement for  
2 the Test Period as described in more detail later in my testimony.

3 **Q. How did you determine what the Rate Period and Test Period should be**  
4 **for this proceeding?**

5 A. Pursuant to NCUC Rule R8-69(a), the Rate Period is the same as the period  
6 during which the rider established under Commission Rule R8-55, the  
7 Company's fuel factor, is in effect. For this proceeding, the Rate Period will  
8 be January 1, 2018, through December 31, 2018. The Test Period for this  
9 proceeding will be the 12-month period ending December 31, 2016, as  
10 provided for in Paragraph 28 of the Mechanism.

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

14 A. Consistent with Paragraph 40 of the Mechanism, the Company has calculated  
15 the capital-related costs for the Test Period for the months of January through  
16 October 2016, using the actual capital structure and cost of capital for the 12-  
17 month period ended December 31, 2016, incorporating a 10.2% return on  
18 common equity ("ROE") that was approved in the Company's previous  
19 general rate case in Docket No. E-22, Sub 479. For the 2-month period of  
20 November and December 2016, the Company utilized the capital structure and  
21 cost of capital for the 12-month period ended December 31, 2016,  
22 incorporating a 9.90% ROE as approved in the Company's most recent

1 general rate case on December 22, 2016, in Docket No. E-22, Sub 532.<sup>10</sup> For  
2 the projected Rate Period in this proceeding, the Company has utilized the  
3 most recently filed NCUC ES-1 capital structure and cost of capital for the  
4 period ended June 30, 2017, incorporating the 9.90% ROE.

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

7 A. Consistent with the Company's 2014, 2015, and 2016 applications for  
8 DSM/EE cost recovery, only Rider CE includes a request to recover measured  
9 net lost revenues, as allowed by Commission Rule R8-69(c)(1) and the  
10 Mechanism. As noted above, the Company has not projected Rate Period net  
11 lost revenues for recovery in this proceeding. Going forward, all net vintage  
12 year 2018 lost revenues will be appropriately recovered through a future EMF  
13 Rider CE true-up cost recovery factor. As I will discuss in greater detail  
14 below, Rider CE provides for the recovery of actual incremental North  
15 Carolina jurisdictional kWh energy reductions for the Test Period.

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

19 A. Paragraph 43 of the Mechanism provides that kWh sales reductions achieved  
20 by a measurement unit installed in a given vintage year are eligible for use in  
21 calculating lost revenues for only the first 36 months after installation of the  
22 measurement unit. Further, Paragraph 46 of the Mechanism provides that

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<sup>10</sup> See *Order Granting General Rate Increase*, Docket No. E-22, Sub 532 (Dec. 22, 2016).

1 notwithstanding this 36-month period of kWh sales reductions, any installed  
2 measurement unit shall cease being eligible for use in calculating net lost  
3 revenues as of the effective date of (a) a Commission-approved alternative  
4 cost recovery mechanism that accounts for the eligible recoverable Net Lost  
5 Revenues associated with eligible kWh sales reductions, or (b) the  
6 implementation of new base rates approved in a general rate case or  
7 comparable proceeding to the extent that the rates set in that proceeding are  
8 set to explicitly or implicitly recover the net lost revenues associated with an  
9 installed measurement unit's kWh sales reductions.

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

13 A. There are three Phase I programs that were adjusted to exclude the applicable  
14 installed measurement units kWh sales reductions that exceed the 36-month  
15 period during the 2016 Test Period. As presented in Company Witness  
16 Deanna R. Kesler's Schedule 1, the following three Phase I programs were  
17 adjusted to exclude kWh sales reductions for installed measures that exceed  
18 the 36-month limit under Paragraph 43 of the Mechanism; 1) Residential Low  
19 Income Program; 2) Commercial HVAC Upgrade Program; and  
20 3) Commercial Lighting Program.

21 As part of the current DSM/EE EMF Rider CE, the Company is seeking to  
22 recover net lost revenues resulting from measures installed up through the end  
23 of the 2016 Test Period.

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

3     A.     Yes. Consistent with the methodology used in the Company's 2012 general  
4     rate case, the rates approved in the Company's 2016 general rate case were  
5     designed to include the cumulative kWh sales reductions recognized in the net  
6     lost revenues related to EE measurement units installed through June 30,  
7     2016, to be recovered through base rates beginning on November 1, 2016.  
8     Therefore, consistent with Paragraph 46 of the Mechanism, beginning  
9     November 1, 2016, the Company excludes from total kWh energy savings, the  
10    June 30, 2016 total cumulative monthly level of kWh sales reductions that  
11    were incorporated into base rates effective November 1, 2016. The net lost  
12    revenues proposed for recovery in this filing for November and December  
13    2016 include only incremental kWh energy savings resulting from energy  
14    efficiency measures installed subsequent to June 30, 2016.

15   **Q.     Mr. Moore, can you describe in more detail the projected Rate Period**  
16   **revenue requirement for Rider C requested in this case?**

17   A.     The projected revenue requirement begins with the projected operating  
18   expense revenue requirement as reflected on line 1 of page 1 of my Schedule  
19   1. The projected operating expenses for the Rate Period, as supported in the  
20   pre-filed direct testimony of Company Witness Bates, are presented for  
21   current recovery by program on line 1 of page 2 of my Schedule 1. Line 2 of  
22   page 2 of my Schedule 1 presents the system level common costs that are  
23   allocated to each program in accordance with the methodology described by

1 Company Witness Melba L. Lyons. The projected operating expenses and  
2 proportionate share of common costs for each program are then allocated to  
3 the North Carolina jurisdiction using the jurisdictional allocation factors  
4 supported by Company Witness Lyons, to derive the projected North Carolina  
5 jurisdictional operating expense revenue requirement presented on line 5 of  
6 page 3 of my Schedule 1.

7 The second component of the projected Rate Period revenue requirement is  
8 the projected capital costs revenue requirement as presented on line 2 of page  
9 1 of my Schedule 1. Lines 6 through 8 of page 3 of my Schedule 1 present the  
10 projected North Carolina jurisdictional depreciation expense, property taxes  
11 and rate base costs, respectively, related to the Air Conditioner Cycling  
12 Program. The projected rate base for the Rate Period as depicted on page 4 of  
13 my Schedule 1 includes the actual system level net plant balances as of June  
14 30, 2017, and projected monthly system level capital expenditures as  
15 supported by Company Witness Bates. The Air Conditioner Cycling Program  
16 is the only DSM/EE program with capital expenditures being presented for  
17 recovery in this current filing. The capital expenditures, projected to be  
18 closed to plant-in-service each month, are added to the actual June 30, 2017  
19 plant balance, and accumulated throughout the Rate Period. The projected  
20 monthly depreciation expense is projected using a new 7.15% annual  
21 depreciation factor from the Company's updated depreciation study. This  
22 projected annual depreciation rate factor assumes an estimated depreciable life  
23 of 15 years with 0% net salvage and includes interim retirement assumptions.

1 The resulting depreciation expenses projected to be incurred during the Rate  
2 Period are included for current recovery as shown on line 5 of page 4 of my  
3 Schedule 1, and the projected accumulated depreciation balances are shown as  
4 a reduction to average rate base as reflected on line 6 of page 4. The monthly  
5 accumulated deferred income taxes, as supported by my Schedule 3, also  
6 serve as monthly reductions to the projected rate base for the Rate Period as  
7 reflected on line 8 of page 4 of my Schedule 1. These system level projected  
8 amounts are then allocated to the North Carolina jurisdiction as explained by  
9 Company Witness Lyons in her pre-filed direct testimony in this proceeding.

10 The projected North Carolina jurisdiction rate base financing costs are  
11 determined by multiplying each two-month average rate base for the Rate  
12 Period by the Company's cost of capital as presented on line 4 of page 5 of  
13 my Schedule 1. As discussed above, for purposes of this Application, the  
14 Company has used the capital structure and cost of capital as provided in its  
15 June 30, 2017 NCUC ES-1 Report, incorporating a rate of return on common  
16 equity of 9.90%, which resulted in a weighted average cost of capital of  
17 7.451% as presented on page 5 of my Schedule 1. The equity component for  
18 purposes of determining the return on rate base is grossed up to a revenue  
19 level in developing the common equity including income taxes revenue  
20 requirement on rate base as presented on line 20 of page 4 of my Schedule 1.

21 The final component of my Rate Period revenue requirement is the projected  
22 PPI revenue requirement shown on line 4 of page 1 of my Schedule 1.  
23 Company Witness Bates provides the PPI calculation, which is incorporated

1 into the revenue requirement and reflected on line 10 of page 3 of my  
2 Schedule 1.

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

5 A. Consistent with Paragraph 37 of the Mechanism, this DSM/EE EMF requests  
6 recovery of the “difference between the reasonable and prudent Costs incurred  
7 or amortized during the applicable test period and the revenues actually  
8 realized during such test period under the DSM/EE rider then in effect.” The  
9 DSM/EE EMF Rider CE also includes a true-up of the PPI and net lost  
10 revenues components for this same Test Period. Finally, in accordance with  
11 the requirements of Commission Rule R8-69(b)(6) and Paragraph 39 of the  
12 Mechanism, the DSM/EE EMF Rider CE includes a return on the over- or  
13 under-recovery balance up and until the effective date of the Rate Period on  
14 January 1, 2018, calculated at the rate of return approved in the Company’s  
15 most recent general rate case in Docket No. E-22, Sub 532. Commission Rule  
16 R8-69(e)(3) provides that the EMF will remain in effect for a fixed 12-month  
17 period and will continue as a rider to rates established in any intervening  
18 general rate case.

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

1 monthly over- or under-recovered amounts net of utility incentives for the  
2 Test Period are presented on line 13 of page 1 of my Schedule 2.

3 Also pursuant to Rule R8-69(b)(6), financing costs are calculated for the  
4 current EMF test period over-recovery amount, exclusive of utility incentives,  
5 as presented on line 8 of page 1 of my Schedule 2. Line 15 reflects these  
6 carrying costs which are calculated on line 5 of page 6 of my Schedule 2 for  
7 the deferral period of January 2017 through December 2017 at the net-of-tax  
8 rate of return approved in the Company's most recent general rate case in  
9 accordance with Rule R8-69(b)(6).

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

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

18 A. Pages 2 and 3 of my Schedule 2 present the monthly revenue requirement for  
19 the reasonable and prudent costs actually incurred during the Test Period. The  
20 actual operating expenses provided by Company Witness Bates for each  
21 Program include a proportionate share of Common Costs allocated according  
22 to the methodology described by Company Witness Lyons, and are included

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

19 The revenue requirement on Rate Base Costs for the Test Period is calculated  
20 on page 4 of my Schedule 2. Actual monthly Net Plant balances and  
21 Accumulated Deferred Income Taxes were provided by the Fixed Assets  
22 Department and Tax Department, respectively. Depreciation expenses  
23 incurred during the Test Period are included in the actual costs, and the

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

9 The 2-month average North Carolina jurisdictional rate base over the Test  
10 Period is presented on line 9 of page 4. As described earlier in my testimony,  
11 to determine the return on rate base for the Test Period, the 2-month rate base  
12 averages on line 9 of page 4 were multiplied by the Company's cost of capital  
13 based on the capital structure and cost of capital for the 12-month period  
14 ended December 31, 2016, incorporating a rate of return on common equity of  
15 10.20% for the January 2016 through October 2016 period prior to the new  
16 base rates taking effect on November 1, 2016, which resulted in a weighted  
17 average cost of capital of 7.636%. For the period of November 1, 2016,  
18 through December 31, 2016, the Company utilized the Commission approved  
19 ROE of 9.90% which resulted in a weighted average cost of capital of  
20 7.474%, as presented on lines 8 of page 7 of my Schedule 2. The equity  
21 component is grossed up to a revenue level for purposes of calculating the  
22 revenue requirement on rate base costs during the Test Period as presented on  
23 line 17 of page 4 of my Schedule 2.

1 Page 5 of my Schedule 2 presents the calculation of the actual net lost  
2 revenues for the Test Period, based upon the actual North Carolina  
3 jurisdictional energy reductions as presented by Company Witness Kesler.  
4 Company Witness Debra A. Stephens provides in her pre-filed direct  
5 testimony in this case the billing rates applied to these North Carolina  
6 jurisdictional net kWh energy savings as presented on line 2 of page 5 of my  
7 Schedule 2. The actual net lost revenues are then reduced for variable O&M  
8 savings and found revenues. The variable O&M savings presented on line 4  
9 of page 5 were provided by the Company's Integrated Resource Planning  
10 Department. As discussed by Company Witness Hubbard, there were no  
11 actual found revenues for the Test Period as indicated on line 5 of page 5 of  
12 my Schedule 2. Line 6 of page 5 provides the Net Lost Revenues by program  
13 for the Test Period.

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

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

19 A. As summarized on page 1 of my Schedule 1, the Company is requesting  
20 recovery of projected operating expenses of \$3,091,006, and projected capital  
21 cost revenue requirement of \$137,860. These amounts combined with the  
22 projected PPI of \$313,603 provide for a total Rider C revenue requirement of  
23 \$3,542,469.

1 As depicted on page 1 of my Schedule 2, the Rider CE revenue requirement  
2 presents the amount of \$202,430, which will be recovered by the Company  
3 over the Rate Period. The combined revenue requirements for the two riders,  
4 Rider C and Rider CE, for the Rate Period totals \$3,744,899, representing a  
5 \$1,968,125 increase over the rates currently in effect.

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

7 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 545  
Projected Revenue Requirement for DSM/EE Rider C  
For the Rate Period January 1, 2018 - December 31, 2018**

<u>line no.</u>	<u>Rider C</u>	<u>Item Location / Formula</u>
1 Projected Operating Expense Revenue Requirement	\$ 3,091,006	Sch 1, Page 3, Line 5
2 Projected Capital Costs Revenue Requirement	\$ 137,860	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 Requirement	<u>\$ 313,603</u>	Sch 1, Page 3, Line 10
5 Total Revenue Requirement	\$ 3,542,469	Line 1 + Line 2 + Line 3 + Line 4

**Dominion Energy North Carolina**  
**Docket No. E-22, Sub 545**  
**Projected Revenue Requirement for DSM/EE Rider C**  
**For the Rate Period January 1, 2018 - December 31, 2018**

line no.	<u>Projection</u> <u>Jan-18</u>	<u>Projection</u> <u>Feb-18</u>	<u>Projection</u> <u>Mar-18</u>	<u>Projection</u> <u>Apr-18</u>	<u>Projection</u> <u>May-18</u>	<u>Projection</u> <u>Jun-18</u>	<u>Projection</u> <u>Jul-18</u>	<u>Projection</u> <u>Aug-18</u>	<u>Projection</u> <u>Sep-18</u>	<u>Projection</u> <u>Oct-18</u>	<u>Projection</u> <u>Nov-18</u>	<u>Projection</u> <u>Dec-18</u>	<u>Rate Period</u> <u>Total</u>
<b>1 System Program Projected Operating Expenses</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>2 Allocate System Common Costs to Programs</b>													
Air Conditioner Cycling Program	\$ 37,139	\$ 37,139	\$ 37,139	\$ 37,139	\$ 37,139	\$ 37,139	\$ 37,139	\$ 37,139	\$ 37,139	\$ 37,139	\$ 37,139	\$ 37,139	\$ 445,673
Residential NC Only Low Income Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Commercial HVAC Upgrade Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Commercial Lighting Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Residential Heat Pump Tune-up Program	\$ 150	\$ 150	\$ 150	\$ 150	\$ 150	\$ 150	\$ 150	\$ 150	\$ 150	\$ 150	\$ 150	\$ 150	\$ 1,796
Residential Heat Pump Upgrade Program	\$ 159	\$ 159	\$ 159	\$ 159	\$ 159	\$ 159	\$ 159	\$ 159	\$ 159	\$ 159	\$ 159	\$ 159	\$ 1,913
Residential Duct Testing & Sealing Program	\$ 150	\$ 150	\$ 150	\$ 150	\$ 150	\$ 150	\$ 150	\$ 150	\$ 150	\$ 150	\$ 150	\$ 150	\$ 1,796
Residential Home Energy Check-Up Program	\$ 247	\$ 247	\$ 247	\$ 247	\$ 247	\$ 247	\$ 247	\$ 247	\$ 247	\$ 247	\$ 247	\$ 247	\$ 2,959
Non-Residential Duct Testing & Sealing Program	\$ 169	\$ 169	\$ 169	\$ 169	\$ 169	\$ 169	\$ 169	\$ 169	\$ 169	\$ 169	\$ 169	\$ 169	\$ 2,031
Non-Residential Energy Audit Program	\$ 169	\$ 169	\$ 169	\$ 169	\$ 169	\$ 169	\$ 169	\$ 169	\$ 169	\$ 169	\$ 169	\$ 169	\$ 2,031
Non-Residential Window Film Program	\$ 8,989	\$ 8,989	\$ 8,989	\$ 8,989	\$ 8,989	\$ 8,989	\$ 8,989	\$ 8,989	\$ 8,989	\$ 8,989	\$ 8,989	\$ 8,989	\$ 107,864
Non-Residential Heating & Cooling Efficiency Program	\$ 7,946	\$ 7,946	\$ 7,946	\$ 7,946	\$ 7,946	\$ 7,946	\$ 7,946	\$ 7,946	\$ 7,946	\$ 7,946	\$ 7,946	\$ 7,946	\$ 95,354
Non-Residential Lighting Systems & Controls Program	\$ 25,270	\$ 25,270	\$ 25,270	\$ 25,270	\$ 25,270	\$ 25,270	\$ 25,270	\$ 25,270	\$ 25,270	\$ 25,270	\$ 25,270	\$ 25,270	\$ 303,235
Residential Income and Age Qualifying Home Improvement Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Qualifying Small Business Improvement Program	\$ 26,311	\$ 26,311	\$ 26,311	\$ 26,311	\$ 26,311	\$ 26,311	\$ 26,311	\$ 26,311	\$ 26,311	\$ 26,311	\$ 26,311	\$ 26,311	\$ 315,727
Residential LED Lighting - NC Only	\$ 4,421	\$ 4,421	\$ 4,421	\$ 4,421	\$ 4,421	\$ 4,421	\$ 4,421	\$ 4,421	\$ 4,421	\$ 4,421	\$ 4,421	\$ 4,421	\$ 53,056
Non-Residential Prescriptive Program	\$ 25,094	\$ 25,094	\$ 25,094	\$ 25,094	\$ 25,094	\$ 25,094	\$ 25,094	\$ 25,094	\$ 25,094	\$ 25,094	\$ 25,094	\$ 25,094	\$ 301,130
<b>3 System Projected Operating Expenses Including Allocated Common Costs</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>4 Jurisdictional Assignment Factors</b>													
Air Conditioner Cycling Program	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%
Commercial HVAC Upgrade Program	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Commercial Lighting Program	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Residential Heat Pump Tune-up Program	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%
Residential Heat Pump Upgrade Program	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%
Residential Duct Testing & Sealing Program	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%
Residential Home Energy Check-Up Program	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%
Non-Residential Duct Testing & Sealing Program	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%
Non-Residential Energy Audit Program	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%
Non-Residential Window Film Program	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%
Non-Residential Heating & Cooling Efficiency Program	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%
Non-Residential Lighting Systems & Controls Program	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%
Residential Income and Age Qualifying Home Improvement Program	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%
Qualifying Small Business Improvement Program	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%
Residential LED Lighting - NC Only	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Non-Residential Prescriptive Program	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%

**Dominion Energy North Carolina**  
**Docket No. E-22, Sub 545**  
**Projected Revenue Requirement for DSM/EE Rider C**  
**For the Rate Period January 1, 2018 - December 31, 2018**

line no.	<u>Projection</u> <u>Jan-18</u>	<u>Projection</u> <u>Feb-18</u>	<u>Projection</u> <u>Mar-18</u>	<u>Projection</u> <u>Apr-18</u>	<u>Projection</u> <u>May-18</u>	<u>Projection</u> <u>Jun-18</u>	<u>Projection</u> <u>Jul-18</u>	<u>Projection</u> <u>Aug-18</u>	<u>Projection</u> <u>Sep-18</u>	<u>Projection</u> <u>Oct-18</u>	<u>Projection</u> <u>Nov-18</u>	<u>Projection</u> <u>Dec-18</u>	<u>Rate Period</u> <u>Total</u>
<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>													
Air Conditioner Cycling Program	\$ 5,925	\$ 5,950	\$ 5,974	\$ 5,999	\$ 6,024	\$ 6,049	\$ 6,073	\$ 6,098	\$ 6,123	\$ 6,147	\$ 6,172	\$ 6,197	\$ 72,731
<b>7 Projected NC Jurisdiction Property Taxes</b>													
Air Conditioner Cycling Program	\$ 819	\$ 819	\$ 819	\$ 819	\$ 819	\$ 819	\$ 819	\$ 819	\$ 819	\$ 819	\$ 819	\$ 819	\$ 9,831
<b>8 Projected NC Jurisdiction Rate Base Costs (Page 4, Line 21)</b>													
Air Conditioner Cycling Program	\$ 4,677	\$ 4,667	\$ 4,657	\$ 4,645	\$ 4,632	\$ 4,619	\$ 4,606	\$ 4,592	\$ 4,576	\$ 4,560	\$ 4,542	\$ 4,525	\$ 55,298
<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	\$ 710	\$ 710	\$ 710	\$ 710	\$ 710	\$ 710	\$ 710	\$ 710	\$ 710	\$ 710	\$ 710	\$ 710	\$ 8,520
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	\$ 8,288	\$ 8,288	\$ 8,288	\$ 8,288	\$ 8,288	\$ 8,288	\$ 8,288	\$ 8,288	\$ 8,288	\$ 8,288	\$ 8,288	\$ 8,288	\$ 99,455
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	\$ 9,761
Non-Residential Heating & Cooling Efficiency Program	\$ 2,770	\$ 2,770	\$ 2,770	\$ 2,770	\$ 2,770	\$ 2,770	\$ 2,770	\$ 2,770	\$ 2,770	\$ 2,770	\$ 2,770	\$ 2,770	\$ 33,235
Non-Residential Lighting Systems & Controls Program	\$ 4,375	\$ 4,375	\$ 4,375	\$ 4,375	\$ 4,375	\$ 4,375	\$ 4,375	\$ 4,375	\$ 4,375	\$ 4,375	\$ 4,375	\$ 4,375	\$ 52,499
Residential Income and Age Qualifying Home Improvement Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Qualifying Small Business Improvement Program	\$ 627	\$ 627	\$ 627	\$ 627	\$ 627	\$ 627	\$ 627	\$ 627	\$ 627	\$ 627	\$ 627	\$ 627	\$ 7,522
Residential LED Lighting - NC Only	\$ 932	\$ 932	\$ 932	\$ 932	\$ 932	\$ 932	\$ 932	\$ 932	\$ 932	\$ 932	\$ 932	\$ 932	\$ 11,181
Non-Residential Prescriptive Program	\$ 319	\$ 319	\$ 319	\$ 319	\$ 319	\$ 319	\$ 319	\$ 319	\$ 319	\$ 319	\$ 319	\$ 319	\$ 3,828
<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													
	\$ 279,890	\$ 279,904	\$ 279,919	\$ 279,932	\$ 331,259	\$ 328,088	\$ 328,100	\$ 328,111	\$ 276,805	\$ 276,813	\$ 276,820	\$ 276,828	\$ 3,542,469

Aug 15 2017

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**Dominion Energy North Carolina**  
**Docket No. E-22, Sub 545**  
**Revenue Requirement for DSM/EE Rider C**  
**Projected Rate Base Cost For the Period July 1, 2017 - December 31, 2018**

line no.	<u>Actual</u> <u>Jun-17</u>	<u>Projection</u> <u>Jul-17</u>	<u>Projection</u> <u>Aug-17</u>	<u>Projection</u> <u>Sep-17</u>	<u>Projection</u> <u>Oct-17</u>	<u>Projection</u> <u>Nov-17</u>	<u>Projection</u> <u>Dec-17</u>	<u>Projection</u> <u>Jan-18</u>	<u>Projection</u> <u>Feb-18</u>	<u>Projection</u> <u>Mar-18</u>	<u>Projection</u> <u>Apr-18</u>	<u>Projection</u> <u>May-18</u>	<u>Projection</u> <u>Jun-18</u>	<u>Projection</u> <u>Jul-18</u>	<u>Projection</u> <u>Aug-18</u>	<u>Projection</u> <u>Sep-18</u>	<u>Projection</u> <u>Oct-18</u>	<u>Projection</u> <u>Nov-18</u>	<u>Projection</u> <u>Dec-18</u>
1 <b>System Level Actual Plant In Service</b> Air Conditioner Cycling Program	\$ 19,376,119	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2 <b>Projected Capital Expenditures (Turner Testimony)</b> Air Conditioner Cycling Program	\$ -	\$ 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 <b>Cumulative Gross Plant (Line 1 + Line 2)</b> Air Conditioner Cycling Program	\$ 19,376,119	\$ 19,459,452	\$ 19,542,786	\$ 19,626,119	\$ 19,709,452	\$ 19,792,786	\$ 19,876,119	\$ 19,959,452	\$ 20,042,786	\$ 20,126,119	\$ 20,209,452	\$ 20,292,786	\$ 20,376,119	\$ 20,459,452	\$ 20,542,786	\$ 20,626,119	\$ 20,709,452	\$ 20,792,786	\$ 20,876,119
4 <b>Monthly Depreciation Percentages</b> 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%
5 <b>Projected System Monthly Depreciation Expense (Line 3 * Line 4)</b> Air Conditioner Cycling Program		\$ 115,946	\$ 116,442	\$ 116,939	\$ 117,435	\$ 117,932	\$ 118,429	\$ 118,925	\$ 119,422	\$ 119,918	\$ 120,415	\$ 120,911	\$ 121,408	\$ 121,904	\$ 122,401	\$ 122,897	\$ 123,394	\$ 123,890	\$ 124,387
6 <b>Actual/Projected System Level of Accumulated Depreciation</b> Air Conditioner Cycling Program	\$ 5,802,768	\$ 5,918,714	\$ 6,035,156	\$ 6,152,095	\$ 6,269,531	\$ 6,387,463	\$ 6,505,891	\$ 6,624,816	\$ 6,744,238	\$ 6,864,156	\$ 6,984,571	\$ 7,105,482	\$ 7,226,890	\$ 7,348,794	\$ 7,471,195	\$ 7,594,092	\$ 7,717,486	\$ 7,841,376	\$ 7,965,763
7 <b>Actual/Projected Cumulative Net Plant (Line 3 - Line 6)</b> Air Conditioner Cycling Program	\$ 13,573,351	\$ 13,540,738	\$ 13,507,629	\$ 13,474,024	\$ 13,439,922	\$ 13,405,323	\$ 13,370,228	\$ 13,334,636	\$ 13,298,548	\$ 13,261,963	\$ 13,224,882	\$ 13,187,304	\$ 13,149,229	\$ 13,110,658	\$ 13,071,591	\$ 13,032,027	\$ 12,991,967	\$ 12,951,410	\$ 12,910,356
8 <b>Actual/Projected Accumulated Deferred Income Tax</b> Air Conditioner Cycling Program	\$ (3,027,943)	\$ (3,010,261)	\$ (2,992,578)	\$ (2,974,895)	\$ (2,957,212)	\$ (2,939,529)	\$ (2,921,848)	\$ (2,907,602)	\$ (2,894,494)	\$ (2,882,645)	\$ (2,872,014)	\$ (2,862,641)	\$ (2,854,488)	\$ (2,847,594)	\$ (2,841,959)	\$ (2,837,541)	\$ (2,834,383)	\$ (2,832,443)	\$ (2,831,762)
9 <b>Monthly Actual/Projected Rate Base (Line 7 + Line 8):</b> Air Conditioner Cycling Program	\$ 10,545,408	\$ 10,530,478	\$ 10,515,052	\$ 10,499,129	\$ 10,482,710	\$ 10,465,794	\$ 10,448,380	\$ 10,427,034	\$ 10,404,054	\$ 10,379,318	\$ 10,352,868	\$ 10,324,663	\$ 10,294,741	\$ 10,263,064	\$ 10,229,632	\$ 10,194,486	\$ 10,157,584	\$ 10,118,967	\$ 10,078,594
10 <b>Jurisdictional Allocation Factors</b> Air Conditioner Cycling Program	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%
11 <b>North Carolina Actual/Projected Rate Base (Line 9 x Line 10)</b> Air Conditioner Cycling Program	\$ 525,372	\$ 524,628	\$ 523,860	\$ 523,067	\$ 522,249	\$ 521,406	\$ 520,538	\$ 519,475	\$ 518,330	\$ 517,098	\$ 515,780	\$ 514,375	\$ 512,884	\$ 511,306	\$ 509,640	\$ 507,889	\$ 506,051	\$ 504,127	\$ 502,116
12 <b>Rate Base (2 month average)</b>	\$ 520,007	\$ 518,902	\$ 517,714	\$ 516,439	\$ 515,077	\$ 513,629	\$ 512,095	\$ 510,473	\$ 508,765	\$ 506,970	\$ 505,089	\$ 503,121							
13 Cost of Capital	0.6209%	0.6209%	0.6209%	0.6209%	0.6209%	0.6209%	0.6209%	0.6209%	0.6209%	0.6209%	0.6209%	0.6209%	0.6209%	0.6209%	0.6209%	0.6209%	0.6209%	0.6209%	0.6209%
14 <b>Net Operating Income</b>	\$ 3,229	\$ 3,222	\$ 3,215	\$ 3,207	\$ 3,198	\$ 3,189	\$ 3,180	\$ 3,170	\$ 3,159	\$ 3,148	\$ 3,136	\$ 3,124							
15 Less Interest Expense LTD																			
16 Weighted Cost of Debt	0.1818%	0.1818%	0.1818%	0.1818%	0.1818%	0.1818%	0.1818%	0.1818%	0.1818%	0.1818%	0.1818%	0.1818%	0.1818%	0.1818%	0.1818%	0.1818%	0.1818%	0.1818%	0.1818%
16 <b>Rate Base</b>	\$ 520,007	\$ 518,902	\$ 517,714	\$ 516,439	\$ 515,077	\$ 513,629	\$ 512,095	\$ 510,473	\$ 508,765	\$ 506,970	\$ 505,089	\$ 503,121							
17 <b>Revenue Requirement - Interest Expense on Debt</b>	\$ 945	\$ 943	\$ 941	\$ 939	\$ 936	\$ 934	\$ 931	\$ 928	\$ 925	\$ 922	\$ 918	\$ 915							
18 <b>Net Income Related to Common Equity</b>	\$ 2,284	\$ 2,279	\$ 2,274	\$ 2,268	\$ 2,262	\$ 2,255	\$ 2,249	\$ 2,242	\$ 2,234	\$ 2,226	\$ 2,218	\$ 2,209							
19 <b>North Carolina Jurisdictional Income Tax Gross-up Factor</b>	61.20%	61.20%	61.20%	61.20%	61.20%	61.20%	61.20%	61.20%	61.20%	61.20%	61.20%	61.20%							
20 <b>Revenue Requirement - Common Equity Including Income Taxes</b>	\$ 3,732	\$ 3,724	\$ 3,716	\$ 3,706	\$ 3,696	\$ 3,685	\$ 3,675	\$ 3,664	\$ 3,651	\$ 3,638	\$ 3,624	\$ 3,610							
21 <b>Revenue Requirement on Rate Base (Line 17 + Line 20)</b>	\$ 4,677	\$ 4,667	\$ 4,657	\$ 4,645	\$ 4,632	\$ 4,619	\$ 4,606	\$ 4,592	\$ 4,576	\$ 4,560	\$ 4,542	\$ 4,525							

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***For Collection During the Rate Period January 1, 2018 - December 31, 2018***

**Cost of Capital and Capital Structure (000s)**

**As of June 30, 2017**

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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	\$10,278,981	46.775%	4.664%	2.182%
2	Total Preferred Stock	\$0	0.000%	0.000%	0.000%
3	Common Equity	\$11,696,475	53.225%	9.900%	5.269%
4	Total	<u>\$21,975,456</u>	<u>100.000%</u>		<u>7.451%</u>

**Dominion Energy North Carolina**  
**Docket No. E-22, Sub 545**  
**Projected Revenue Requirement For DSM/EE Rider C**  
**For the Rate Period January 1, 2018 - December 31, 2018**

**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		\$1,459,872	\$1,109,951	\$171,017	
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	\$57,277	
Residential Duct Testing & Sealing Program		\$0	\$0	\$0	
Residential Home Energy Check-Up Program		\$0	\$0	\$3,223	
Non-Residential Duct Testing & Sealing Program		\$0	\$0	\$1,648,960	
Non-Residential Energy Audit Program		\$0	\$0	\$104,764	
Non-Residential Window Film Program		\$0	\$0	\$161,844	
Non-Residential Heating & Cooling Efficiency Program		\$0	\$0	\$551,040	
Non-Residential Lighting Systems & Controls Program		\$0	\$0	\$870,435	
Residential Income and Age Qualifying Home Improvement Program		\$0	\$0	\$0	
Qualifying Small Business Improvement Program		\$0	\$0	\$124,712	
Residential LED Lighting - NC Only		\$0	\$0	\$11,181	
Non-Residential Prescriptive Program		\$0	\$0	\$63,462	
Common Costs	\$1,634,563				\$1,634,563

**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		\$72,731	\$55,298	\$8,520	
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	\$99,455	
Non-Residential Energy Audit Program		\$0	\$0	\$6,319	
Non-Residential Window Film Program		\$0	\$0	\$9,761	
Non-Residential Heating & Cooling Efficiency Program		\$0	\$0	\$33,235	
Non-Residential Lighting Systems & Controls Program		\$0	\$0	\$52,499	
Residential Income and Age Qualifying Home Improvement Program		\$0	\$0	\$0	
Qualifying Small Business Improvement Program		\$0	\$0	\$7,522	
Residential LED Lighting - NC Only		\$0	\$0	\$11,181	
Non-Residential Prescriptive Program		\$0	\$0	\$3,828	

(1) O&amp;M Includes AC Cycling Property Taxes

**Dominion Energy North Carolina**  
**Docket No. E-22, Sub 545**  
**DSM/EE Experience Modification Factor (Rider CE) for the Test Period January 1, 2016 through December 31, 2016**  
**For (Refund)/Recovery in the Rate Period January 1, 2018 - December 31, 2018**

line no.	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Rider CE Total
1 Monthly Revenue Requirement (Page 3; Line 12)	\$ 205,536	\$ 193,518	\$ 245,131	\$ 229,985	\$ 251,205	\$ 415,453	\$ 376,624	\$ 538,431	\$ 365,601	\$ 284,688	\$ 314,728	\$ 44,372	\$ 3,465,272
2 Less: Portion Related to Utility Incentives (Page 3, Lines 9 & 10)	\$ (60,332)	\$ (59,451)	\$ (64,873)	\$ (65,526)	\$ (66,668)	\$ (72,576)	\$ (73,823)	\$ (78,907)	\$ (78,329)	\$ (75,956)	\$ (35,711)	\$ (38,939)	\$ (771,092)
3 Monthly Revenue Requirement Net of Incentives (Line 1 + Line 2)	\$ 145,204	\$ 134,067	\$ 180,258	\$ 164,459	\$ 184,537	\$ 342,877	\$ 302,801	\$ 459,524	\$ 287,272	\$ 208,732	\$ 279,017	\$ 5,434	\$ 2,694,181
4 Monthly Rider C Revenues	\$ 324,988	\$ 263,512	\$ 211,157	\$ 213,355	\$ 216,887	\$ 247,423	\$ 382,106	\$ 316,370	\$ 276,244	\$ 232,575	\$ 265,452	\$ 272,445	\$ 3,222,514
5 Less: Portion Related to Utility Incentives (Rev Req in Previous Rider C Filings)	\$ (15,167)	\$ (12,298)	\$ (9,854)	\$ (9,957)	\$ (10,122)	\$ (11,547)	\$ (17,832)	\$ (14,765)	\$ (12,892)	\$ (10,854)	\$ (12,388)	\$ (12,715)	\$ (150,390)
6 Monthly Rider C Revenues Net of Incentives (Line 4 + Line 5)	\$ 309,821	\$ 251,214	\$ 201,302	\$ 203,398	\$ 206,766	\$ 235,876	\$ 364,274	\$ 301,606	\$ 263,352	\$ 221,721	\$ 253,063	\$ 259,730	\$ 3,072,124
7 Monthly (Over)/Under Recovery Before Carrying Costs (Line 1 - Line 4)	\$ (119,451)	\$ (69,994)	\$ 33,974	\$ 16,630	\$ 34,317	\$ 168,030	\$ (5,482)	\$ 222,061	\$ 89,357	\$ 52,113	\$ 49,276	\$ (228,073)	\$ 242,758
8 Monthly (Over)/Under Recovery Excluding Utility Incentives (Line 3 - Line 6)	\$ (164,617)	\$ (117,148)	\$ (21,045)	\$ (38,939)	\$ (22,229)	\$ 107,001	\$ (61,473)	\$ 157,918	\$ 23,920	\$ (12,989)	\$ 25,954	\$ (254,297)	\$ (377,943)
9 Deferred Income Tax	\$ (63,880)	\$ (45,459)	\$ (8,166)	\$ (15,110)	\$ (8,626)	\$ 41,522	\$ (23,854)	\$ 61,280	\$ 9,282	\$ (5,040)	\$ 10,071	\$ (98,680)	\$ (146,661)
10 Net Monthly (Over)/Under Recovery Net of ADIT and Incentives (Line 8 - Line 9)	\$ (100,737)	\$ (71,689)	\$ (12,878)	\$ (23,829)	\$ (13,603)	\$ 65,479	\$ (37,618)	\$ 96,638	\$ 14,638	\$ (7,949)	\$ 15,882	\$ (155,617)	\$ (231,283)
11 Cumulative Net Monthly (Over)/Under Recovery (Net of Incentives)	\$ (100,737)	\$ (172,426)	\$ (185,304)	\$ (209,133)	\$ (222,736)	\$ (157,257)	\$ (194,875)	\$ (98,237)	\$ (83,599)	\$ (91,548)	\$ (75,666)	\$ (231,283)	
12 Two Month Average Cumulative Net (Over)/Under Recovery (Net of Incentives)	\$ (50,369)	\$ (136,582)	\$ (178,865)	\$ (197,219)	\$ (215,935)	\$ (189,997)	\$ (176,066)	\$ (146,556)	\$ (90,918)	\$ (87,574)	\$ (83,607)	\$ (153,474)	
13 Carrying Cost on Cumulative (Over)/Under Recovery [1]	\$ (469)	\$ (1,271)	\$ (1,664)	\$ (1,835)	\$ (2,009)	\$ (1,768)	\$ (1,638)	\$ (1,363)	\$ (846)	\$ (815)	\$ (740)	\$ (1,358)	\$ (15,776)
14 DSM EE/EMF to be (refunded)/collected during the Rate Period (Line 7 + Line 13)	\$ (119,920)	\$ (71,265)	\$ 32,310	\$ 14,795	\$ 32,308	\$ 166,262	\$ (7,120)	\$ 220,698	\$ 88,511	\$ 51,298	\$ 48,536	\$ (229,431)	\$ 226,982
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)													\$ (24,552)
Total DSM EE EMF Rider CE Revenue Requirement to be (Refunded)/Collected over the January 1, 2018 - December 31, 2018 Rate Year													\$ 202,430

[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.

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**Dominion Energy North Carolina**  
**Docket No. E-22, Sub 545**  
**Actual Revenue Requirement for DSM/EE EMF Rider CE**  
**For the Test Period January 1, 2016 - December 31, 2016**

line no.	<u>Actual</u> <u>Jan-16</u>	<u>Actual</u> <u>Feb-16</u>	<u>Actual</u> <u>Mar-16</u>	<u>Actual</u> <u>Apr-16</u>	<u>Actual</u> <u>May-16</u>	<u>Actual</u> <u>Jun-16</u>	<u>Actual</u> <u>Jul-16</u>	<u>Actual</u> <u>Aug-16</u>	<u>Actual</u> <u>Sep-16</u>	<u>Actual</u> <u>Oct-16</u>	<u>Actual</u> <u>Nov-16</u>	<u>Actual</u> <u>Dec-16</u>	<u>Total</u> <u>Test Period</u>
<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													
<b>2 Allocate System Common Costs to Programs</b>													
Air Conditioner Cycling Program	\$ 24,726	\$ 23,058	\$ 16,044	\$ 17,737	\$ 18,600	\$ 13,640	\$ 18,835	\$ 23,382	\$ 25,662	\$ 20,509	\$ 18,770	\$ 4,491	\$ 225,455
Residential Lighting Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Residential Low Income Program (NC Only)	\$ 36	\$ 33	\$ 23	\$ 26	\$ 27	\$ 20	\$ 27	\$ 34	\$ 37	\$ 29	\$ 27	\$ 6	\$ 324
Commercial HVAC Upgrade Program (NC Trailing EMV Costs Only)	\$ 3	\$ 3	\$ 2	\$ 2	\$ 2	\$ 2	\$ 2	\$ 3	\$ 3	\$ 2	\$ 2	\$ 0	\$ 25
Commercial Lighting Program (NC Trailing EMV Costs Only)	\$ 4	\$ 4	\$ 3	\$ 3	\$ 3	\$ 2	\$ 3	\$ 4	\$ 4	\$ 3	\$ 3	\$ 1	\$ 38
Residential Heat Pump Tune-up Program	\$ 11,721	\$ 10,931	\$ 7,606	\$ 8,409	\$ 8,817	\$ 6,466	\$ 8,929	\$ 11,084	\$ 12,165	\$ 9,722	\$ 8,898	\$ 2,129	\$ 106,878
Residential Heat Pump Upgrade Program	\$ 9,249	\$ 8,625	\$ 6,001	\$ 6,635	\$ 6,958	\$ 5,102	\$ 7,046	\$ 8,746	\$ 9,599	\$ 7,671	\$ 7,021	\$ 1,680	\$ 84,334
Residential Duct Testing & Sealing Program	\$ 2,719	\$ 2,535	\$ 1,764	\$ 1,950	\$ 2,045	\$ 1,500	\$ 2,071	\$ 2,571	\$ 2,822	\$ 2,255	\$ 2,064	\$ 494	\$ 24,790
Residential Home Energy Check-up Program	\$ 16,259	\$ 15,162	\$ 10,550	\$ 11,663	\$ 12,231	\$ 8,969	\$ 12,385	\$ 15,375	\$ 16,874	\$ 13,485	\$ 12,342	\$ 2,953	\$ 148,248
Non-Residential Duct Testing & Sealing Program	\$ 19,951	\$ 18,606	\$ 12,946	\$ 14,312	\$ 15,008	\$ 11,006	\$ 15,198	\$ 18,867	\$ 20,706	\$ 16,548	\$ 15,145	\$ 3,624	\$ 181,919
Non-Residential Energy Audit Program	\$ 8,291	\$ 7,732	\$ 5,380	\$ 5,948	\$ 6,237	\$ 4,574	\$ 6,316	\$ 7,840	\$ 8,605	\$ 6,877	\$ 6,294	\$ 1,506	\$ 75,599
Non-Residential Lighting Systems and Controls	\$ 24,356	\$ 22,713	\$ 15,804	\$ 17,472	\$ 18,322	\$ 13,436	\$ 18,553	\$ 23,032	\$ 25,278	\$ 20,202	\$ 18,489	\$ 4,424	\$ 222,080
Non-Residential Heating & Cooling Efficiency	\$ 4,541	\$ 4,234	\$ 2,946	\$ 3,257	\$ 3,416	\$ 2,505	\$ 3,459	\$ 4,294	\$ 4,712	\$ 3,766	\$ 3,447	\$ 825	\$ 41,402
Non-Residential Window Film	\$ 1,476	\$ 1,377	\$ 958	\$ 1,059	\$ 1,110	\$ 814	\$ 1,125	\$ 1,396	\$ 1,532	\$ 1,224	\$ 1,121	\$ 268	\$ 13,461
Residential Income & Age Qualifying Home Improvement Program	\$ 21,367	\$ 19,925	\$ 13,864	\$ 15,328	\$ 16,073	\$ 11,787	\$ 16,276	\$ 20,205	\$ 22,175	\$ 17,722	\$ 16,220	\$ 3,881	\$ 194,824
<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													
<b>4 Jurisdictional Assignment Factors</b>													
Air Conditioner Cycling Program	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%
Residential Lighting Program	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%
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	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%
Residential Heat Pump Upgrade Program	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%
Residential Duct Testing & Sealing Program	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%
Residential Home Energy Check-up Program	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%
Non-Residential Duct Testing & Sealing Program	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%
Non-Residential Energy Audit Program	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%
Non-Residential Lighting Systems and Controls	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%
Non-Residential Heating & Cooling Efficiency	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%
Non-Residential Window Film	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%
Residential Income & Age Qualifying Home Improvement Program	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%	6.0314%

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**Dominion Energy North Carolina**  
**Docket No. E-22, Sub 545**  
**Actual Revenue Requirement for DSM/EE EMF Rider CE**  
**For the Test Period January 1, 2016 - December 31, 2016**

line no.	Actual Jan-16	Actual Feb-16	Actual Mar-16	Actual Apr-16	Actual May-16	Actual Jun-16	Actual Jul-16	Actual Aug-16	Actual Sep-16	Actual Oct-16	Actual Nov-16	Actual Dec-16	Total Test Period
<b>5 NC Jurisdiction Operating Expenses (Line 3 * Line 4)</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													
<b>6 NC Jurisdiction Property Taxes</b>													
Air Conditioner Cycling Program	\$ 700	\$ 700	\$ 700	\$ 700	\$ 700	\$ 700	\$ 700	\$ 700	\$ 700	\$ 700	\$ 700	\$ 700	\$ 8,400
<b>7 NC Jurisdiction Depreciation Expense (Page 4, Line 2 * Line 7)</b>													
Air Conditioner Cycling Program	\$ 5,171	\$ 5,331	\$ 5,401	\$ 5,381	\$ 4,561	\$ 5,275	\$ 5,281	\$ 5,282	\$ 5,287	\$ 5,298	\$ 5,304	\$ (5,343)	\$ 52,229
<b>8 NC Jurisdiction Rate Base Costs (Page 4, Line 18)</b>													
Air Conditioner Cycling Program	\$ 5,344	\$ 5,446	\$ 5,614	\$ 5,616	\$ 5,458	\$ 5,329	\$ 5,306	\$ 5,271	\$ 5,235	\$ 5,208	\$ 5,059	\$ 5,024	\$ 63,911
<b>9 NC Jurisdiction Net Lost Revenues (Page 5, Line 6)</b>													
Residential Lighting Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Residential Low Income Program (NC Only)	\$ 2,319	\$ 2,279	\$ 2,234	\$ 2,229	\$ 2,215	\$ 2,657	\$ 2,647	\$ 2,567	\$ 2,528	\$ 2,058	\$ -	\$ -	\$ 23,732
Commercial HVAC Upgrade Program (NC Trailing EMV Costs Only)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Commercial Lighting Program (NC Trailing EMV Costs Only)	\$ 5,411	\$ 4,430	\$ 4,486	\$ 4,306	\$ 4,469	\$ 4,384	\$ 4,470	\$ 4,964	\$ 4,606	\$ 4,022	\$ -	\$ -	\$ 45,547
Residential Heat Pump Tune-up Program	\$ 4,814	\$ 5,005	\$ 5,148	\$ 5,337	\$ 5,447	\$ 6,789	\$ 6,917	\$ 7,082	\$ 7,172	\$ 6,048	\$ 559	\$ 649	\$ 60,965
Residential Heat Pump Upgrade Program	\$ 885	\$ 965	\$ 999	\$ 1,038	\$ 1,074	\$ 1,399	\$ 1,452	\$ 1,555	\$ 1,596	\$ 1,380	\$ 324	\$ 335	\$ 13,003
Residential Duct Testing & Sealing Program	\$ 420	\$ 451	\$ 543	\$ 602	\$ 633	\$ 785	\$ 804	\$ 817	\$ 820	\$ 686	\$ 38	\$ 38	\$ 6,637
Residential Home Energy Check-up Program	\$ 3,943	\$ 3,948	\$ 3,951	\$ 3,957	\$ 3,953	\$ 4,736	\$ 4,714	\$ 4,712	\$ 4,726	\$ 3,945	\$ -	\$ -	\$ 42,586
Non-Residential Duct Testing & Sealing Program	\$ 13,343	\$ 13,372	\$ 13,803	\$ 13,560	\$ 13,713	\$ 14,190	\$ 14,936	\$ 15,582	\$ 15,721	\$ 14,901	\$ 2,885	\$ 2,781	\$ 148,785
Non-Residential Energy Audit Program	\$ 3,548	\$ 3,598	\$ 3,708	\$ 3,544	\$ 3,567	\$ 3,591	\$ 3,575	\$ 3,546	\$ 3,567	\$ 4,172	\$ 893	\$ 1,557	\$ 38,865
Non-Residential Lighting Systems and Controls	\$ 2,831	\$ 2,582	\$ 7,168	\$ 8,104	\$ 8,525	\$ 10,031	\$ 10,264	\$ 14,004	\$ 13,455	\$ 14,793	\$ 8,085	\$ 10,503	\$ 110,345
Non-Residential Heating & Cooling Efficiency	\$ 307	\$ 309	\$ 321	\$ 338	\$ 559	\$ 1,503	\$ 1,471	\$ 1,469	\$ 1,498	\$ 1,267	\$ 37	\$ 37	\$ 9,116
Non-Residential Window Film	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Residential Income & Age Qualifying Home Improvement Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 59	\$ 97	\$ 130	\$ 172	\$ 377	\$ 527	\$ 1,362
<b>10 NC Jurisdiction Program Performance Incentive (PPI)</b>													
Air Conditioner Cycling Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Residential Lighting Program	\$ 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
Residential Low Income Program (NC Only)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Commercial HVAC Upgrade Program (NC Trailing EMV Costs Only)	\$ 435	\$ 435	\$ 435	\$ 435	\$ 435	\$ 435	\$ 435	\$ 435	\$ 435	\$ 435	\$ 435	\$ 435	\$ 5,215
Commercial Lighting Program (NC Trailing EMV Costs Only)	\$ 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	\$ 8,288	\$ 8,288	\$ 8,288	\$ 8,288	\$ 8,288	\$ 8,288	\$ 8,288	\$ 8,288	\$ 8,288	\$ 8,288	\$ 8,288	\$ 8,288	\$ 99,455
Non-Residential Energy Audit Program	\$ 527	\$ 527	\$ 527	\$ 527	\$ 527	\$ 527	\$ 527	\$ 527	\$ 527	\$ 527	\$ 527	\$ 527	\$ 6,319
Non-Residential Lighting Systems and Controls	\$ 3,764	\$ 3,764	\$ 3,764	\$ 3,764	\$ 3,764	\$ 3,764	\$ 3,764	\$ 3,764	\$ 3,764	\$ 3,764	\$ 3,764	\$ 3,764	\$ 45,172
Non-Residential Heating & Cooling Efficiency	\$ 2,567	\$ 2,567	\$ 2,567	\$ 2,567	\$ 2,567	\$ 2,567	\$ 2,567	\$ 2,567	\$ 2,567	\$ 2,567	\$ 2,567	\$ 2,567	\$ 30,798
Non-Residential Window Film	\$ 594	\$ 594	\$ 594	\$ 594	\$ 594	\$ 594	\$ 594	\$ 594	\$ 594	\$ 594	\$ 594	\$ 594	\$ 7,124
Residential Income & Age Qualifying Home Improvement Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>11 Revenue Requirement (Sum Lines 5 through 10)</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													
<b>12 Total Revenue Requirement All Programs</b>	\$ 205,536	\$ 193,518	\$ 245,131	\$ 229,985	\$ 251,205	\$ 415,453	\$ 376,624	\$ 538,431	\$ 365,601	\$ 284,688	\$ 314,728	\$ 44,372	\$ 3,465,272

Aug 15 2017

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**Dominion Energy North Carolina**  
**Docket No. E-22, Sub 545**  
**Rate Base Costs For the Test Period January 1, 2016 - December 31, 2016**

line no.	<u>Actual</u> <u>Dec-15</u>	<u>Actual</u> <u>Jan-16</u>	<u>Actual</u> <u>Feb-16</u>	<u>Actual</u> <u>Mar-16</u>	<u>Actual</u> <u>Apr-16</u>	<u>Actual</u> <u>May-16</u>	<u>Actual</u> <u>Jun-16</u>	<u>Actual</u> <u>Jul-16</u>	<u>Actual</u> <u>Aug-16</u>	<u>Actual</u> <u>Sep-16</u>	<u>Actual</u> <u>Oct-16</u>	<u>Actual</u> <u>Nov-16</u>	<u>Actual</u> <u>Dec-16</u>
1 System Level Plant In Service Air Conditioner Cycling Program	\$ 18,982,740	\$ 19,075,679	\$ 19,662,460	\$ 19,923,868	\$ 19,849,858	\$ 19,403,068	\$ 19,456,755	\$ 19,478,784	\$ 19,484,036	\$ 19,500,190	\$ 19,543,766	\$ 19,563,477	\$ 19,352,669
2 System Depreciation Expense Air Conditioner Cycling Program	\$ 103,297	\$ 103,803	\$ 106,997	\$ 108,420	\$ 108,016	\$ 91,542	\$ 105,877	\$ 105,997	\$ 106,025	\$ 106,114	\$ 106,350	\$ 106,458	\$ (107,253)
3 System Accumulated Depreciation Air Conditioner Cycling Program	\$ 4,062,260	\$ 4,166,063	\$ 4,273,060	\$ 4,381,479	\$ 4,489,496	\$ 4,581,038	\$ 4,686,915	\$ 4,792,912	\$ 4,898,937	\$ 5,005,051	\$ 5,111,401	\$ 5,217,859	\$ 5,110,606
4 Cumulative System Net Plant (Line 1 - Line 3) Air Conditioner Cycling Program	\$ 14,920,480	\$ 14,909,616	\$ 15,389,400	\$ 15,542,389	\$ 15,360,362	\$ 14,822,030	\$ 14,769,840	\$ 14,685,872	\$ 14,585,099	\$ 14,495,139	\$ 14,432,365	\$ 14,345,618	\$ 14,242,063
5 System Accumulated Deferred Income Tax Air Conditioner Cycling Program	\$ (3,281,667)	\$ (3,386,799)	\$ (3,308,121)	\$ (3,290,715)	\$ (3,273,308)	\$ (3,255,902)	\$ (3,238,495)	\$ (3,221,088)	\$ (3,203,681)	\$ (3,186,274)	\$ (3,168,868)	\$ (3,151,460)	\$ (3,134,041)
6 Monthly Rate Base System (Line 4 + Line 5): Air Conditioner Cycling Program	\$ 11,638,813	\$ 11,522,817	\$ 12,081,279	\$ 12,251,674	\$ 12,087,054	\$ 11,566,128	\$ 11,531,345	\$ 11,464,784	\$ 11,381,418	\$ 11,308,865	\$ 11,263,497	\$ 11,194,158	\$ 11,108,022
7 Jurisdictional Allocation Factor Air Conditioner Cycling Program	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%	4.9820%
8 North Carolina Rate Base (Line 6 x Line 7) Air Conditioner Cycling Program	\$ 579,846	\$ 574,067	\$ 601,889	\$ 610,378	\$ 602,177	\$ 576,224	\$ 574,492	\$ 571,176	\$ 567,022	\$ 563,408	\$ 561,147	\$ 557,693	\$ 553,402
9 North Carolina Rate Base (2 month average)		\$ 576,956	\$ 587,978	\$ 606,134	\$ 606,278	\$ 589,201	\$ 575,358	\$ 572,834	\$ 569,099	\$ 565,215	\$ 562,278	\$ 559,420	\$ 555,547
10 Cost of Capital (Page 9, Line 4/12)		0.6363%	0.6363%	0.6363%	0.6363%	0.6363%	0.6363%	0.6363%	0.6363%	0.6363%	0.6363%	0.6228%	0.6228%
11 Net Operating Income (Line 9 * Line 10)		\$ 3,671	\$ 3,741	\$ 3,857	\$ 3,858	\$ 3,749	\$ 3,661	\$ 3,645	\$ 3,621	\$ 3,596	\$ 3,578	\$ 3,484	\$ 3,460
Less Interest Expense LTD													
12 Weighted Cost of Debt (Page 9, Line 1/12)		0.1790%	0.1790%	0.1790%	0.1790%	0.1790%	0.1790%	0.1790%	0.1790%	0.1790%	0.1790%	0.1790%	0.1790%
13 Rate Base (2 Month Average = Line 9)		\$ 576,956	\$ 587,978	\$ 606,134	\$ 606,278	\$ 589,201	\$ 575,358	\$ 572,834	\$ 569,099	\$ 565,215	\$ 562,278	\$ 559,420	\$ 555,547
14 Revenue Requirement - Interest Expense on Debt		\$ 1,033	\$ 1,052	\$ 1,085	\$ 1,085	\$ 1,055	\$ 1,030	\$ 1,025	\$ 1,019	\$ 1,012	\$ 1,006	\$ 1,001	\$ 994
15 Net Income Related to Common Equity (Line 11 - Line 14)		\$ 2,638	\$ 2,689	\$ 2,772	\$ 2,772	\$ 2,694	\$ 2,631	\$ 2,620	\$ 2,602	\$ 2,585	\$ 2,571	\$ 2,483	\$ 2,466
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%
17 Revenue Requirement - Common Equity Including Income Taxes		\$ 4,311	\$ 4,394	\$ 4,529	\$ 4,531	\$ 4,403	\$ 4,299	\$ 4,281	\$ 4,253	\$ 4,224	\$ 4,202	\$ 4,057	\$ 4,029
18 Revenue Requirement on Rate Base (Line 14 + Line 17)		\$ 5,344	\$ 5,446	\$ 5,614	\$ 5,616	\$ 5,458	\$ 5,329	\$ 5,306	\$ 5,271	\$ 5,235	\$ 5,208	\$ 5,059	\$ 5,024

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**Dominion Energy North Carolina**  
**Docket No. E-22, Sub 545**  
**Actual Net Lost Revenues**  
**For the Test Period January 1, 2016 - December 31, 2016**

line no.	<u>Actual</u> <u>Jan-16</u>	<u>Actual</u> <u>Feb-16</u>	<u>Actual</u> <u>Mar-16</u>	<u>Actual</u> <u>Apr-16</u>	<u>Actual</u> <u>May-16</u>	<u>Actual</u> <u>Jun-16</u>	<u>Actual</u> <u>Jul-16</u>	<u>Actual</u> <u>Aug-16</u>	<u>Actual</u> <u>Sep-16</u>	<u>Actual</u> <u>Oct-16</u>	<u>Actual</u> <u>Nov-16</u>	<u>Actual</u> <u>Dec-16</u>	<u>Total</u> <u>Test Period</u>
<b>1 Jurisdictional Energy Reductions (kWh)</b>													
Residential Lighting Program	-	-	-	-	-	-	-	-	-	-	-	-	-
Residential Low Income Program (NC Only)	36,465	35,835	35,149	35,062	34,870	34,870	34,845	33,785	33,194	32,386	-	-	346,461
Commercial HVAC Upgrade Program (NC Trailing EMV Costs Only)	-	-	-	-	-	-	-	-	-	-	-	-	-
Commercial Lighting Program (NC Trailing EMV Costs Only)	66,388	66,388	66,388	66,388	66,388	66,388	66,388	66,388	66,388	66,388	-	-	663,877
Residential Heat Pump Tune-up Program	76,130	79,170	81,392	84,326	86,120	89,521	91,524	93,699	94,659	95,660	7,562	8,778	888,540
Residential Heat Pump Upgrade Program	13,991	15,251	15,792	16,398	16,981	18,434	19,196	20,564	21,047	21,804	4,385	4,533	188,376
Residential Duct Testing & Sealing Program	6,651	7,140	8,595	9,529	10,023	10,365	10,658	10,822	10,837	10,875	510	510	96,516
Residential Home Energy Check-up Program	62,266	62,300	62,300	62,300	62,300	62,300	62,300	62,300	62,300	62,300	-	-	622,961
Non-Residential Duct Testing & Sealing Program	211,178	213,244	213,244	213,927	215,212	215,695	228,406	242,034	242,588	244,306	40,133	40,133	2,320,099
Non-Residential Energy Audit Program	53,436	53,436	53,436	53,436	53,436	53,436	53,436	53,600	53,617	65,176	11,740	21,131	579,312
Non-Residential Lighting Systems and Controls	33,853	36,305	95,388	111,169	111,169	128,339	134,747	191,543	195,187	217,118	99,678	127,102	1,481,597
Non-Residential Heating & Cooling Efficiency	5,317	5,317	5,317	5,957	9,547	22,959	22,959	23,332	23,332	23,332	582	582	148,531
Non-Residential Window Film	-	-	-	-	-	-	-	-	-	-	-	-	-
Residential Income & Age Qualifying Home Improvement Program	-	-	-	-	-	-	779	1,277	1,712	2,710	5,082	7,092	18,652
<b>2 Billing Rate</b>													
Residential Lighting Program	\$ 0.06353	\$ 0.06351	\$ 0.06355	\$ 0.06355	\$ 0.06354	\$ 0.07620	\$ 0.07615	\$ 0.07617	\$ 0.07617	\$ 0.06350	\$ 0.07438	\$ 0.07436	
Residential Low Income Program (NC Only)	\$ 0.06360	\$ 0.06360	\$ 0.06357	\$ 0.06359	\$ 0.06359	\$ 0.07628	\$ 0.07627	\$ 0.07627	\$ 0.07626	\$ 0.06356	\$ 0.07443	\$ 0.07442	
Commercial HVAC Upgrade Program (NC Trailing EMV Costs Only)	\$ 0.11294	\$ 0.07115	\$ 0.08076	\$ 0.08143	\$ 0.09154	\$ 0.09272	\$ 0.08920	\$ 0.07566	\$ 0.06536	\$ 0.07016	\$ 0.08651	\$ 0.09579	
Commercial Lighting Program (NC Trailing EMV Costs Only)	\$ 0.08152	\$ 0.06672	\$ 0.06758	\$ 0.06487	\$ 0.06738	\$ 0.06612	\$ 0.06763	\$ 0.07507	\$ 0.06949	\$ 0.06061	\$ 0.07360	\$ 0.07657	
Residential Heat Pump Tune-up Program	\$ 0.06325	\$ 0.06321	\$ 0.06326	\$ 0.06330	\$ 0.06331	\$ 0.07592	\$ 0.07587	\$ 0.07587	\$ 0.07588	\$ 0.06325	\$ 0.07406	\$ 0.07400	
Residential Heat Pump Upgrade Program	\$ 0.06326	\$ 0.06328	\$ 0.06328	\$ 0.06332	\$ 0.06333	\$ 0.07597	\$ 0.07593	\$ 0.07593	\$ 0.07596	\$ 0.06331	\$ 0.07411	\$ 0.07404	
Residential Duct Testing & Sealing Program	\$ 0.06318	\$ 0.06317	\$ 0.06320	\$ 0.06322	\$ 0.06317	\$ 0.07579	\$ 0.07575	\$ 0.07578	\$ 0.07578	\$ 0.06314	\$ 0.07386	\$ 0.07393	
Residential Home Energy Check-up Program	\$ 0.06335	\$ 0.06336	\$ 0.06344	\$ 0.06353	\$ 0.06352	\$ 0.07610	\$ 0.07597	\$ 0.07592	\$ 0.07597	\$ 0.06335	\$ 0.07418	\$ 0.07409	
Non-Residential Duct Testing & Sealing Program	\$ 0.06320	\$ 0.06270	\$ 0.06474	\$ 0.06340	\$ 0.06378	\$ 0.06587	\$ 0.06569	\$ 0.06467	\$ 0.06492	\$ 0.06102	\$ 0.07205	\$ 0.06940	
Non-Residential Energy Audit Program	\$ 0.06641	\$ 0.06733	\$ 0.06940	\$ 0.06633	\$ 0.06682	\$ 0.06728	\$ 0.06719	\$ 0.06645	\$ 0.06664	\$ 0.06404	\$ 0.07623	\$ 0.07379	
Non-Residential Lighting Systems and Controls	\$ 0.08365	\$ 0.07110	\$ 0.07516	\$ 0.07291	\$ 0.07675	\$ 0.07824	\$ 0.07647	\$ 0.07340	\$ 0.06905	\$ 0.06816	\$ 0.08128	\$ 0.08275	
Non-Residential Heating & Cooling Efficiency	\$ 0.05773	\$ 0.05813	\$ 0.06040	\$ 0.05683	\$ 0.05864	\$ 0.06554	\$ 0.06438	\$ 0.06324	\$ 0.06430	\$ 0.05431	\$ 0.06415	\$ 0.06383	
Non-Residential Window Film	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Residential Income & Age Qualifying Home Improvement Program	\$ 0.06365	\$ 0.06366	\$ 0.06347	\$ 0.06363	\$ 0.06345	\$ 0.07616	\$ 0.07620	\$ 0.07626	\$ 0.07624	\$ 0.06351	\$ 0.07437	\$ 0.07438	
<b>3 Jurisdictional Lost Revenues (Line 1 x Line 2)</b>													
Residential Lighting Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Residential Low Income Program (NC Only)	\$ 2,319	\$ 2,279	\$ 2,234	\$ 2,230	\$ 2,217	\$ 2,660	\$ 2,658	\$ 2,577	\$ 2,531	\$ 2,058	\$ -	\$ -	\$ 23,764
Commercial HVAC Upgrade Program (NC Trailing EMV Costs Only)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Commercial Lighting Program (NC Trailing EMV Costs Only)	\$ 5,412	\$ 4,429	\$ 4,486	\$ 4,307	\$ 4,473	\$ 4,390	\$ 4,490	\$ 4,984	\$ 4,613	\$ 4,024	\$ -	\$ -	\$ 45,608
Residential Heat Pump Tune-up Program	\$ 4,815	\$ 5,004	\$ 5,149	\$ 5,338	\$ 5,452	\$ 6,796	\$ 6,944	\$ 7,109	\$ 7,183	\$ 6,050	\$ 560	\$ 650	\$ 61,051
Residential Heat Pump Upgrade Program	\$ 885	\$ 965	\$ 999	\$ 1,038	\$ 1,075	\$ 1,400	\$ 1,458	\$ 1,561	\$ 1,599	\$ 1,380	\$ 325	\$ 336	\$ 13,022
Residential Duct Testing & Sealing Program	\$ 420	\$ 451	\$ 543	\$ 602	\$ 633	\$ 786	\$ 807	\$ 820	\$ 821	\$ 687	\$ 38	\$ 38	\$ 6,646
Residential Home Energy Check-up Program	\$ 3,945	\$ 3,947	\$ 3,952	\$ 3,958	\$ 3,957	\$ 4,741	\$ 4,733	\$ 4,730	\$ 4,733	\$ 3,947	\$ -	\$ -	\$ 42,643
Non-Residential Duct Testing & Sealing Program	\$ 13,346	\$ 13,370	\$ 13,805	\$ 13,563	\$ 13,726	\$ 14,208	\$ 15,004	\$ 15,652	\$ 15,749	\$ 14,908	\$ 2,892	\$ 2,785	\$ 149,009
Non-Residential Energy Audit Program	\$ 3,549	\$ 3,598	\$ 3,708	\$ 3,544	\$ 3,571	\$ 3,595	\$ 3,590	\$ 3,562	\$ 3,573	\$ 4,174	\$ 895	\$ 1,559	\$ 38,918
Non-Residential Lighting Systems and Controls	\$ 2,832	\$ 2,581	\$ 7,169	\$ 8,105	\$ 8,532	\$ 10,041	\$ 10,304	\$ 14,059	\$ 13,478	\$ 14,799	\$ 8,102	\$ 10,518	\$ 110,520
Non-Residential Heating & Cooling Efficiency	\$ 307	\$ 309	\$ 321	\$ 339	\$ 560	\$ 1,505	\$ 1,478	\$ 1,476	\$ 1,500	\$ 1,267	\$ 37	\$ 37	\$ 9,136
Non-Residential Window Film	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Residential Income & Age Qualifying Home Improvement Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 59	\$ 97	\$ 131	\$ 172	\$ 378	\$ 527	\$ 1,365
<b>4 Variable O&amp;M Savings</b>	\$ (10)	\$ 4	\$ (8)	\$ (10)	\$ (42)	\$ (58)	\$ (214)	\$ (232)	\$ (94)	\$ (22)	\$ (28)	\$ (24)	\$ (739)
<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)	\$ 2,319	\$ 2,279	\$ 2,234	\$ 2,229	\$ 2,215	\$ 2,657	\$ 2,647	\$ 2,567	\$ 2,528	\$ 2,058	\$ -	\$ -	\$ 23,732
Commercial HVAC Upgrade Program (NC Trailing EMV Costs Only)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Commercial Lighting Program (NC Trailing EMV Costs Only)	\$ 5,411	\$ 4,430	\$ 4,486	\$ 4,306	\$ 4,469	\$ 4,384	\$ 4,470	\$ 4,964	\$ 4,606	\$ 4,022	\$ -	\$ -	\$ 45,547
Residential Heat Pump Tune-up Program	\$ 4,814	\$ 5,005	\$ 5,148	\$ 5,337	\$ 5,447	\$ 6,789	\$ 6,917	\$ 7,082	\$ 7,172	\$ 6,048	\$ 559	\$ 649	\$ 60,965
Residential Heat Pump Upgrade Program	\$ 885	\$ 965	\$ 999	\$ 1,038	\$ 1,074	\$ 1,399	\$ 1,452	\$ 1,555	\$ 1,596	\$ 1,380	\$ 324	\$ 335	\$ 13,003
Residential Duct Testing & Sealing Program	\$ 420	\$ 451	\$ 543	\$ 602	\$ 633	\$ 785	\$ 804	\$ 817	\$ 820	\$ 686	\$ 38	\$ 38	\$ 6,637
Residential Home Energy Check-up Program	\$ 3,943	\$ 3,948	\$ 3,951	\$ 3,957	\$ 3,953	\$ 4,736	\$ 4,714	\$ 4,712	\$ 4,726	\$ 3,945	\$ -	\$ -	\$ 42,586
Non-Residential Duct Testing & Sealing Program	\$ 13,343	\$ 13,372	\$ 13,803	\$ 13,560	\$ 13,713	\$ 14,190	\$ 14,936	\$ 15,582	\$ 15,721	\$ 14,901	\$ 2,885	\$ 2,781	\$ 148,785
Non-Residential Energy Audit Program	\$ 3,548	\$ 3,598	\$ 3,708	\$ 3,544	\$ 3,567	\$ 3,591	\$ 3,575	\$ 3,546	\$ 3,567	\$ 4,172	\$ 893	\$ 1,557	\$ 38,865
Non-Residential Lighting Systems and Controls	\$ 2,831	\$ 2,582	\$ 7,168	\$ 8,104	\$ 8,525	\$ 10,031	\$ 10,264	\$ 14,004	\$ 13,455	\$ 14,793	\$ 8,085	\$ 10,503	\$ 110,345
Non-Residential Heating & Cooling Efficiency	\$ 307	\$ 309	\$ 321	\$ 338	\$ 559	\$ 1,503	\$ 1,471	\$ 1,469	\$ 1,498	\$ 1,267	\$ 37	\$ 37	\$ 9,116
Non-Residential Window Film	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Residential Income & Age Qualifying Home Improvement Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 59	\$ 97	\$ 130	\$ 172	\$ 377	\$ 527	\$ 1,362
<b>Total Lost Revenues All Programs</b>	<b>\$ 37,820</b>	<b>\$ 36,939</b>	<b>\$ 42,361</b>	<b>\$ 43,014</b>	<b>\$ 44,155</b>	<b>\$ 50,063</b>	<b>\$ 51,310</b>	<b>\$ 56,395</b>	<b>\$ 55,817</b>	<b>\$ 53,443</b>	<b>\$ 13,198</b>	<b>\$ 16,426</b>	<b>\$ 500,942</b>

**Aug 15 2017**

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**Dominion Energy North Carolina**  
**Docket No. E-22, Sub 545**  
**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 January 1, 2018 - December 31, 2018**

line  
no.

1	Test Period (Over)/Under Recovery - Net of Utility Incentives (Net of ADIT), R8-69(b)(6) (Shedule 2, Page 1, Line 8)	\$ (231,283)
2	Overall Cost of Capital Approved in Docket No. E-22, Sub 479 Grossed Up for Taxes	10.62%
3	Monthly Interest Rate (Line 2/12)	0.8846%
4	Number of Months Refund is Outstanding (January 2017 - December 2017)	12
5	<b>Interest to be Paid on Test Period (Over) Recovery Net of ADIT</b>	<b>\$ (24,552)</b>

**VIRGINIA ELECTRIC AND POWER COMPANY**

Cost of Capital and Capital Structure  
13-Month Average  
As of December 31, 2016

line no.	Description	Average Capitalization	Average Capitalization Ratio	Average Embedded Cost%	Overall Cost Rate
1	Total Long-Term Debt	9,638,131	46.201%	4.6493%	2.148%
2	Total Preferred Stock	0	0.000%	0.0000%	0.000%
3	Common Equity	11,223,147	53.799%	10.2000%	5.487%
4	Total	<u>\$20,861,278</u>	<u>100.000%</u>		<u>7.636%</u>

**VIRGINIA ELECTRIC AND POWER COMPANY**

Cost of Capital and Capital Structure  
13-Month Average  
As of December 31, 2016

	Description	Average Capitalization	Average Capitalization Ratio	Average Embedded Cost%	Overall Cost Rate
5	Total Long-Term Debt	9,638,131	46.201%	4.6493%	2.148%
6	Total Preferred Stock	0	0.000%	0.0000%	0.000%
7	Common Equity	11,223,147	53.799%	9.9000%	5.326%
8	Total	<u>\$20,861,278</u>	<u>100.000%</u>		<u>7.474%</u>

file: Summary ADIT AC Cycling 2017 Filing 8.7.2017

Virginia Power  
Estimated ADIT  
Dec 2015 - Dec 2018

Year	Month	ADIT
2015	Dec	(3,281,667)
2016	Jan	(3,386,799)
2016	Feb	(3,308,121)
2016	Mar	(3,290,715)
2016	Apr	(3,273,308)
2016	May	(3,255,902)
2016	Jun	(3,238,495)
2016	Jul	(3,221,088)
2016	Aug	(3,203,681)
2016	Sep	(3,186,274)
2016	Oct	(3,168,868)
2016	Nov	(3,151,460)
2016	Dec	(3,134,041)
2017	Jan	(3,116,358)
2017	Feb	(3,098,675)
2017	Mar	(3,080,992)
2017	Apr	(3,063,309)
2017	May	(3,045,626)
2017	Jun	(3,027,943)
2017	Jul	(3,010,261)
2017	Aug	(2,992,578)
2017	Sep	(2,974,895)
2017	Oct	(2,957,212)
2017	Nov	(2,939,529)
2017	Dec	(2,921,848)
2018	Jan	(2,907,602)
2018	Feb	(2,894,494)
2018	Mar	(2,882,645)
2018	Apr	(2,872,014)
2018	May	(2,862,641)
2018	Jun	(2,854,488)
2018	Jul	(2,847,594)
2018	Aug	(2,841,959)
2018	Sep	(2,837,541)
2018	Oct	(2,834,383)
2018	Nov	(2,832,443)
2018	Dec	(2,831,762)

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Virginia Power  
State Apportionment  
2017

		<u>Non Current Def</u>	
NC	3.687501%		
Current	3.000000%		
Def Current	3.000000%		
Non Current	2.500000%		
	0.110625%	0.00092188	
WV	2.465100%		
Current	6.500000%		
Def Current	6.500000%		
Non Current	6.500000%		
	0.160232%	0.00160232	
VA	93.355900%		
	6.000000%		
Non Current	6.000000%		
	5.601354%	0.05601354	
DC	0.000000%		
	9.000000%		
Non Current	9.000000%		
	0.000000%	0.00000000	
		0.05853774	
		0.03804953	
		0.35000000	
		0.38804953	

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**Dominion Energy North Carolina**  
**Docket No. E-22, Sub 545**  
**Monthly Revenues - Rider C**  
**For the Test Period January 1, 2016 - December 31, 2016**

<u>Revenue Class</u>	<u>Jan-16</u>	<u>Feb-16</u>	<u>Mar-16</u>	<u>Apr-16</u>	<u>May-16</u>	<u>Jun-16</u>	<u>Jul-16</u>	<u>Aug-16</u>	<u>Sep-16</u>	<u>Oct-16</u>	<u>Nov-16</u>	<u>Dec-16</u>	<u>2016 Totals</u>
Residential	\$ 183,848	\$ 201,567	\$ 148,399	\$ 108,397	\$ 120,931	\$ 170,501	\$ 237,799	\$ 236,934	\$ 174,744	\$ 128,446	\$ 121,416	\$ 186,927	\$ 2,019,908
Commercial	\$ 56,458	\$ 51,236	\$ 49,644	\$ 49,859	\$ 53,533	\$ 59,846	\$ 73,669	\$ 76,856	\$ 67,617	\$ 62,495	\$ 52,640	\$ 57,485	\$ 711,338
Industrial	\$ 74,142	\$ 1,102	\$ 4,936	\$ 47,103	\$ 33,700	\$ 7,425	\$ 59,773	\$ (8,855)	\$ 23,254	\$ 32,125	\$ 83,663	\$ 18,401	\$ 376,769
COV	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Co/Muni	\$ 10,539	\$ 9,607	\$ 8,178	\$ 7,996	\$ 8,724	\$ 9,651	\$ 10,866	\$ 11,436	\$ 10,629	\$ 9,510	\$ 7,733	\$ 9,632	\$ 114,499
St & Traffic (COVA)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Federal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Revenue by Month	<u>\$ 324,988</u>	<u>\$ 263,512</u>	<u>\$ 211,157</u>	<u>\$ 213,355</u>	<u>\$ 216,887</u>	<u>\$ 247,423</u>	<u>\$ 382,106</u>	<u>\$ 316,370</u>	<u>\$ 276,244</u>	<u>\$ 232,575</u>	<u>\$ 265,452</u>	<u>\$ 272,445</u>	<u>\$ 3,222,514</u>

**DIRECT TESTIMONY  
OF  
MELBA L. LYONS  
ON BEHALF OF  
DOMINION ENERGY NORTH CAROLINA  
BEFORE THE  
NORTH CAROLINA UTILITIES COMMISSION  
DOCKET NO. E-22, SUB 545**

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AUG 15 2017

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 Melba L. Lyons and I am a Regulatory Advisor for Dominion**  
5           **Energy North Carolina. My business address is 701 East Cary Street,**  
6           **Richmond, Virginia 23219. A statement of my background and qualifications**  
7           **is attached as Appendix A.**

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

9   **A.     I am responsible for the development of cost allocation factors and the**  
10          **preparation of cost of service studies.**

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”). The purpose of**  
18          **my testimony is to explain the jurisdiction and customer class responsibility of**

1 costs for the approved and proposed DSM/EE Programs for which the  
2 Company seeks approval for cost recovery in this proceeding.

3 **Q. Ms. Lyons, are you sponsoring any exhibits or schedules in connection**  
4 **with your testimony?**

5 A. Yes. Company Exhibit No. MLL-1, consisting of Schedules 1-4 (Schedules 1  
6 and 3 provided in public and confidential versions filed under seal) has been  
7 prepared under my direction and supervision, and is accurate and complete to  
8 the best of my knowledge and belief. My Schedules 1-4 support the  
9 jurisdictional allocation and customer class allocation of DSM/EE costs for  
10 the development of Rider C and Rider CE, as follows:

- 11 • Schedule 1 shows the allocation or assignment of system-level Common  
12 Costs to each individual DSM and EE Program and the determination of  
13 jurisdictional responsibility of system costs for approved Programs,  
14 including allocated Common Costs.
- 15 • Schedule 2 shows the factors for allocating total Program revenue  
16 requirements to customer classes.
- 17 • Schedule 3 shows how total Program revenue requirements are allocated  
18 to customer classes.
- 19 • Schedule 4 provides the documents to be filed in accordance with NCUC  
20 Rule R8-69(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 536?**

5     A.    Yes. In its Final Order in the Company’s 2016 North Carolina DSM case,  
6           Docket No. E-22, Sub 536, the Commission stated that, to the extent a change  
7           to the coincident peak demand allocation factor was approved in the  
8           Company’s general base rate case, Docket No. E-22, Sub 532, a  
9           corresponding adjustment would be made to the 2017 rate period costs in the  
10          2017 DSM/EE rider proceeding. The Final Order in the base rate proceeding  
11          approved a change in the methodology for calculating the Summer Winter  
12          Peak and Average (“SWPA”) demand allocation factor. This change in  
13          methodology is reflected in the calculation of the coincident peak demand  
14          allocation factor for this proceeding. Consistent with the approach taken in  
15          the 2016 DSM case, that allocation factor is then used to allocate DSM costs  
16          as required by the Mechanism. As with last year’s proceeding, EE costs were  
17          allocated on the basis of energy.

18                   **I.     ALLOCATION OF COMMON COSTS TO**  
19                   **DSM/EE PROGRAMS**

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

22    A.    Certain costs including internal labor and related costs, program marketing  
23           costs, and information gathering costs are not directly attributable to specific

1 Programs. The Company characterizes these costs as “Common Costs,”  
2 which are needed to design, implement, and operate the Programs.

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

7 My Schedule 1, Page 1 provides a general description of how system-level  
8 Common Costs are allocated to each Program. Page 2 provides the allocation  
9 of these costs to the Programs for the January 1, 2016, to December 31, 2016,  
10 test period (“Test Period”) through the EMF for recovery through Rider CE.  
11 Page 3 provides the allocation of these costs for the projected January 1, 2018,  
12 to December 31, 2018, rate period (“Rate Period”) for recovery through  
13 Rider C.

14 **II. JURISDICTIONAL ALLOCATION OF**  
15 **PROGRAM COSTS**

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

19 **A.** System costs for the approved DSM/EE Programs, including allocated  
20 Common Costs, are allocated or assigned to the North Carolina jurisdiction  
21 according to Paragraph 30 of the Mechanism. Paragraph 30 provides for the  
22 cost of DSM programs to be allocated on the basis of the Company’s

1 coincident peak and for the cost of EE programs to be allocated on the basis of  
2 energy. In the case of both the DSM and EE allocation factors, the following  
3 retail jurisdictions are included in the development of each factor: (i) the  
4 North Carolina retail jurisdiction; (ii) the Virginia retail jurisdiction; and  
5 (iii) Virginia non-jurisdictional customers excluding contract classes that are  
6 exempt or have opted out.<sup>1</sup>

7 My Schedule 1, Page 1 provides a general description of how DSM/EE costs  
8 are allocated or assigned to the North Carolina jurisdiction. My Schedule 1,  
9 Page 4 provides the development of jurisdictional allocation factors for DSM  
10 and EE Programs. Coincident peak and energy allocation factors are  
11 calculated as described above to allocate costs from the system to the North  
12 Carolina retail jurisdiction. For the updated EMF Test Period, the allocation  
13 factors for determining jurisdictional costs are based on the 12 months ended  
14 December 31, 2016, and are shown on Schedule 1, Page 4. For the Rate  
15 Period, the allocation factors are based on the 12 months ended December 31,  
16 2016, and are shown on Schedule 2, Page 2.

---

<sup>1</sup> Virginia non-jurisdictional customers contract for electric service from Virginia Electric and Power Company, but these contract customers are not subject to the jurisdiction of the State Corporation Commission of Virginia and are exempt from or may opt out of the Company's Virginia DSM/EE programs and cost recovery riders. The contract classes that have elected not to participate and are not participating in DSM/EE programs include the County and Municipal class, the Commonwealth of Virginia class, the NASA class, and the Non-jurisdictional Outdoor Lighting class. The MS class, which represents large military and federal government customers, includes certain customers that are exempt or may opt out of participation in DSM/EE programs and payment of DSM/EE cost recovery riders. Certain other MS customers choose to participate in DSM/EE programs and pay the applicable Virginia DSM/EE cost recovery riders.

1                   **III.     ASSIGNMENT AND ALLOCATION OF**  
2                   **JURISDICTIONAL COSTS TO CUSTOMER CLASSES**

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

6     A.     Retail jurisdictional costs for the Company's Phase I, Phase II, Phase III,  
7           Phase IV, Phase V, and proposed Phase VI Programs, including allocated  
8           Common Costs, shall be assigned or allocated to North Carolina retail  
9           customer classes based on the particular classes at which each program is  
10          targeted according to Paragraph 33 of the Mechanism. The cost of  
11          residential Programs is assigned to the residential class as shown in my  
12          Schedule 2, Page 1. The costs of non-residential Programs are allocated to  
13          targeted non-residential customer classes using an energy-based allocation  
14          factor as shown in my Schedule 2, Page 1.

15          My Schedule 2, Page 2 provides the development of the coincident peak and  
16          energy allocation factors for the non-residential Programs. I have developed  
17          class allocation factors for the non-residential programs for both the true-up  
18          through the EMF and the projected Rate Period consistent with the time  
19          periods used to allocate costs from the system to the jurisdiction. For the  
20          updated EMF, the allocation factors for determining customer class  
21          responsibility for jurisdictional costs are based on the 12 months ended  
22          December 31, 2016, and are shown on Schedule 2, Page 2. I have developed  
23          class allocation factors for these same programs. For the projected Rate

1 Period, the allocation factors for determining customer class responsibility for  
2 jurisdictional costs are also based on the 12 months ended December 31,  
3 2016, and are shown on Schedule 2, Page 2.

4 **Q. How will the EMF and Rate Period revenue requirements be assigned or**  
5 **allocated for the residential Programs to the customer classes?**

6 A. The total amount to be recovered through the DSM/EE EMF Rider CE for the  
7 residential Programs will be assigned to the residential class. The total  
8 revenue requirement for DSM/EE Programs Rider C for the residential  
9 Programs will also be assigned to the residential class for cost recovery  
10 purposes. Please refer to my Schedule 2, Page 1 for further explanation of this  
11 assignment.

12 **Q. How will the EMF and Rate Period revenue requirements be assigned or**  
13 **allocated for the non-residential Programs to the customer classes?**

14 A. The total amount to be recovered through the DSM/EE EMF Rider CE for the  
15 non-residential Programs will be allocated to the non-residential customer  
16 classes eligible to participate in such Programs. The total revenue  
17 requirement for DSM/EE Programs Rider C for the non-residential Programs  
18 will also be allocated to the non-residential customer classes eligible to  
19 participate in such Programs.

20 Regarding the development of allocation factors, these Programs are not  
21 limited to commercial customers as other non-residential customers, including  
22 industrial customers, are eligible to participate. The allocation factors used to

1 allocate these revenue requirements will be adjusted for customers who elect  
2 to opt out as provided for under N.C.G.S. § 62-133.9(f). In addition, no costs  
3 will be allocated to the Street and Outdoor Lighting class or the Traffic  
4 Lighting class since such classes will not be targeted by these Programs.  
5 Neither class will experience a reduction in energy consumption or demand  
6 resulting from these Programs and will, therefore, not experience a benefit due  
7 to a change in their production demand allocation factor if all other things  
8 remain the same. Other non-residential customer classes that do participate in  
9 the Programs will experience reductions in energy consumption and/or  
10 demand and may receive a benefit due to a change in their production demand  
11 allocation factor. It is appropriate to not allocate any costs to customer classes  
12 that will not benefit from participation in a program or programs.

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

15 **Q. Do you have a schedule which shows the allocation to the customer classes**  
16 **of the amounts to be recovered through the DSM/EE EMF Rider CE and**  
17 **DSM/EE Programs Rider C?**

18 A. Yes. My Schedule 3, Pages 1 and 2 provide the allocation to the customer  
19 classes of the amount that needs to be collected for the Test Period true-up  
20 through the DSM/EE EMF Rider CE. My Schedule 3, Pages 3 and 4 provide  
21 the allocation of the revenue requirement to the customer classes for the  
22 projected Rate Period for recovery through DSM/EE Programs Rider C.

1           These total revenue requirements are obtained from Company Witness  
2           Moore's Schedule 1 for Rider CE and Rider C, respectively.

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

6   A.     My Schedule 3, Page 2, line 9 provides the amount to be recovered by each  
7           customer class under the proposed DSM/EE EMF Rider CE. My Schedule 3,  
8           Page 4, line 2 provides the total revenue requirement by customer class under  
9           the proposed DSM/EE Rider C.

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

11   A.     In accordance with NCUC Rule R8-69(f)(1)(ii)(b), the total cost that the  
12           utility does not expect to incur during the Rate Period as a direct result of the  
13           DSM/EE measures in the aggregate to the North Carolina jurisdiction are  
14           shown on Page 1 of my Schedule 4. Expenses not expected to be incurred are  
15           provided by Company Witness Deanna R. Kesler. In this Schedule, I provide  
16           the North Carolina jurisdictional allocation factors that were produced in the  
17           Company's most recent 2016 cost of service study, as filed on May 30, 2017,  
18           in Docket No. E-22, Sub 532 that would be used to allocate these costs had  
19           they been incurred. As can be seen on Schedule 4, Page 1 of my testimony,  
20           separate demand and energy weighted factors should be used to allocate the  
21           demand-related expenses not expected to be incurred and the energy-related  
22           expenses not expected to be incurred, respectively. These factors are Factor 1  
23           (demand-weighted) and Factor 3 (energy-weighted).

1           Also included in Schedule 4 are Pages 2 through 4, which are work papers  
2           filed in accordance with NCUC Rule R8-69(f)(1)(viii). These pages show the  
3           development of allocation factors used to allocate system expenses not  
4           expected to be incurred during the Rate Period (Pages 3 and 4).

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

6   **A.     Yes, it does.**

**BACKGROUND AND QUALIFICATIONS  
OF  
MELBA L. LYONS**

Melba L. Lyons graduated from Saint Paul's College in 1985 with a B.S. in Business Administration. She later attended Averett University and graduated with a Masters of Business Administration degree in 2007. She joined Virginia Electric and Power Company in 1985 in the Power Station Accounting Department as an accountant. Ms. Lyons served 22 years in the accounting profession in field and corporate positions.

In 2007, Ms. Lyons transferred to the Rate Department (which is now Customer Rates) as a Regulatory Analyst. In this position, she has performed research to determine the Company's peer group of utilities and COS Study work. From 2009 through 2014, she provided support for peer group-related issues in the Company's biennial review cases and in other regulatory proceedings. In 2010, Melba was selected for a position on the COS team. Her responsibilities include performing calculations for alternative COS methodologies and new allocation factors, rewriting and updating factor calculation methodologies and maintaining the COS Model and serving as a rates witness for the Company's Generation Riders and Virginia and North Carolina DSM Programs. In 2017, Melba was promoted to Regulatory Advisor.

Ms. Lyons has presented testimony before the North Carolina Utilities Commission.

**DOMINION ENERGY NORTH CAROLINA**  
**ASSIGNMENT AND ALLOCATION OF COSTS TO NORTH CAROLINA JURISDICTION**  
**DOCKET NO. E-22, SUB 545**

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

Notes

- 1) For the true-up through the EMF, the Residential Low Income Program is allocated to the North Carolina jurisdiction.  
For the projected period, the Residential Low Income Program is a North Carolina retail-only program and the cost is assigned.
- 2) 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 retail-only programs are assigned to NC.

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**DOMINION ENERGY NORTH CAROLINA  
ALLOCATION OF COMMON COSTS TO PROGRAMS  
FOR THE EMF TRUE-UP FOR RIDER CE  
DOCKET NO. E-22, SUB 545**

**JANUARY 1, 2016 - DECEMBER 31, 2016**

**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	Operating Cost (2)	Depreciation Expense (3)	Property Taxes (4)	Total (5)	Allocation Factors
1	Air Conditioner Cycling Program	Peak-Clipping	X					
2	Residential Lighting Program	Energy Efficiency	X					
3	Low Income Program	Energy Efficiency	X					
4	Commercial HVAC Upgrade Program	Energy Efficiency	X					
5	Commercial Lighting Program	Energy Efficiency	X					
6	Residential Heat Pump Tune Up	Energy Efficiency	X					
7	Residential Heat Pump Upgrade	Energy Efficiency	X					
8	Residential Duct Testing & Sealing	Energy Efficiency	X					
9	Residential Home Energy Check Up Program	Energy Efficiency	X					
10	Non Residential Duct Testing & Sealing	Energy Efficiency	X					
11	Non residential Energy Audit Program	Energy Efficiency	X					
12	Commercial Distributed Generation	Peak-Clipping	X					
13	Non Residential Lighting Systems and Controls	Energy Efficiency	X					
14	Non Residential Heating & Cooling Efficiency	Energy Efficiency	X					
15	Non Residential Window Film	Energy Efficiency	X					
16	Residential Low Income	Energy Efficiency	X					
17	Residential Appliance Recycling	Energy Efficiency	X					
18	Residential Income & Age Qualifying Home Improvement Prc	Energy Efficiency	X					
19	Non-Residential Small Business Improvement	Energy Efficiency	X					
Sum of Program Cost								

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, 2016, refer to Company Exhibit AJM - 1, Rider CE, Schedule 2. Page 2
- 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, DNF - Input Sheet, Row 106

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**DOMINION ENERGY NORTH CAROLINA  
ALLOCATION OF COMMON COSTS TO PROGRAMS  
FOR THE PROJECTED RATE PERIOD FOR RIDER C  
DOCKET NO. E-22, SUB 545**

**JANUARY 1, 2018 - DECEMBER 31, 2018**

**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 (5)
1	Air Conditioner Cycling Program	Peak-Clipping	X					
2	Residential Lighting Program	Energy Efficiency	Concluded					
3	Low Income Program	Energy Efficiency	NC Only					
4	Commercial HVAC Upgrade Program	Energy Efficiency	NC Only					
5	Commercial Lighting Program	Energy Efficiency	NC Only					
6	Residential Heat Pump Tune Up	Energy Efficiency	X					
7	Residential Heat Pump Upgrade	Energy Efficiency	X					
8	Residential Duct Testing & Sealing	Energy Efficiency	X					
9	Residential Home Energy Check-up Program	Energy Efficiency	X					
10	Non-residential Duct Testing & Sealing	Energy Efficiency	X					
11	Non-residential Energy Audit	Energy Efficiency	X					
12	Non-residential Solar Film	Energy Efficiency						
13	Non-residential Heating & Cooling Efficiency	Energy Efficiency						
14	Non-residential Lighting Systems and Controls	Energy Efficiency						
15	Residential Income and Age qualifying Home Improvement Residential LED Lighting - NC Only	Energy Efficiency						
16	Commercial Distributed Generation	Peak-Clipping						
17	Non Residential Qualifying Small Business Improvement	Energy Efficiency						
18	Residential Programmable Thermostat	Energy Efficiency						
19	Residential Appliance Recycling	Energy Efficiency						
20	Residential Home Energy Assessment Program	Energy Efficiency						
21	Non Residential Prescriptive Program	Energy Efficiency						
20	Sum of Program Cost							

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 December 31, 2016, 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 and DNF, Column J.

3) For the projected rate period, refer to Company Exhibit AJM-1, Rider C, Schedule 1, Page 4, Line 5

**DOMINION ENERGY NORTH CAROLINA  
JURISDICTIONAL ALLOCATION FACTORS  
FOR THE PROJECTED RATE PERIOD FOR RIDER C AND RIDER CE  
TWELVE MONTHS ENDED DECEMBER 31, 2016  
DOCKET NO. E-22, SUB 545**

**1CP Methodology - 4 Jurisdiction**

**Factor 1 NC DSM**

	<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)	17,362,375	14,425,969	1,803,546	370,331	762,529
(2) Less Non-participating Contract Classes and Exempt/Opt-out MS Customers	2,056,795	0	1,686,464	370,331	0
(3) Adjusted CP loads	15,305,580	14,425,969	117,082	0	762,529
(4) Factor 1 NC DSM	100.0000%	94.2530%	0.7650%	0.0000%	4.9820%
(5) Rounding					
(6) <b>Factor 1 NC DSM</b>	<b>100.0000%</b>	<b>94.2530%</b>	<b>0.7650%</b>	<b>0.0000%</b>	<b>4.9820%</b>

**Factor 3 NC EE**

	<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)	87,519,304	68,908,583	11,296,351	2,846,523	4,467,848
(2) Less Non-participating Contract Classes and Exempt/Opt-out MS Customers	13,442,976	0	10,596,454	2,846,523	0
(3) Adjusted energy	74,076,328	68,908,583	699,897	0	4,467,848
(4) Factor 3 NC DSM	100.0000%	93.0238%	0.9448%	0.0000%	6.0314%
(5) Rounding					
(6) <b>Factor 3 NC DSM</b>	<b>100.0000%</b>	<b>93.0238%</b>	<b>0.9448%</b>	<b>0.0000%</b>	<b>6.0314%</b>

**DOMINION ENERGY NORTH CAROLINA**  
**ALLOCATION FACTORS FOR THE COSTS OF THE APPROVED DSM PROGRAMS TO THE CUSTOMER CLASSES**  
**DOCKET NO. E-22, SUB 545**

<u>Name of Program</u>	<u>Program Category</u>	<u>Total Rider Revenue Requirement</u> <u>Customer Class Assignment or Allocation Factor</u>	
Air Conditioner Cycling Program	Peak-Clipping	Assigned - Residential Class	
Residential Heat Pump Tune Up	Energy Efficiency	Assigned - Residential Class	
Residential Heat Pump Upgrade	Energy Efficiency	Assigned - Residential Class	
Residential Duct Testing & Sealing	Energy Efficiency	Assigned - Residential Class	
Residential Home Energy Check-up Program	Energy Efficiency	Assigned - Residential Class	
Non-residential Duct Testing & Sealing	Energy Efficiency	Allocated to Non -Residential Customers Using Energy Factor	(1)
Non-residential Energy Audit	Energy Efficiency	Allocated to Non -Residential Customers Using Energy Factor	(1)
Non-residential Window Film Program	Energy Efficiency	Allocated to Non -Residential Customers Using Energy Factor	(1)
Non-residential Heating and Cooling Efficiency Program	Energy Efficiency	Allocated to Non -Residential Customers Using Energy Factor	(1)
Non-residential Lighting Systems and Controls Program	Energy Efficiency	Allocated to Non -Residential Customers Using Energy Factor	(1)
Qualifying Small Business Improvement Program	Energy Efficiency	Allocated to Non -Residential Customers Using Energy Factor	(1)
Residential Income and Age Qualifying Home Improvement	Energy Efficiency	Assigned - Residential Class	
Residential LED Lighting - NC Only	Energy Efficiency	Assigned - Residential Class	
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 MLL - 1, Schedule 2, Page 2 for the EMF true-up and for the Projected Rate Period.

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**ADJUSTED FOR OPT - OUT CUSTOMERS AND CUSTOMER CLASSES NOT PARTICIPATING IN COMMERCIAL PROGRAMS  
FOR THE PROJECTED RATE PERIOD FOR RIDER C AND RIDER CE  
TWELVE MONTHS ENDED DECEMBER 31, 2016  
DOCKET NO. E-22, SUB 545**

**1CP ALLOCATION METHODOLOGY - NORTH CAROLINA RETAIL CLASSES**

**Factor 1 NC DSM**

	<b>Total NC Class</b>	<b>Residential</b>	<b>SGS</b>	<b>LGS</b>	<b>6VP</b>	<b>Schedule NS</b>	<b>ST &amp; Outdoor Lighting</b>	<b>Traffic Lighting</b>
(1) CP (kW) loads at time of DOM Zone Peak (NSPL)	762,529	420,746	156,883	110,235	34,848	39,757	-	59
(2) Less Opt-out customers and directly assigned classes	550,191	420,746	205	54,575	34,848	38,757	0	59
(3) Adjusted CP loads	212,338	0	156,678	55,660	-	0	0	0
(4) Factor 1 NC DSM	100.0000%	0.0000%	73.7871%	26.2129%	0.0000%	0.0000%	0.0000%	0.0000%
(5) Rounding								
(6) <b>Factor 1 NC DSM</b>	<b>100.0000%</b>	<b>0.0000%</b>	<b>73.7871%</b>	<b>26.2129%</b>	<b>0.0000%</b>	<b>0.0000%</b>	<b>0.0000%</b>	<b>0.0000%</b>

**Factor 3 NC EE**

	<b>Total NC Class</b>	<b>Residential</b>	<b>SGS</b>	<b>LGS</b>	<b>6VP</b>	<b>Schedule NS</b>	<b>ST &amp; Outdoor Lighting</b>	<b>Traffic Lighting</b>
(1) Annual Energy (MWh)	4,467,848	1,635,177	866,534	819,395	264,835	854,987	26,375	545
(2) Less Opt-out customers and directly assigned classes	3,209,505	1,635,177	1,630	425,956	264,835	854,987	26,375	545
(3) Adjusted energy	1,258,343	0	864,903	393,439	0	0	0	0
(4) Factor 3 NC DSM	100.0000%	0.0000%	68.7335%	31.2665%	0.0000%	0.0000%	0.0000%	0.0000%
(5) Rounding								
(6) <b>Factor 3 NC DSM</b>	<b>100.0000%</b>	<b>0.0000%</b>	<b>68.7335%</b>	<b>31.2665%</b>	<b>0.0000%</b>	<b>0.0000%</b>	<b>0.0000%</b>	<b>0.0000%</b>

**DOMINION ENERGY NORTH CAROLINA**  
**DSM/EE EXPERIENCE MODIFICATION FACTOR (RIDER CE) FOR THE TEST PERIOD JANUARY 1, 2015 THROUGH DECEMBER 31, 2015**  
**ASSIGNMENT AND ALLOCATION TO CUSTOMER CLASSES**  
**DOCKET NO. E-22, SUB 545**

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	<u>Operating Expenses, Depreciation, Rate Base Costs, PPI</u>	Total			
	Air Conditioner Cycling Program				
	Residential Lighting Program				
	Low Income Program				
	Commercial HVAC Upgrade Program				
	Commercial Lighting Program				
	Residential Heat Pump Tune-up Program				
	Residential Heat Pump Upgrade Program				
	Residential Duct 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 and Cooling Efficiency				
	Non-Residential Window Film				
	Residential Income & Age Qualifying Home Improvement Program				
	Jurisdictional Lost Revenues				
	From Exhibit No. AJM-1				
	Rider CE Sch 2 Pg 5 Ln 3				
2	<u>Jurisdictional Lost Revenues</u>				
	Air Conditioner Cycling Program				
	Residential Lighting Program				
	Low Income Program				
	Commercial HVAC Upgrade Program				
	Commercial Lighting Program				
	Residential Heat Pump Tune-up Program				
	Residential Heat Pump Upgrade Program				
	Residential Duct 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 and Cooling Efficiency				
	Non-Residential Window Film				
	Residential Income & Age Qualifying Home Improvement Program				
3	<u>Variable O&amp;M Savings</u>				
	From Exhibit No. AJM-1 Rider CE Sch 2 Pg 5 Ln 4				
		Energy Savings (kWh)			
		From Exhibit No. AJM-1			
		Rider CE Sch 2 Pg 5 Ln 1			
	<u>Allocation of Variable O&amp;M Savings Based on Energy Savings (kWh)</u>	<u>Allocated Variable O&amp;M Savings</u>	<u>Allocation of Variable O&amp;M Savings</u>		
	Air Conditioner Cycling Program		0	0.0000%	
	Residential Lighting Program		0	0.0000%	
	Low Income Program	346,461		4.7106%	
	Commercial HVAC Upgrade Program	-		0.0000%	
	Commercial Lighting Program	663,877		9.0263%	
	Residential Heat Pump Tune-up Program	888,540		12.0809%	
	Residential Heat Pump Upgrade Program	188,376		2.5612%	
	Residential Duct Sealing Program	96,516		1.3123%	
	Residential Home Energy Check-up Program	622,961		8.4700%	
	Non-Residential Duct Testing & Sealing Program	2,320,099		31.5448%	
	Non-Residential Energy Audit Program	579,312		7.8765%	
	Non-Residential Lighting Systems and Controls	1,481,597		20.1443%	
	Non-Residential Heating and Cooling Efficiency	148,531		2.0195%	
	Non-Residential Window Film	0		0.0000%	
	Residential Income & Age Qualifying Home Improvement Program	18,652		0.2536%	
	Total	7,354,922		100.0000%	
4	<u>Jurisdictional Program Revenue Requirement (Ln 1 + Ln 2 + Ln 3)</u>		<u>Targeted Classes</u>	<u>Res./Non-Res. Allocation Factors</u>	
	Air Conditioner Cycling Program		Residential	51.7026%	
	Residential Lighting Program		Residential		
	Low Income Program		Residential		
	Commercial HVAC Upgrade Program		Non-residential	48.2974%	
	Commercial Lighting Program		Non-residential		
	Residential Heat Pump Tune-up Program		Residential		
	Residential Heat Pump Upgrade Program		Residential		
	Residential Duct 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 and Cooling Efficiency		Non-residential		
	Non-Residential Window Film		Non-residential		
	Residential Income & Age Qualifying Home Improvement Program		Residential		
	Total From Exhibit No. AJM-1 Rider CE Sch 2 Pg 3 Ln 12			100.0000%	

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**DOMINION ENERGY NORTH CAROLINA**  
**DSM/EE EXPERIENCE MODIFICATION FACTOR (RIDER CE) FOR THE TEST PERIOD JANUARY 1, 2015 THROUGH DECEMBER 31, 2015**  
**ASSIGNMENT AND ALLOCATION TO CUSTOMER CLASSES**  
**DOCKET NO. E-22, SUB 545**

1	Jurisdictional Program Revenue Requirement From Exhibit No. MLL-1 Sch 3 Pg 1 Ln 4								
	Residential Programs	\$1,791,637							
	Non-residential Programs	<u>\$1,673,635</u>							
	Jurisdictional Program Revenue Requirement AJM-1 Sch 2 Pg 1 Ln 1	\$3,465,272							
2	<u>Monthly Rider C Revenues</u>								
	Residential Programs	\$1,666,125							
	Non-residential Programs	<u>\$1,556,389</u>							
	Monthly Revenue From Exhibit No. AJM-1 Sch 2 Pg 1 Ln 4	<u>\$3,222,514</u>							
3	<u>(Over) / Under Recovery (Ln 1 - Ln 2)</u>								
	Residential Programs	\$125,512							
	Non-residential Programs	<u>\$117,246</u>							
	(Over) / Under Recovery From Exhibit No. AJM-1 Rider CE Sch 2 Pg 1 Ln 7	<u>\$242,758</u>							
4	<u>Deferred Income Tax</u>								
	Residential Programs	(\$75,828)							
	Non-residential Programs	<u>(\$70,833)</u>							
	Deferred Income Tax From Exhibit No. AJM-1 Rider CE Sch 2 Pg 1 Ln 9	<u>(\$146,661)</u>							
5	<u>Net (Over) / Under Recovery (Ln 3 - Ln 4)</u>								
	Residential Programs	\$201,340							
	Non-residential Programs	<u>\$188,079</u>							
	Net (Over) / Under Recovery From all Programs	\$389,419							
6	Carrying Cost on Cumulative (Over) / Under Recovery								
	Residential Programs	(\$8,157)							
	Non-residential Programs	<u>(\$7,619)</u>							
	From Exhibit No. AJM-1 Rider CE Sch 2 Pg 1 Ln 13	<u>(\$15,776)</u>							
7	Financing Costs Rider CE (Over)-recovery								
	Residential Programs	(\$12,694)							
	Non-residential Programs	<u>(\$11,858)</u>							
	From Exhibit No. AJM-1 Rider CE Sch 2 Pg 1 Ln 15	<u>(\$24,552)</u>							
8	DSM EE/EMF to be (refunded)/collected during the Rate Period January 1, 2018 - December 31, 2018 (Ln 3 + Ln 6+Ln7)								
	Residential Programs	\$104,662							
	Non-residential Programs	\$97,768							
	DSM EE/EMF to be (refunded)/collected From Exhibit No. AJM-1 Rider CE Sch 2 Pg 1 Ln 16)	\$202,430							
9	Assignment / Allocation of DSM / EE EMF Rider CE Revenue Requirement to Customer Classes								
	Residential Programs	\$104,662	\$104,662	\$0	\$0	\$0	\$0	\$0	\$0
	<u>Non-residential Programs</u>								
	Factor to Allocate Energy Efficiency Programs								
	From Exhibit No. MLL-1 Sch 2 Pg 2	100.0000%	0.0000%	68.7335%	31.2665%	0.0000%	0.0000%	0.0000%	0.0000%
	Non-residential Programs	<u>\$97,769</u>	\$0	\$67,200	\$30,569	\$0	\$0	\$0	\$0
	<b>Check</b>	<b>\$202,430</b>							

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**DOMINION ENERGY NORTH CAROLINA**  
**DSM/EE (RIDER C) FOR THE PROJECTED RATE PERIOD JANUARY 1, 2018 THROUGH DECEMBER 31, 2018**  
**ASSIGNMENT AND ALLOCATION TO CUSTOMER CLASSES**  
**DOCKET NO. E-22, SUB 545**

<u>Line</u>		NC Juris Operating Expenses	NC Jurisdiction Depreciation Expense	NC Jurisdiction Rate Base Costs	NC Juris PPI & Property Tax
		From Exhibit No. AJM-1 Rider C Sch 1 Pg 3 Ln 5	From Exhibit No. AJM-1 Rider C Sch 1 Pg 3 Ln 6	From Exhibit No. AJM-1 Rider C Sch 1 Pg 3 Ln 8	From Exhibit No. AJM-1 Rider C Sch 1 Pg 3 Ln 7 & 10
1	<u>Operating Expenses, Depreciation, Rate Base Costs, PPI</u> Residential Lighting (PPI only) Air Conditioner Cycling Program Residential Low Income Program Commercial HVAC Upgrade Program Commercial Lighting Program Residential Heat Pump Tune Up Residential Heat Pump Upgrade Residential Duct Testing & Sealing Residential Home Energy Check-up Program Non-residential Duct Testing & Sealing Non-residential Energy Audit Non Residential Window Film Non Residential Heating & Cooling Efficiency Program Non Residential Lighting Systems and Controls Residential Income and Age Qualifying Home Improvement Program Qualifying Small Business Improvement Program Residential LED Lighting - NC Only Non-Residential Prescriptive Program				
		Total			
2	<u>Jurisdictional Lost Revenues</u> Residential Lighting (PPI only) Air Conditioner Cycling Program Residential Low Income Program Commercial HVAC Upgrade Program Commercial Lighting Program Residential Heat Pump Tune Up Residential Heat Pump Upgrade Residential Duct Testing & Sealing Residential Home Energy Check-up Program Non-residential Duct Testing & Sealing Non-residential Energy Audit Non Residential Window Film Non Residential Heating & Cooling Efficiency Program Non Residential Lighting Systems and Controls Residential Income and Age Qualifying Home Improvement Program Qualifying Small Business Improvement Program Residential LED Lighting - NC Only Non-Residential Prescriptive Program Total From Exhibit No. AJM-1 Rider C Sch 1 Pg 1 Ln 5				
		Jurisdictional Lost Revenues From Exhibit No. AJM-1 Rider C Sch 1 Pg 3 Ln 9			
4	<u>Jurisdictional Program Revenue Requirement (Ln 1 + Ln 2 + Ln 3)</u> Residential Lighting (PPI only) Air Conditioner Cycling Program Residential Low Income Program Commercial HVAC Upgrade Program Commercial Lighting Program Residential Heat Pump Tune Up Residential Heat Pump Upgrade Residential Duct Testing & Sealing Residential Home Energy Check-up Program Non-residential Duct Testing & Sealing Non-residential Energy Audit Non Residential Window Film Non Residential Heating & Cooling Efficiency Program Non Residential Lighting Systems and Controls Residential Income and Age Qualifying Home Improvement Program Qualifying Small Business Improvement Program Residential LED Lighting - NC Only Non-Residential Prescriptive Program Total From Exhibit No. AJM-1 Rider C Sch 1 Pg 1 Ln 5				
			<u>Targeted Classes</u>	<u>Res./Non-Res. Allocation Factors</u>	
			Residential	50.5833%	
			Residential		
			Residential		
			Non-residential	49.4167%	
			Non-residential		
			Residential		
			Residential		
			Residential		
			Non-residential		
			Non-residential		
			Non-residential		
			Non-residential		
			Residential		
			Non-residential		
			Residential		
			Non-residential		
				100.0000%	

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**DOMINION ENERGY NORTH CAROLINA**  
**DSM/EE (RIDER C) FOR THE PROJECTED RATE PERIOD JANUARY 1, 2018 THROUGH DECEMBER 31, 2018**  
**ASSIGNMENT AND ALLOCATION TO CUSTOMER CLASSES**  
**DOCKET NO. E-22, SUB 545**

Line

1	Jurisdictional Program Revenue Requirement From Exhibit No. MLL-1 Sch 3 Pg 3 Ln 4								
	Residential Programs	\$1,791,897							
	Non-residential Programs	<u>\$1,750,572</u>							
	Jurisdictional Program Revenue Requirement	\$3,542,469							
		North Carolina		SGS				ST & Outdoor	Traffic
		<u>Jurisdiction</u>	<u>Residential</u>	<u>Co &amp; Muni</u>	<u>LGS</u>	<u>6 VP</u>	<u>Schedule NS</u>	<u>Lighting</u>	<u>Lighting</u>
2	Assignment / Allocation of DSM / EE Rider C Revenue Requirement to Customer Classes								
	Residential Programs	\$1,791,897	\$1,791,897	\$0	\$0	\$0	\$0	\$0	\$0
	Non-residential Programs								
	Factor to Allocate Energy Efficiency Programs								
	From Exhibit No. MLL-1 Sch 3 Pg 3	100.0000%	0.0000%	68.7335%	31.2665%	0.0000%	0.0000%	0.0000%	0.0000%
	Non-residential Programs	<u>\$1,750,572</u>	\$0	\$1,203,229	\$547,343	\$0	\$0	\$0	\$0
	<b>Check</b>	<b>\$3,542,469</b>							

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**DOMINION ENERGY NORTH CAROLINA  
DOCKET NO. E-22, SUB 545**

Company Exhibit No. MLL-1  
Schedule 4  
Page 1 of 4

**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 January 1, 2018 through December 31, 2018. The demand allocation factor is based on the summer / winter peak and average methodology and is provided for the twelve months ended December 31, 2016. The energy allocation factor is provided for the twelve months ended December 31, 2016.

Program	NC Jurisdictional Demand Allocator	NC Jurisdictional Energy Allocator
Air Conditioner Cycling Program	4.9395%	5.1050%
Residential Lighting Program	4.9395%	5.1050%
Low Income Program	4.9395%	5.1050%
Residential Home Energy Check-Up Program	4.9395%	5.1050%
Residential Duct Testing & Sealing Program	4.9395%	5.1050%
Residential Heat Pump Tune-Up Program	4.9395%	5.1050%
Residential Heat Pump Upgrade Program	4.9395%	5.1050%
Commercial HVAC Upgrade Program	4.9395%	5.1050%
Commercial Lighting Program	4.9395%	5.1050%
Non-residential Energy Audit Program	4.9395%	5.1050%
Non-residential Duct Testing & Sealing Program	4.9395%	5.1050%
Non-residential Window Film	4.9395%	5.1050%
Non-residential Lighting Systems and Controls	4.9395%	5.1050%
Non-residential Heating and Cooling Efficiency	4.9395%	5.1050%
Residential Income and Age Qualifying Home Improvement Program	4.9395%	5.1050%
Qualifying Small Business Improvement Program	4.9395%	5.1050%

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**DOMINION ENERGY NORTH CAROLINA  
DOCKET NO. E-22, SUB 545**

Company Exhibit No. MLL-1  
Schedule 4  
Page 2 of 4

**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:

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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 = 4.9395%
  
- 2) Factor 3 — System to Jurisdiction
  - a. NC Juris = 5.1050%

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**DOMINION ENERGY NORTH CAROLINA**  
**DOCKET NO. E-22 , SUB 545**  
12 MONTHS ENDING DECEMBER 31, 2016  
SUMMER WINTER PEAK AND AVERAGE

<b>FACTOR 1/61</b>		<b>Total System</b>	<b>Va Juris</b>	<b>Va Non-Juris</b>	<b>FERC</b>	<b>N C Juris</b>
(1)	Energy-Production	87,519,304	68,908,583	11,296,351	2,846,523	4,467,848
(2)	Ave. Demand (Ln 1 / # hrs in year)	9,963,491	7,844,784	1,286,014	324,058	508,635
(3)	Class Avg. Demand as % of system	100.0000%	78.7353%	12.9073%	3.2525%	5.1050%
(4)	Winter Coincident Peak 02/20/15 @ 0800	16,492,492	13,509,041	1,692,040	461,799	829,611
(5)	Summer Coincident Peak 06/23/15 @ 1700	17,362,375	14,425,969	1,803,546	370,331	762,529
(6)	Avg. Peak Demand [(Lns 4+5)/2]	16,927,434	13,967,505	1,747,793	416,065	796,070
(7)	Avg. Peak Demand as % of system	100.0000%	82.5140%	10.3252%	2.4579%	4.7028%
(8)	Sys. Ln 2 / Sys Ln 6 =	58.8600%	5,864,513	4,617,442	756,948	190,740
	Class Ave. Dem.% Ln 3 x	58.8600%	58.8600%	46.3436%	7.5972%	1.9144%
(9)	1 - Sys. Line 8 =	41.1400%	6,963,943	5,746,229	719,042	171,169
	Class Ave. Pk. Dem. % Ln 7 x	41.1400%	41.1400%	33.9462%	4.2478%	1.0112%
(10)	Factor 1/61 (8+ 9)	100.0000%	80.2899%	11.8450%	2.9256%	4.9395%
(11)	Rounding		0.0000%	0.0000%	0.0000%	0.0000%
(12)	Factor 1/61	100.0000%	80.2899%	11.8450%	2.9256%	4.9395%

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**DOMINION ENERGY NORTH CAROLINA**  
**DOCKET NO. E-22 , SUB 545**  
12 MONTHS ENDING DECEMBER 31, 2016 SUMMER WINTER  
PEAK AND AVERAGE

FACTOR 3/63	Total System	Va Juris	Va Non-Juris	FERC	N C Juris
Energy production	87,519,304	68,908,583	11,296,351	2,846,523	4,467,848
Factor 3/63	100.0001%	<u>78.7353%</u>	<u>12.9073%</u>	<u>3.2525%</u>	<u>5.1050%</u>
		-0.0001%	0.0000%	0.0000%	0.0000%
Factor 3/63	100.0000%	78.7352%	12.9073%	3.2525%	5.1050%

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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 545**

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AUG 15 2017

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 Advisor for Dominion  
5           Energy North Carolina. My business address is 701 East Cary Street,  
6           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 the  
2 Company's reasonable and prudent costs incurred for the adoption and  
3 implementation of the Company's DSM/EE Programs during the rate period,  
4 January 1, 2018, through December 31, 2018 ("Rate Period"). Rider CE will  
5 true up any over- or under-recovery for the period January 1, 2016, through  
6 December 31, 2016. ("Test Period"). The Company is requesting the  
7 proposed riders, Rider C and Rider CE, become effective for usage on and  
8 after January 1, 2018. Additionally, I provide the calculations for the monthly  
9 residential and non-residential non-fuel average base rates that have been used  
10 by Company Witness Alan J. Moore in determining gross lost revenues.

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

13 A. Yes. Company Exhibit No. DAS-1, consisting of Schedules 1 through 18,  
14 was prepared under my supervision and is accurate and complete to the best of  
15 my knowledge and belief. I also provide my supporting workpaper as  
16 required by Commission Rule R8-69(f)(i)(viii).

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

18 A. Yes. The Company has calculated the Rider C rates in accordance with the  
19 following methodology. To develop the Rider C rate applicable to each of the  
20 Company's customer classes, we must first determine forecasted kWh sales  
21 for each customer class. For the North Carolina jurisdiction, the Company  
22 only forecasts kWh sales and customers by "revenue class" (*i.e.*, Residential,  
23 Commercial, Industrial, Public Authority, and Outdoor Street Lighting/Traffic

1 Signals), and this revenue class kWh sales forecast is shown on pages 1  
2 through 3 of Schedule 1, as required by Rule R8-69(f)(1)(i). However, these  
3 revenue classes are not perfectly aligned with the Company's customer  
4 classes. Therefore, the Company must allocate the revenue classes' January  
5 2018, through December 2018 forecasted kWh sales down to the customer  
6 class level. This allocation was performed using 2014 through 2016 historical  
7 monthly customer and kWh usage for each customer class to capture the  
8 recent trends of kWh sales and the numbers of customers within each  
9 customer class. This allocation by revenue class (and within revenue class by  
10 rate schedule) is shown on pages 4 and 5 of my Schedule 1. The summary on  
11 page 6 shows the allocation of the 12 months ended December 31, 2018,  
12 forecasted kWh sales for each rate schedule, less the kWh sales for the  
13 industrial and large commercial customers who have "opted out" under North  
14 Carolina General Statute § 62-133.9(f), to produce a net forecast. Pages 7 and  
15 8 categorize the net forecasted rate schedule kWh sales into the seven  
16 customer classes (*i.e.*, Residential, SGS, NS, LGS, 6VP, Outdoor/Street  
17 Lighting, and Traffic Lighting customer classes).

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

21 Page 9 of Schedule 1 shows the customer class allocated revenue  
22 requirements associated with DSM/EE program costs that were provided by  
23 Company Witness Melba L. Lyons. By dividing these class revenue

1 requirements by their respective customer class forecasted kWh sales, we  
2 have calculated customer class rates, which are then adjusted for North  
3 Carolina Regulatory Fee. Page 10 shows the rate schedules within their  
4 associated customer class and provides their respective Rider C rate.

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

9 A. Since the Company generally does not forecast kWh sales for individual  
10 customers, we have used actual kWh sales, from January 1, 2016, to  
11 December 31, 2016, as a proxy for the projected opt-out kWh sales for the  
12 Rate Period for customers that have opted out as of June 30, 2017. Schedule 2  
13 of my pre-filed direct testimony contains the aggregated opt-out customer  
14 sales by month.

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

17 A. Yes. Schedule 3 is comprised of the tariff sheet showing the proposed Rider  
18 C as required by R8-69(f)(1)(vi), which, if approved as proposed, would be  
19 applicable for usage on and after January 1, 2018.

20 **Q. Would you please discuss the calculation of the Rider CE?**

21 A. Yes. The Company has calculated the Rider CE rates in accordance with the  
22 same methodology as previously approved for calculating Rider C. The

1 allocated class Rider CE revenue requirements used in these calculations are  
2 provided in Company Witness Lyons' Schedule 3. The forecasted kWh by  
3 class and rate schedule for use in developing the Rider CE rates are the same  
4 as described in the calculation of the Rider C rates. The results of these  
5 calculations are shown in my Schedule 4. The corresponding tariff sheet  
6 providing the Rider CE rates is shown in my Schedule 5.

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

9 A. For this comparison, the Company has used the base and fuel rates that went  
10 into effect January 1, 2017, Docket No. E-22 Sub 532, and the Company's  
11 fuel case, Docket No. E-22, Sub 534, to calculate the customers' "current  
12 bill." For Rate Schedule 1 (residential), based on the proposed January 1,  
13 2018 effective date for Riders C and CE, for a customer using 1,000 kWh per  
14 month, the weighted monthly residential bill (4 summer months and 8 base  
15 months) would increase from \$133.30 to \$133.88, or by 0.44%. For Rate  
16 Schedule 5 (small general service), based on the proposed January 1, 2018  
17 effective date for Riders C and CE, for a customer using 12,500 kWh per  
18 month and 50 kW of demand, the weighted monthly bill (4 summer months  
19 and 8 base months) would increase from \$1,359.53 to \$1,371.28, or by 0.86%.  
20 For Rate Schedule 6P (large general service), based on the proposed January  
21 1, 2018 Riders C and CE, for a customer using 259,200 kWh on-peak and  
22 316,800 kWh off-peak per month and 1,000 kW of demand, the monthly bill  
23 would increase from \$50,559.63 to \$50,928.27, or by 0.73%.

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

3     A.     Yes. We have calculated monthly non-fuel average base rates for the Test  
4     Period for each DSM Program. These monthly non-fuel average base rates  
5     are provided to Company Witness Moore, who in turn applies these rates to  
6     the measured and verified kWh reductions that occurred during the Test  
7     Period, as determined and provided by Company Witness Deanna R. Kesler.

8     In truing up gross lost revenues for the Residential Low Income Program, the  
9     Residential Heat Pump Tune Up Program, the Residential Heat Pump  
10    Upgrade Program, the Residential Duct Testing & Sealing Program, the  
11    Residential Home Energy Check-Up Program, and the Residential Income and  
12    Age Qualifying Program, we used the actual participants' non-fuel base  
13    revenues and their kilowatt-hour consumption for the period of January 1,  
14    2016, to December 31, 2016, to develop monthly average non-fuel base rates.  
15    These calculations are shown in Schedules 6 through 11 of my testimony. To  
16    calculate the average rates for the Residential Lighting program, we used the  
17    average non-fuel base rates for all customers on Rate Schedules 1, 1P, and 1T  
18    and the kilowatt-hour consumption for the period of January 1, 2016, to  
19    December 31, 2016, shown in Schedule 12.

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

22   A.     Yes. We used the actual participants' non-fuel base revenues and their  
23   kilowatt-hour consumption for the applicable true-up period to develop

1 monthly average non-fuel base rates. This analysis used the kWh  
2 consumption for those customers who participated in the Commercial  
3 Lighting Program, the Commercial HVAC Program, the Non-Residential  
4 Energy Audit, the Non-Residential Duct Testing & Sealing Program, the Non-  
5 Residential Heating & Cooling Efficiency Program, and the Non-Residential  
6 Lighting Systems & Controls Program shown in Schedules 13 through 18  
7 during the period of January 1, 2016, to December 31, 2016. No rates were  
8 calculated for the Non-Residential Window Film Program since there were no  
9 North Carolina participants in the program during 2016.

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

11 **A.** Yes, it does.

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

Debra A. Stephens graduated from the Virginia Polytechnic Institute & State University in 1978 with a B.S. in Marketing. She continued her education, completing a Masters in Business Administration from Virginia Polytechnic Institute & State University in 1979. In 1985, after spending five years as a Research Analyst for the Virginia Department of Planning & Budget, Ms. Stephens joined Virginia Electric and Power Company as a Statistical Analyst in the Insurance & 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 & 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 Advisor. 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 December 31, 2018

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

YR	MONTH	FORECAST CUST	FORECAST KWH
2018	1	102,516	150,399,190
2018	2	102,544	159,360,632
2018	3	102,563	125,694,097
2018	4	102,572	85,848,806
2018	5	102,591	107,750,188
2018	6	102,618	143,151,796
2018	7	102,651	174,515,376
2018	8	102,692	170,658,381
2018	9	102,717	120,702,838
2018	10	102,745	105,251,648
2018	11	102,791	101,149,336
2018	12	102,840	144,457,170
TOTAL			1,588,939,458

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

YR	MONTH	FORECAST CUST	FORECAST KWH
2018	1	15,666	74,164,964
2018	2	15,668	60,122,161
2018	3	15,672	59,289,366
2018	4	15,675	58,552,257
2018	5	15,679	64,297,664
2018	6	15,683	71,591,260
2018	7	15,687	83,810,898
2018	8	15,690	86,374,639
2018	9	15,693	75,414,343
2018	10	15,696	73,039,390
2018	11	15,699	63,837,374
2018	12	15,702	67,001,134
TOTAL			837,495,450

VIRGINIA ELECTRIC AND POWER COMPANY  
DOMINION ENERGY NORTH CAROLINA  
RIDER C  
FORECAST KWH SALES AND CUSTOMERS  
BY REVENUE CLASS  
12 MONTHS ENDED December 31, 2018

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

YR	MONTH	FORECAST CUST	FORECAST KWH
2018	1	61	179,931,187
2018	2	61	107,725,606
2018	3	61	120,141,821
2018	4	61	179,929,169
2018	5	61	143,735,053
2018	6	61	137,626,590
2018	7	61	193,441,230
2018	8	61	113,323,196
2018	9	61	143,060,559
2018	10	61	149,362,916
2018	11	61	144,871,322
2018	12	61	126,972,556
-----			-----
TOTAL			1,740,121,205

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

YR	MONTH	FORECAST CUST	FORECAST KWH
2018	1	393	837,570
2018	2	394	639,782
2018	3	394	681,156
2018	4	394	702,348
2018	5	394	752,804
2018	6	394	666,019
2018	7	394	743,722
2018	8	394	737,667
2018	9	394	622,627
2018	10	394	687,211
2018	11	394	642,810
2018	12	394	687,211
-----			-----
TOTAL			8,400,927

VIRGINIA ELECTRIC AND POWER COMPANY  
DOMINION ENERGY NORTH CAROLINA  
RIDER C  
FORECAST KWH SALES AND CUSTOMERS  
BY REVENUE CLASS  
12 MONTHS ENDED December 31, 2018

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

YR	MONTH	FORECAST CUST	FORECAST KWH
2018	1	1,851	11,179,070
2018	2	1,850	10,874,292
2018	3	1,850	9,957,878
2018	4	1,850	9,003,884
2018	5	1,850	9,878,227
2018	6	1,850	11,078,879
2018	7	1,851	11,974,432
2018	8	1,850	12,546,392
2018	9	1,848	11,726,488
2018	10	1,847	10,652,971
2018	11	1,846	9,056,853
2018	12	1,846	8,939,375
-----			-----
TOTAL			126,868,741
			=====
			4,301,825,781

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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 12/31/2018 FORECAST KWH
RATE SCHEDULE	
1DF	2,951,366
1	1,570,657,381
1P	6,891,732
1T	1,089,029
1W	86,653
26	7,263,296
-----	-----
RC	1,588,939,458

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

	12 MOS ENDED 12/31/2018 FORECAST KWH
RATE SCHEDULE	
5	569,772,905
5C	5,228,272
5P	112,206,047
7	1,400,696
6C	5,228,714
6P & 6L	101,580,839
10	35,452,469
26	9,270,975
-----	-----
RC	840,140,917

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

	12 MOS ENDED 12/31/2018 FORECAST KWH
RATE SCHEDULE	
5	13,004,799
5P	1,309,597
6P & 6L	621,610,915
6VP	89,928,168

\* SCHEDULE NS IS ACTUAL KWH FOR THE 12 MONTHS ENDING DECEMBER 2016.

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)

RATE SCHEDULE	12 MOS ENDED 12/31/2018 FORECAST KWH
10	133,829,211
NS	826,025,926
26	344,355
-----	-----
RC	1,686,052,971

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

RATE SCHEDULE	12 MOS ENDED 12/31/2018 FORECAST KWH
30T	553,910
26	7,847,017
-----	-----
RC	8,400,927

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

RATE SCHEDULE	12 MOS ENDED 12/31/2018 FORECAST KWH
5P	2,191,522
30	78,994,572
42	42,758,279
26	278,901
-----	-----
RC	124,223,274
	=====
	4,247,757,547

\* SCHEDULE NS IS ACTUAL KWH FOR THE 12 MONTHS ENDING DECEMBER 2016.

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 12/31/2018 FORECAST KWH	OPT OUT KWH	12 MOS ENDED 12/31/2018 NET FORECAST KWH
1DF	2,951,366	0	2,951,366
1	1,570,657,381	0	1,570,657,381
1P	6,891,732	0	6,891,732
1T	1,089,029	0	1,089,029
1W	86,653	0	86,653
5	582,777,705	36,924	582,740,781
5C	5,228,272	0	5,228,272
5P	115,707,166	1,512,781	114,194,385
7	1,400,696	0	1,400,696
6C	5,228,714	0	5,228,714
6P & 6L	723,191,754	381,835,267	341,356,487
6VP	89,928,168	260,040,198	0
10	169,281,681	28,214,260	141,067,421
30	78,994,572	0	78,994,572
30T	553,910	0	553,910
42	42,758,279	0	42,758,279
NS	826,025,926	826,025,926	0
26	25,004,543	0	25,004,543
	=====	=====	=====
	4,247,757,547	1,497,665,356	2,920,204,221

\* SCHEDULE NS IS ACTUAL KWH FOR THE 12 MONTHS ENDING DECEMBER 2016.

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VIRGINIA ELECTRIC AND POWER COMPANY  
DOMINION ENERGY NORTH CAROLINA  
RIDER C  
REFLECTS FORECASTED NET KWH SALES  
12 MONTHS ENDED December 31, 2018  
KWH CATEGORIZED BY CUSTOMER CLASSES AND RATES SCHEDULES

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

	12 MOS ENDED 12/31/2018
RATE SCHEDULE	NET FORECAST KWH
1	1,570,657,381
1DF	2,951,366
1P	6,891,732
1T	1,089,029
1W	86,653
-----	-----
CLASS	1,581,676,162

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

	12 MOS ENDED 12/31/2018
RATE SCHEDULE	NET FORECAST KWH
30	78,994,572
42	42,758,279
5	582,740,782
5C	5,228,272
5P	114,194,385
7	1,400,696
-----	-----
CLASS	825,316,985

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

	12 MOS ENDED 12/31/2018
RATE SCHEDULE	NET FORECAST KWH
10	141,067,421
6C	5,228,714
6P & 6L	341,356,487
-----	-----
CLASS	487,652,622

VIRGINIA ELECTRIC AND POWER COMPANY  
DOMINION ENERGY NORTH CAROLINA  
RIDER C  
REFLECTS FORECASTED NET KWH SALES  
12 MONTHS ENDED December 31, 2018  
KWH CATEGORIZED BY CUSTOMER CLASSES AND RATES SCHEDULES

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

	12 MOS ENDED
RATE	12/31/2018
SCHEDULE	NET FORECAST KWH
6VP	0

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

	12 MOS ENDED
RATE	12/31/2018
SCHEDULE	NET FORECAST KWH
NS	0

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

	12 MOS ENDED
RATE	12/31/2018
SCHEDULE	NET FORECAST KWH
26	25,004,543

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

	12 MOS ENDED
RATE	12/31/2018
SCHEDULE	NET FORECAST KWH
30T	553,910
	=====
	2,920,204,222

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 12/31/2017 NET FORECAST KWH	CUSTOMER CLASS RATE W/OUT REG FEE	CUSTOMER CLASS RATE WITH REG FEE
RESIDENTIAL	\$1,791,897	1,581,676,162	\$0.00113	\$0.00113
SMALL GENERAL SERVICE & PUBLIC AUTHORITY	\$1,203,229	825,316,985	\$0.00146	\$0.00146
LARGE GENERAL SERVICE	\$547,343	487,652,622	\$0.00112	\$0.00112
6VP	\$0	0	0	0
NS	\$0	0	0	0
OUTDOOR LIGHTING	\$0	25,004,543	\$0.00000	\$0.00000
TRAFFIC LIGHTING	\$0	553,910	\$0.00000	\$0.00000
	=====	=====		
	\$3,542,469	2,920,204,222		

(1) FROM MLL SCHEDULE 3 PAGE 4

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

<b>CUSTOMER CLASS</b>	<b>RATE SCHEDULE</b>	<b>RIDER C RATE</b>
RESIDENTIAL	1	\$ 0.00113
	1DF	\$ 0.00113
	1P	\$ 0.00113
	1T	\$ 0.00113
	1W	\$ 0.00113
SMALL GENERAL SERVICE & PUBLIC AUTHORITY	30	\$ 0.00146
	42	\$ 0.00146
	5	\$ 0.00146
	5C	\$ 0.00146
	5P	\$ 0.00146
	7	\$ 0.00146
LARGE GENERAL SERVICE	10	\$ 0.00112
	6C	\$ 0.00112
	6P	\$ 0.00112
	6L	\$ 0.00112
6VP	6VP	\$ -
NS	NS	\$ -
OUTDOOR LIGHTING	26	\$ -
TRAFFIC LIGHTING	30T	\$ -

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

Month	Year	Total Monthly KWH
January	2016	125,846,252
February	2016	126,146,718
March	2016	122,848,517
April	2016	123,798,729
May	2016	142,869,966
June	2016	133,435,673
July	2016	128,011,420
August	2016	130,783,815
September	2016	109,147,359
October	2016	124,541,035
November	2016	118,267,296
December	2016	111,968,576
TOTAL		1,497,665,356

RIDER C

DEMAND 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.

Rate Schedule	Cents per kWh Charge
Schedule 1	0.113 ¢/kWh
Schedule 1DF	0.113 ¢/kWh
Schedule 1P	0.113 ¢/kWh
Schedule 1T	0.113 ¢/kWh
Schedule 1W	0.113 ¢/kWh
Schedule 5	0.146 ¢/kWh
Schedule 5C	0.146 ¢/kWh
Schedule 5P	0.146 ¢/kWh
Schedule 6C	0.112 ¢/kWh
Schedule 6L	0.112 ¢/kWh
Schedule 6P	0.112 ¢/kWh
Schedule 6VP	0.000 ¢/kWh
Schedule 7	0.146 ¢/kWh
Schedule NS	0.000 ¢/kWh
Schedule 10	0.112 ¢/kWh
Schedule 26	0.000 ¢/kWh
Schedule 30	0.146 ¢/kWh
Schedule 30T	0.000 ¢/kWh
Schedule 42	0.146 ¢/kWh

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 12/31/2017 NET FORECAST KWH	CUSTOMER CLASS RATE W/OUT REG FEE	CUSTOMER CLASS RATE WITH REG FEE
RESIDENTIAL	\$104,662	1,581,676,162	\$0.00007	\$0.00007
SMALL GENERAL SERVICE & PUBLIC AUTHORITY	\$67,200	825,316,985	\$0.00008	\$0.00008
LARGE GENERAL SERVICE	\$30,569	487,652,622	\$0.00006	\$0.00006
6VP	\$0	0	0	0
NS	\$0	0	0	0
OUTDOOR LIGHTING	\$0	25,004,543	\$0.00000	\$0.00000
TRAFFIC LIGHTING	\$0	553,910	\$0.00000	\$0.00000
	=====	=====		
	\$202,430	2,920,204,222		

(1) FROM MLL SCHEDULE 3 PAGE 2

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Aug 15 2017

**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	\$ 0.00007
	1DF	\$ 0.00007
	1P	\$ 0.00007
	1T	\$ 0.00007
	1W	\$ 0.00007
SMALL GENERAL SERVICE & PUBLIC AUTHORITY	30	\$ 0.00008
	42	\$ 0.00008
	5	\$ 0.00008
	5C	\$ 0.00008
	5P	\$ 0.00008
	7	\$ 0.00008
LARGE GENERAL SERVICE	10	\$ 0.00006
	6C	\$ 0.00006
	6P	\$ 0.00006
	6L	\$ 0.00006
6VP	6VP	\$ -
NS	NS	\$ -
OUTDOOR LIGHTING	26	\$ -
TRAFFIC LIGHTING	30T	\$ -

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	0.007 ¢/kWh
Schedule 1DF	0.007 ¢/kWh
Schedule 1P	0.007 ¢/kWh
Schedule 1T	0.007 ¢/kWh
Schedule 1W	0.007 ¢/kWh
Schedule 5	0.008 ¢/kWh
Schedule 5C	0.008 ¢/kWh
Schedule 5P	0.008 ¢/kWh
Schedule 6C	0.006 ¢/kWh
Schedule 6L	0.006 ¢/kWh
Schedule 6P	0.006 ¢/kWh
Schedule 6VP	0.000 ¢/kWh
Schedule 7	0.008 ¢/kWh
Schedule NS	0.000 ¢/kWh
Schedule 10	0.006 ¢/kWh
Schedule 26	0.000 ¢/kWh
Schedule 30	0.008 ¢/kWh
Schedule 30T	0.000 ¢/kWh
Schedule 42	0.008 ¢/kWh

Filed 08-15-17  
Electric-North Carolina

Superseding Filing Effective For Usage On  
and After 01-01-17. This Filing Effective  
For Usage On and After 01-01-18.

## DOCKET NO. E-22, SUB 545

**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 LOW INCOME PROGRAM**

**SUMMARY**

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Residential Average Base Rate (E)=(D)/(C)
<b>1</b>	2016	1	1,252,951	\$79,688	\$0.06360
<b>2</b>	2016	2	1,501,060	\$95,469	\$0.06360
<b>3</b>	2016	3	1,536,581	\$97,686	\$0.06357
<b>4</b>	2016	4	1,020,564	\$64,902	\$0.06359
<b>5</b>	2016	5	786,423	\$50,008	\$0.06359
<b>6</b>	2016	6	1,250,732	\$95,406	\$0.07628
<b>7</b>	2016	7	1,278,244	\$97,496	\$0.07627
<b>8</b>	2016	8	1,703,652	\$129,937	\$0.07627
<b>9</b>	2016	9	1,394,097	\$106,311	\$0.07626
<b>10</b>	2016	10	960,882	\$61,078	\$0.06356
<b>11</b>	2016	11	921,017	\$68,553	\$0.07443
<b>12</b>	2016	12	1,408,390	\$104,808	\$0.07442

\*Base Revenue reflects Schedule 1 and 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 6 on pages 2 to 3 in Columns (C) & (D) of each residential rate table.

**DOCKET NO. E-22, SUB 545**

**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 LOW INCOME PROGRAM**

**RATE SCHEDULE - 1**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>kWh (C)</b>	<b>Base Revenue* (D)</b>	<b>Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	1,251,315	\$79,599	\$0.06361
<b>2</b>	2016	2	1,499,104	\$95,378	\$0.06362
<b>3</b>	2016	3	1,534,774	\$97,598	\$0.06359
<b>4</b>	2016	4	1,019,221	\$64,833	\$0.06361
<b>5</b>	2016	5	785,469	\$49,953	\$0.06360
<b>6</b>	2016	6	1,249,282	\$95,310	\$0.07629
<b>7</b>	2016	7	1,276,258	\$97,381	\$0.07630
<b>8</b>	2016	8	1,701,709	\$129,836	\$0.07630
<b>9</b>	2016	9	1,391,851	\$106,189	\$0.07629
<b>10</b>	2016	10	959,516	\$61,006	\$0.06358
<b>11</b>	2016	11	920,046	\$68,487	\$0.07444
<b>12</b>	2016	12	1,406,625	\$104,715	\$0.07444

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

**DOCKET NO. E-22, SUB 545**

**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 LOW INCOME PROGRAM**

**RATE SCHEDULE - 1P**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>kWh (C)</b>	<b>Base Revenue* (D)</b>	<b>Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	1,636	\$89	\$0.05440
<b>2</b>	2016	2	1,956	\$91	\$0.04652
<b>3</b>	2016	3	1,807	\$88	\$0.04870
<b>4</b>	2016	4	1,343	\$69	\$0.05138
<b>5</b>	2016	5	954	\$55	\$0.05765
<b>6</b>	2016	6	1,450	\$96	\$0.06621
<b>7</b>	2016	7	1,986	\$115	\$0.05791
<b>8</b>	2016	8	1,943	\$101	\$0.05198
<b>9</b>	2016	9	2,246	\$122	\$0.05432
<b>10</b>	2016	10	1,366	\$72	\$0.05271
<b>11</b>	2016	11	971	\$66	\$0.06797
<b>12</b>	2016	12	1,765	\$93	\$0.05269

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

**DOCKET NO. E-22, SUB 545**

**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**

<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>Residential Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	3,215,552	\$203,398	\$0.06325
<b>2</b>	2016	2	3,963,705	\$250,558	\$0.06321
<b>3</b>	2016	3	2,806,849	\$177,548	\$0.06326
<b>4</b>	2016	4	2,605,818	\$164,957	\$0.06330
<b>5</b>	2016	5	2,671,072	\$169,106	\$0.06331
<b>6</b>	2016	6	4,869,955	\$369,735	\$0.07592
<b>7</b>	2016	7	6,393,810	\$485,089	\$0.07587
<b>8</b>	2016	8	7,319,528	\$555,350	\$0.07587
<b>9</b>	2016	9	5,980,044	\$453,776	\$0.07588
<b>10</b>	2016	10	3,779,124	\$239,035	\$0.06325
<b>11</b>	2016	11	2,088,977	\$154,719	\$0.07406
<b>12</b>	2016	12	3,032,645	\$224,422	\$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 7 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 HEAT PUMP TUNE UP PROGRAM**

**RATE SCHEDULE - 1**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>kWh (C)</b>	<b>Base Revenue* (D)</b>	<b>Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	3,193,358	\$202,020	\$0.06326
<b>2</b>	2016	2	3,941,013	\$249,329	\$0.06327
<b>3</b>	2016	3	2,791,795	\$176,684	\$0.06329
<b>4</b>	2016	4	2,588,045	\$163,854	\$0.06331
<b>5</b>	2016	5	2,648,074	\$167,737	\$0.06334
<b>6</b>	2016	6	4,827,083	\$366,765	\$0.07598
<b>7</b>	2016	7	6,347,779	\$482,141	\$0.07595
<b>8</b>	2016	8	7,260,917	\$551,502	\$0.07595
<b>9</b>	2016	9	5,931,378	\$450,609	\$0.07597
<b>10</b>	2016	10	3,748,564	\$237,312	\$0.06331
<b>11</b>	2016	11	2,074,943	\$153,677	\$0.07406
<b>12</b>	2016	12	3,007,686	\$222,742	\$0.07406

\*Base Revenue reflects the applicable rate schedules non-fuel revenues , excluding 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 HEAT PUMP TUNE UP PROGRAM**

**RATE SCHEDULE - 1P**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>kWh (C)</b>	<b>Base Revenue* (D)</b>	<b>Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	14,233	\$915	\$0.06429
<b>2</b>	2016	2	14,884	\$780	\$0.05241
<b>3</b>	2016	3	10,516	\$591	\$0.05620
<b>4</b>	2016	4	12,029	\$748	\$0.06218
<b>5</b>	2016	5	14,972	\$869	\$0.05804
<b>6</b>	2016	6	27,354	\$1,844	\$0.06741
<b>7</b>	2016	7	30,501	\$1,832	\$0.06006
<b>8</b>	2016	8	38,300	\$2,324	\$0.06068
<b>9</b>	2016	9	33,418	\$2,030	\$0.06075
<b>10</b>	2016	10	20,439	\$1,074	\$0.05255
<b>11</b>	2016	11	9,053	\$702	\$0.07754
<b>12</b>	2016	12	17,159	\$1,154	\$0.06725

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

**DOCKET NO. E-22, SUB 545**

**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**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>kWh (C)</b>	<b>Base Revenue* (D)</b>	<b>Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	7,961	\$463	\$0.05816
<b>2</b>	2016	2	7,808	\$449	\$0.05751
<b>3</b>	2016	3	4,538	\$273	\$0.06016
<b>4</b>	2016	4	5,744	\$355	\$0.06180
<b>5</b>	2016	5	8,026	\$500	\$0.06230
<b>6</b>	2016	6	15,518	\$1,126	\$0.07256
<b>7</b>	2016	7	15,530	\$1,116	\$0.07186
<b>8</b>	2016	8	20,311	\$1,524	\$0.07503
<b>9</b>	2016	9	15,248	\$1,137	\$0.07457
<b>10</b>	2016	10	10,121	\$649	\$0.06412
<b>11</b>	2016	11	4,981	\$340	\$0.06826
<b>12</b>	2016	12	7,800	\$526	\$0.06744

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

**DOCKET NO. E-22, SUB 545**

**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**

<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>Residential Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	1,240,848	\$78,494	\$0.06326
<b>2</b>	2016	2	1,538,910	\$97,384	\$0.06328
<b>3</b>	2016	3	1,093,397	\$69,193	\$0.06328
<b>4</b>	2016	4	1,035,936	\$65,592	\$0.06332
<b>5</b>	2016	5	1,098,301	\$69,553	\$0.06333
<b>6</b>	2016	6	1,928,442	\$146,504	\$0.07597
<b>7</b>	2016	7	2,474,390	\$187,871	\$0.07593
<b>8</b>	2016	8	2,777,182	\$210,879	\$0.07593
<b>9</b>	2016	9	2,299,371	\$174,650	\$0.07596
<b>10</b>	2016	10	1,512,720	\$95,767	\$0.06331
<b>11</b>	2016	11	834,686	\$61,855	\$0.07411
<b>12</b>	2016	12	1,161,787	\$86,016	\$0.07404

\*Base Revenue reflects Schedule 1 and 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 8 on pages 2 to 3 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 HEAT PUMP UPGRADE PROGRAM**

**RATE SCHEDULE - 1**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>kWh (C)</b>	<b>Base Revenue* (D)</b>	<b>Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	1,239,560	\$78,402	\$0.06325
<b>2</b>	2016	2	1,537,585	\$97,261	\$0.06326
<b>3</b>	2016	3	1,092,559	\$69,127	\$0.06327
<b>4</b>	2016	4	1,035,062	\$65,528	\$0.06331
<b>5</b>	2016	5	1,096,329	\$69,447	\$0.06335
<b>6</b>	2016	6	1,924,783	\$146,269	\$0.07599
<b>7</b>	2016	7	2,470,021	\$187,595	\$0.07595
<b>8</b>	2016	8	2,771,757	\$210,533	\$0.07596
<b>9</b>	2016	9	2,295,555	\$174,398	\$0.07597
<b>10</b>	2016	10	1,511,043	\$95,685	\$0.06332
<b>11</b>	2016	11	833,525	\$61,745	\$0.07408
<b>12</b>	2016	12	1,160,827	\$85,922	\$0.07402

\*Base Revenue reflects the applicable rate schedules non-fuel revenues , excluding 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 HEAT PUMP UPGRADE PROGRAM

RATE SCHEDULE - 1P

Line Number	Year (A)	Month (B)	kWh (C)	Base Revenue* (D)	Average Base Rate (E)=(D)/(C)
1	2016	1	1,288	\$92	\$0.07143
2	2016	2	1,325	\$123	\$0.09283
3	2016	3	838	\$66	\$0.07876
4	2016	4	874	\$64	\$0.07323
5	2016	5	1,972	\$106	\$0.05375
6	2016	6	3,659	\$235	\$0.06423
7	2016	7	4,369	\$276	\$0.06317
8	2016	8	5,425	\$346	\$0.06378
9	2016	9	3,816	\$252	\$0.06604
10	2016	10	1,677	\$82	\$0.04890
11	2016	11	1,161	\$110	\$0.09475
12	2016	12	960	\$94	\$0.09792

\*Base Revenue reflects the applicable rate schedules non-fuel revenues , excluding 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 DUCT TESTING & SEALING PROGRAM**

**RATE SCHEDULE - 1**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>kWh (C)</b>	<b>Base Revenue* (D)</b>	<b>Residential Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	357,105	\$22,562	\$0.06318
<b>2</b>	2016	2	413,564	\$26,125	\$0.06317
<b>3</b>	2016	3	293,075	\$18,523	\$0.06320
<b>4</b>	2016	4	318,132	\$20,112	\$0.06322
<b>5</b>	2016	5	367,723	\$23,230	\$0.06317
<b>6</b>	2016	6	695,745	\$52,729	\$0.07579
<b>7</b>	2016	7	918,287	\$69,562	\$0.07575
<b>8</b>	2016	8	1,012,998	\$76,763	\$0.07578
<b>9</b>	2016	9	880,771	\$66,741	\$0.07578
<b>10</b>	2016	10	581,707	\$36,729	\$0.06314
<b>11</b>	2016	11	262,962	\$19,422	\$0.07386
<b>12</b>	2016	12	333,948	\$24,688	\$0.07393

\*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.

**DOCKET NO. E-22, SUB 545**

**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**

<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>Residential Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	1,491,984	\$94,521	\$0.06335
<b>2</b>	2016	2	1,820,696	\$115,352	\$0.06336
<b>3</b>	2016	3	1,296,619	\$82,257	\$0.06344
<b>4</b>	2016	4	1,034,264	\$65,704	\$0.06353
<b>5</b>	2016	5	880,797	\$55,944	\$0.06352
<b>6</b>	2016	6	1,356,850	\$103,250	\$0.07610
<b>7</b>	2016	7	1,679,610	\$127,599	\$0.07597
<b>8</b>	2016	8	1,927,770	\$146,357	\$0.07592
<b>9</b>	2016	9	1,582,359	\$120,209	\$0.07597
<b>10</b>	2016	10	1,116,596	\$70,740	\$0.06335
<b>11</b>	2016	11	920,505	\$68,281	\$0.07418
<b>12</b>	2016	12	1,341,722	\$99,406	\$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 10 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**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>kWh (C)</b>	<b>Base Revenue* (D)</b>	<b>Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	1,476,199	\$93,692	\$0.06347
<b>2</b>	2016	2	1,804,480	\$114,549	\$0.06348
<b>3</b>	2016	3	1,283,601	\$81,499	\$0.06349
<b>4</b>	2016	4	1,022,691	\$64,935	\$0.06349
<b>5</b>	2016	5	872,534	\$55,368	\$0.06346
<b>6</b>	2016	6	1,342,983	\$102,225	\$0.07612
<b>7</b>	2016	7	1,662,718	\$126,468	\$0.07606
<b>8</b>	2016	8	1,905,352	\$144,997	\$0.07610
<b>9</b>	2016	9	1,566,604	\$119,176	\$0.07607
<b>10</b>	2016	10	1,105,798	\$70,090	\$0.06338
<b>11</b>	2016	11	910,660	\$67,627	\$0.07426
<b>12</b>	2016	12	1,321,352	\$98,198	\$0.07432

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

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EXCLUDES CUSTOMER CHARGES, ALL FUEL COMPONENTS AND OPT-OUT CUSTOMERS  
NORTH CAROLINA JURISDICTIONAL**

**RESIDENTIAL HOME ENERGY CHECK UP PROGRAM**

**RATE SCHEDULE - 1P**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>kWh (C)</b>	<b>Base Revenue* (D)</b>	<b>Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	15,091	\$786	\$0.05208
<b>2</b>	2016	2	15,204	\$738	\$0.04854
<b>3</b>	2016	3	12,325	\$714	\$0.05793
<b>4</b>	2016	4	10,990	\$732	\$0.06661
<b>5</b>	2016	5	7,673	\$538	\$0.07012
<b>6</b>	2016	6	13,173	\$966	\$0.07333
<b>7</b>	2016	7	15,791	\$1,031	\$0.06529
<b>8</b>	2016	8	21,101	\$1,249	\$0.05919
<b>9</b>	2016	9	14,687	\$937	\$0.06380
<b>10</b>	2016	10	10,237	\$613	\$0.05988
<b>11</b>	2016	11	9,268	\$612	\$0.06603
<b>12</b>	2016	12	19,582	\$1,151	\$0.05878

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

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RESIDENTIAL HOME ENERGY CHECK UP PROGRAM

RATE SCHEDULE - 1T

Line Number	Year (A)	Month (B)	kWh (C)	Base Revenue* (D)	Average Base Rate (E)=(D)/(C)
1	2016	1	694	\$43	\$0.06196
2	2016	2	1,012	\$65	\$0.06423
3	2016	3	693	\$44	\$0.06349
4	2016	4	583	\$37	\$0.06346
5	2016	5	590	\$38	\$0.06441
6	2016	6	694	\$59	\$0.08501
7	2016	7	1,101	\$100	\$0.09083
8	2016	8	1,317	\$111	\$0.08428
9	2016	9	1,068	\$96	\$0.08989
10	2016	10	561	\$37	\$0.06595
11	2016	11	577	\$42	\$0.07279
12	2016	12	788	\$57	\$0.07234

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

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## RESIDENTIAL INCOME AND AGE QUALIFYING HOME IMPROVEMENT

## RATE SCHEDULE - 1

Line Number	Year (A)	Month (B)	Sum of kWh (C)	Sum of Base Revenue* (D)	Residential Average Base Rate (E)=(D)/(C)
1	2016	1	100,324	\$6,386	\$0.06365
2	2016	2	129,479	\$8,242	\$0.06366
3	2016	3	197,817	\$12,556	\$0.06347
4	2016	4	96,026	\$6,110	\$0.06363
5	2016	5	82,068	\$5,207	\$0.06345
6	2016	6	158,077	\$12,039	\$0.07616
7	2016	7	142,423	\$10,853	\$0.07620
8	2016	8	192,662	\$14,692	\$0.07626
9	2016	9	151,517	\$11,552	\$0.07624
10	2016	10	104,469	\$6,635	\$0.06351
11	2016	11	125,885	\$9,362	\$0.07437
12	2016	12	180,565	\$13,430	\$0.07438

\*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 JURISDICTIONAL**

**RESIDENTIAL 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>Residential Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	112,819,294	\$7,167,248	\$0.06353
<b>2</b>	2016	2	138,319,404	\$8,785,040	\$0.06351
<b>3</b>	2016	3	116,991,861	\$7,434,407	\$0.06355
<b>4</b>	2016	4	91,802,763	\$5,833,884	\$0.06355
<b>5</b>	2016	5	80,947,031	\$5,143,701	\$0.06354
<b>6</b>	2016	6	131,156,782	\$9,994,058	\$0.07620
<b>7</b>	2016	7	147,738,814	\$11,250,533	\$0.07615
<b>8</b>	2016	8	197,054,822	\$15,009,330	\$0.07617
<b>9</b>	2016	9	152,054,272	\$11,581,569	\$0.07617
<b>10</b>	2016	10	107,830,169	\$6,846,854	\$0.06350
<b>11</b>	2016	11	81,487,679	\$6,060,915	\$0.07438
<b>12</b>	2016	12	127,019,167	\$9,445,055	\$0.07436

\*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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**RESIDENTIAL LIGHTING PROGRAM**

**RATE SCHEDULE - 1**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>kWh (C)</b>	<b>Base Revenue* (D)</b>	<b>Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	112,268,170	\$7,137,432	\$0.06357
<b>2</b>	2016	2	137,658,167	\$8,751,922	\$0.06358
<b>3</b>	2016	3	116,488,978	\$7,406,670	\$0.06358
<b>4</b>	2016	4	91,356,076	\$5,807,923	\$0.06357
<b>5</b>	2016	5	80,574,515	\$5,121,380	\$0.06356
<b>6</b>	2016	6	130,448,600	\$9,947,002	\$0.07625
<b>7</b>	2016	7	146,888,323	\$11,198,688	\$0.07624
<b>8</b>	2016	8	196,018,487	\$14,946,636	\$0.07625
<b>9</b>	2016	9	151,225,059	\$11,530,738	\$0.07625
<b>10</b>	2016	10	107,258,856	\$6,816,376	\$0.06355
<b>11</b>	2016	11	81,077,230	\$6,033,529	\$0.07442
<b>12</b>	2016	12	126,371,612	\$9,405,162	\$0.07442

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

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**RESIDENTIAL LIGHTING PROGRAM**

**RATE SCHEDULE - 1P**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>kWh (C)</b>	<b>Base Revenue* (D)</b>	<b>Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	469,558	\$25,067	\$0.05338
<b>2</b>	2016	2	561,634	\$27,198	\$0.04843
<b>3</b>	2016	3	415,799	\$22,621	\$0.05440
<b>4</b>	2016	4	378,245	\$21,916	\$0.05794
<b>5</b>	2016	5	306,185	\$18,239	\$0.05957
<b>6</b>	2016	6	597,058	\$39,087	\$0.06547
<b>7</b>	2016	7	726,175	\$42,641	\$0.05872
<b>8</b>	2016	8	871,104	\$50,424	\$0.05789
<b>9</b>	2016	9	711,575	\$42,122	\$0.05920
<b>10</b>	2016	10	480,281	\$24,888	\$0.05182
<b>11</b>	2016	11	357,162	\$23,606	\$0.06609
<b>12</b>	2016	12	554,068	\$33,552	\$0.06056

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

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**RESIDENTIAL LIGHTING PROGRAM**

**RATE SCHEDULE - 1T**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>kWh (C)</b>	<b>Base Revenue* (D)</b>	<b>Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	81,566	\$4,749	\$0.05822
<b>2</b>	2016	2	99,603	\$5,920	\$0.05944
<b>3</b>	2016	3	87,084	\$5,116	\$0.05875
<b>4</b>	2016	4	68,442	\$4,045	\$0.05910
<b>5</b>	2016	5	66,331	\$4,082	\$0.06154
<b>6</b>	2016	6	111,124	\$7,969	\$0.07171
<b>7</b>	2016	7	124,316	\$9,204	\$0.07404
<b>8</b>	2016	8	165,231	\$12,270	\$0.07426
<b>9</b>	2016	9	117,638	\$8,709	\$0.07403
<b>10</b>	2016	10	91,032	\$5,590	\$0.06141
<b>11</b>	2016	11	53,287	\$3,780	\$0.07094
<b>12</b>	2016	12	93,487	\$6,341	\$0.06783

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

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NORTH CAROLINA JURISDICTIONAL**

**COMMERCIAL HVAC UPGRADE 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>Residential Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	579,956	\$65,503	\$0.11294
<b>2</b>	2016	2	791,748	\$56,329	\$0.07115
<b>3</b>	2016	3	583,337	\$47,111	\$0.08076
<b>4</b>	2016	4	553,586	\$45,080	\$0.08143
<b>5</b>	2016	5	453,557	\$41,518	\$0.09154
<b>6</b>	2016	6	431,876	\$40,042	\$0.09272
<b>7</b>	2016	7	505,414	\$45,083	\$0.08920
<b>8</b>	2016	8	632,167	\$47,831	\$0.07566
<b>9</b>	2016	9	868,197	\$56,746	\$0.06536
<b>10</b>	2016	10	715,942	\$50,233	\$0.07016
<b>11</b>	2016	11	614,886	\$53,193	\$0.08651
<b>12</b>	2016	12	753,714	\$72,195	\$0.09579

\* Base Revenue reflects Rate Schedules 5, 6P, and 30 non-fuel revenues, excluding the 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 4 in Columns (C) & (D) of each non residential rate table.

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**COMMERCIAL HVAC UPGRADE PROGRAM**

**RATE SCHEDULE - 30**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>kWh (C)</b>	<b>Base Revenue* (D)</b>	<b>Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	24,576	\$1,303	\$0.05302
<b>2</b>	2016	2	27,648	\$1,450	\$0.05245
<b>3</b>	2016	3	30,912	\$1,662	\$0.05377
<b>4</b>	2016	4	22,656	\$1,363	\$0.06016
<b>5</b>	2016	5	27,072	\$1,633	\$0.06032
<b>6</b>	2016	6	33,216	\$1,987	\$0.05982
<b>7</b>	2016	7	42,624	\$2,673	\$0.06271
<b>8</b>	2016	8	55,872	\$3,679	\$0.06585
<b>9</b>	2016	9	44,352	\$2,922	\$0.06588
<b>10</b>	2016	10	32,832	\$1,954	\$0.05952
<b>11</b>	2016	11	29,376	\$1,851	\$0.06301
<b>12</b>	2016	12	25,344	\$1,589	\$0.06270

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

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**COMMERCIAL HVAC UPGRADE PROGRAM**

**RATE SCHEDULE - 5**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>kWh (C)</b>	<b>Base Revenue* (D)</b>	<b>Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	12,880	\$705	\$0.05474
<b>2</b>	2016	2	11,600	\$656	\$0.05655
<b>3</b>	2016	3	10,800	\$616	\$0.05704
<b>4</b>	2016	4	7,680	\$465	\$0.06055
<b>5</b>	2016	5	7,360	\$447	\$0.06073
<b>6</b>	2016	6	10,160	\$644	\$0.06339
<b>7</b>	2016	7	13,040	\$802	\$0.06150
<b>8</b>	2016	8	11,920	\$746	\$0.06258
<b>9</b>	2016	9	12,720	\$777	\$0.06108
<b>10</b>	2016	10	9,360	\$542	\$0.05791
<b>11</b>	2016	11	9,760	\$627	\$0.06424
<b>12</b>	2016	12	9,120	\$622	\$0.06820

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

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**COMMERCIAL HVAC UPGRADE PROGRAM**

**RATE SCHEDULE - 6P**

Line Number	Year (A)	Month (B)	kWh (C)	Base Revenue* (D)	Average Base Rate (E)=(D)/(C)
1	2016	1	542,500	\$63,495	\$0.11704
2	2016	2	752,500	\$54,223	\$0.07206
3	2016	3	541,625	\$44,833	\$0.08277
4	2016	4	523,250	\$43,252	\$0.08266
5	2016	5	419,125	\$39,438	\$0.09410
6	2016	6	388,500	\$37,411	\$0.09630
7	2016	7	449,750	\$41,608	\$0.09251
8	2016	8	564,375	\$43,406	\$0.07691
9	2016	9	811,125	\$53,047	\$0.06540
10	2016	10	673,750	\$47,737	\$0.07085
11	2016	11	575,750	\$50,715	\$0.08809
12	2016	12	719,250	\$69,984	\$0.09730

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

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COMMERCIAL LIGHTING PROGRAM

SUMMARY

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Residential Average Base Rate (E)=(D)/(C)
1	2016	1	1,484,919	\$121,053	\$0.08152
2	2016	2	2,159,880	\$144,107	\$0.06672
3	2016	3	2,365,250	\$159,847	\$0.06758
4	2016	4	1,952,125	\$126,636	\$0.06487
5	2016	5	1,812,890	\$122,150	\$0.06738
6	2016	6	1,970,307	\$130,269	\$0.06612
7	2016	7	2,185,919	\$147,837	\$0.06763
8	2016	8	2,409,623	\$180,886	\$0.07507
9	2016	9	2,673,690	\$185,801	\$0.06949
10	2016	10	2,293,356	\$138,995	\$0.06061
11	2016	11	2,095,410	\$154,229	\$0.07360
12	2016	12	2,210,630	\$169,259	\$0.07657

\* Base Revenue reflects Rate Schedules 5, 5P, 6P, 10, 30, and 42 non-fuel revenues, excluding the 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 non residential rate table.

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**COMMERCIAL LIGHTING PROGRAM**

**RATE SCHEDULE - 10**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>kWh (C)</b>	<b>Base Revenue* (D)</b>	<b>Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	398,142	\$24,270	\$0.06096
<b>2</b>	2016	2	441,514	\$22,083	\$0.05002
<b>3</b>	2016	3	479,784	\$19,183	\$0.03998
<b>4</b>	2016	4	467,798	\$17,145	\$0.03665
<b>5</b>	2016	5	461,505	\$15,176	\$0.03288
<b>6</b>	2016	6	519,155	\$16,837	\$0.03243
<b>7</b>	2016	7	554,955	\$23,205	\$0.04181
<b>8</b>	2016	8	539,589	\$48,964	\$0.09074
<b>9</b>	2016	9	630,502	\$48,934	\$0.07761
<b>10</b>	2016	10	574,579	\$22,489	\$0.03914
<b>11</b>	2016	11	558,124	\$24,352	\$0.04363
<b>12</b>	2016	12	578,363	\$26,005	\$0.04496

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

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**COMMERCIAL LIGHTING PROGRAM**

**RATE SCHEDULE - 30**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>kWh (C)</b>	<b>Base Revenue* (D)</b>	<b>Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	39,824	\$2,236	\$0.05615
<b>2</b>	2016	2	41,072	\$2,257	\$0.05495
<b>3</b>	2016	3	44,096	\$2,453	\$0.05563
<b>4</b>	2016	4	41,880	\$2,464	\$0.05883
<b>5</b>	2016	5	44,240	\$2,547	\$0.05757
<b>6</b>	2016	6	50,528	\$3,213	\$0.06359
<b>7</b>	2016	7	46,360	\$2,920	\$0.06299
<b>8</b>	2016	8	45,448	\$2,807	\$0.06176
<b>9</b>	2016	9	57,104	\$3,597	\$0.06299
<b>10</b>	2016	10	58,504	\$3,269	\$0.05588
<b>11</b>	2016	11	40,384	\$2,640	\$0.06537
<b>12</b>	2016	12	44,760	\$2,772	\$0.06193

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

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NORTH CAROLINA JURISDICTIONAL**

**COMMERCIAL LIGHTING PROGRAM**

**RATE SCHEDULE - 42**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>kWh (C)</b>	<b>Base Revenue* (D)</b>	<b>Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	57,767	\$2,820	\$0.04882
<b>2</b>	2016	2	71,154	\$3,538	\$0.04972
<b>3</b>	2016	3	65,836	\$3,303	\$0.05017
<b>4</b>	2016	4	53,196	\$2,706	\$0.05087
<b>5</b>	2016	5	45,087	\$2,289	\$0.05077
<b>6</b>	2016	6	52,077	\$3,834	\$0.07362
<b>7</b>	2016	7	58,626	\$4,248	\$0.07246
<b>8</b>	2016	8	60,907	\$4,383	\$0.07196
<b>9</b>	2016	9	65,230	\$4,821	\$0.07391
<b>10</b>	2016	10	56,875	\$2,897	\$0.05094
<b>11</b>	2016	11	40,307	\$2,270	\$0.05632
<b>12</b>	2016	12	58,396	\$3,121	\$0.05345

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

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**NORTH CAROLINA DEMAND SIDE MANAGEMENT  
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NORTH CAROLINA JURISDICTIONAL**

**COMMERCIAL LIGHTING PROGRAM**

**RATE SCHEDULE - 5**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>kWh (C)</b>	<b>Base Revenue* (D)</b>	<b>Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	275,823	\$15,793	\$0.05726
<b>2</b>	2016	2	322,099	\$17,987	\$0.05584
<b>3</b>	2016	3	309,063	\$17,605	\$0.05696
<b>4</b>	2016	4	332,866	\$18,646	\$0.05602
<b>5</b>	2016	5	310,517	\$17,193	\$0.05537
<b>6</b>	2016	6	334,098	\$20,923	\$0.06263
<b>7</b>	2016	7	372,325	\$22,749	\$0.06110
<b>8</b>	2016	8	379,942	\$23,277	\$0.06126
<b>9</b>	2016	9	362,213	\$22,026	\$0.06081
<b>10</b>	2016	10	315,673	\$17,527	\$0.05552
<b>11</b>	2016	11	280,066	\$18,087	\$0.06458
<b>12</b>	2016	12	320,515	\$19,869	\$0.06199

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

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**COMMERCIAL LIGHTING PROGRAM**

**RATE SCHEDULE - 5P**

Line Number	Year (A)	Month (B)	kWh (C)	Base Revenue* (D)	Average Base Rate (E)=(D)/(C)
1	2016	1	170,863	\$12,439	\$0.07280
2	2016	2	148,291	\$11,437	\$0.07713
3	2016	3	149,596	\$11,608	\$0.07760
4	2016	4	162,135	\$12,456	\$0.07682
5	2016	5	157,916	\$12,515	\$0.07925
6	2016	6	197,199	\$14,462	\$0.07334
7	2016	7	196,403	\$14,938	\$0.07606
8	2016	8	203,362	\$15,344	\$0.07545
9	2016	9	203,266	\$14,907	\$0.07334
10	2016	10	181,725	\$13,103	\$0.07210
11	2016	11	159,779	\$13,787	\$0.08629
12	2016	12	169,096	\$13,431	\$0.07943

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

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**COMMERCIAL LIGHTING PROGRAM**

**RATE SCHEDULE - 6P**

Line Number	Year (A)	Month (B)	kWh (C)	Base Revenue* (D)	Average Base Rate (E)=(D)/(C)
1	2016	1	542,500	\$63,495	\$0.11704
2	2016	2	1,135,750	\$86,805	\$0.07643
3	2016	3	1,316,875	\$105,695	\$0.08026
4	2016	4	894,250	\$73,219	\$0.08188
5	2016	5	793,625	\$72,430	\$0.09126
6	2016	6	817,250	\$71,000	\$0.08688
7	2016	7	957,250	\$79,777	\$0.08334
8	2016	8	1,180,375	\$86,111	\$0.07295
9	2016	9	1,355,375	\$91,516	\$0.06752
10	2016	10	1,106,000	\$79,710	\$0.07207
11	2016	11	1,016,750	\$93,093	\$0.09156
12	2016	12	1,039,500	\$104,061	\$0.10011

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

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NON-RESIDENTIAL ENERGY AUDIT PROGRAM

SUMMARY

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E)=(D)/(C)
1	2016	1	3,941,354	\$ 261,737	\$0.06641
2	2016	2	3,906,237	\$ 263,021	\$0.06733
3	2016	3	3,901,917	\$ 270,774	\$0.06940
4	2016	4	3,958,657	\$ 262,580	\$0.06633
5	2016	5	4,029,900	\$ 269,266	\$0.06682
6	2016	6	5,086,293	\$ 342,216	\$0.06728
7	2016	7	5,519,334	\$ 370,829	\$0.06719
8	2016	8	5,959,281	\$ 396,001	\$0.06645
9	2016	9	5,712,820	\$ 380,695	\$0.06664
10	2016	10	4,748,458	\$ 304,073	\$0.06404
11	2016	11	4,062,495	\$ 309,672	\$0.07623
12	2016	12	4,013,043	\$ 296,108	\$0.07379

\* Base Revenue reflects Rate Schedules 5, 5P, 6P, 30, and 42 non-fuel revenues, excluding the 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 6 in Columns (C) & (D) of each non residential rate table.

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**NON-RESIDENTIAL ENERGY AUDIT PROGRAM**

**RATE SCHEDULE - 30**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>kWh (C)</b>	<b>Base Revenue* (D)</b>	<b>Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	168,669	\$10,286	\$0.06098
<b>2</b>	2016	2	142,685	\$9,084	\$0.06366
<b>3</b>	2016	3	150,981	\$9,991	\$0.06617
<b>4</b>	2016	4	155,616	\$9,581	\$0.06157
<b>5</b>	2016	5	177,092	\$11,177	\$0.06311
<b>6</b>	2016	6	161,163	\$10,368	\$0.06433
<b>7</b>	2016	7	351,237	\$23,845	\$0.06789
<b>8</b>	2016	8	266,281	\$16,722	\$0.06280
<b>9</b>	2016	9	315,629	\$19,885	\$0.06300
<b>10</b>	2016	10	265,920	\$15,044	\$0.05657
<b>11</b>	2016	11	188,500	\$13,590	\$0.07210
<b>12</b>	2016	12	153,037	\$10,411	\$0.06803

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

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**NON-RESIDENTIAL ENERGY AUDIT PROGRAM**

**RATE SCHEDULE - 42**

Line Number	Year (A)	Month (B)	kWh (C)	Base Revenue* (D)	Average Base Rate (E)=(D)/(C)
1	2016	1	85,920	\$4,568	\$0.05317
2	2016	2	67,440	\$3,600	\$0.05338
3	2016	3	68,880	\$3,579	\$0.05196
4	2016	4	70,560	\$3,731	\$0.05288
5	2016	5	74,160	\$3,961	\$0.05341
6	2016	6	106,800	\$8,034	\$0.07522
7	2016	7	98,160	\$7,413	\$0.07552
8	2016	8	157,440	\$11,469	\$0.07285
9	2016	9	128,320	\$9,627	\$0.07502
10	2016	10	139,840	\$7,060	\$0.05049
11	2016	11	71,680	\$4,207	\$0.05869
12	2016	12	77,360	\$4,445	\$0.05746

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

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**NON-RESIDENTIAL ENERGY AUDIT PROGRAM****RATE SCHEDULE - 5**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>kWh (C)</b>	<b>Base Revenue* (D)</b>	<b>Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	1,240,629	\$66,934	\$0.05395
<b>2</b>	2016	2	1,193,818	\$64,135	\$0.05372
<b>3</b>	2016	3	1,189,793	\$64,616	\$0.05431
<b>4</b>	2016	4	1,263,795	\$67,961	\$0.05378
<b>5</b>	2016	5	1,366,508	\$73,232	\$0.05359
<b>6</b>	2016	6	1,904,755	\$111,195	\$0.05838
<b>7</b>	2016	7	1,880,245	\$108,654	\$0.05779
<b>8</b>	2016	8	2,329,437	\$134,855	\$0.05789
<b>9</b>	2016	9	2,115,555	\$122,486	\$0.05790
<b>10</b>	2016	10	1,493,689	\$78,098	\$0.05229
<b>11</b>	2016	11	1,416,662	\$84,432	\$0.05960
<b>12</b>	2016	12	1,215,096	\$72,481	\$0.05965

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

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**NON-RESIDENTIAL ENERGY AUDIT PROGRAM****RATE SCHEDULE - 5P**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>kWh (C)</b>	<b>Base Revenue* (D)</b>	<b>Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	1,957,136	\$146,094	\$0.07465
<b>2</b>	2016	2	2,015,094	\$152,298	\$0.07558
<b>3</b>	2016	3	1,995,463	\$158,207	\$0.07928
<b>4</b>	2016	4	1,999,186	\$148,540	\$0.07430
<b>5</b>	2016	5	1,944,440	\$149,885	\$0.07708
<b>6</b>	2016	6	2,359,475	\$177,969	\$0.07543
<b>7</b>	2016	7	2,554,592	\$192,594	\$0.07539
<b>8</b>	2016	8	2,603,123	\$197,102	\$0.07572
<b>9</b>	2016	9	2,570,116	\$193,074	\$0.07512
<b>10</b>	2016	10	2,297,009	\$167,552	\$0.07294
<b>11</b>	2016	11	1,950,953	\$170,779	\$0.08754
<b>12</b>	2016	12	2,057,850	\$166,873	\$0.08109

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

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**NON-RESIDENTIAL ENERGY AUDIT PROGRAM**

**RATE SCHEDULE - 6P**

Line Number	Year (A)	Month (B)	kWh (C)	Base Revenue* (D)	Average Base Rate (E)=(D)/(C)
1	2016	1	489,000	\$33,855	\$0.06923
2	2016	2	487,200	\$33,904	\$0.06959
3	2016	3	496,800	\$34,381	\$0.06920
4	2016	4	469,500	\$32,767	\$0.06979
5	2016	5	467,700	\$31,011	\$0.06631
6	2016	6	554,100	\$34,650	\$0.06253
7	2016	7	635,100	\$38,323	\$0.06034
8	2016	8	603,000	\$35,853	\$0.05946
9	2016	9	583,200	\$35,623	\$0.06108
10	2016	10	552,000	\$36,319	\$0.06580
11	2016	11	434,700	\$36,664	\$0.08434
12	2016	12	509,700	\$41,898	\$0.08220

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

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**NON RESIDENTIAL DUCT TESTING & SEALING 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>Residential Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	5,391,241	\$340,753	\$0.06320
<b>2</b>	2016	2	5,673,340	\$355,715	\$0.06270
<b>3</b>	2016	3	5,392,182	\$349,090	\$0.06474
<b>4</b>	2016	4	5,168,540	\$327,664	\$0.06340
<b>5</b>	2016	5	5,219,138	\$332,899	\$0.06378
<b>6</b>	2016	6	6,851,847	\$451,303	\$0.06587
<b>7</b>	2016	7	7,397,403	\$485,938	\$0.06569
<b>8</b>	2016	8	8,205,673	\$530,645	\$0.06467
<b>9</b>	2016	9	7,820,213	\$507,661	\$0.06492
<b>10</b>	2016	10	6,328,982	\$386,214	\$0.06102
<b>11</b>	2016	11	5,268,739	\$379,590	\$0.07205
<b>12</b>	2016	12	5,570,328	\$386,571	\$0.06940

\* Base Revenue reflects Rate Schedules 5, 5P, 6P, 30 and 42 non-fuel revenues, excluding the 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 16 on pages 2 to 6 in Columns (C) & (D) of each non residential rate table.

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**NON RESIDENTIAL DUCT TESTING & SEALING PROGRAM**

**RATE SCHEDULE - 30**

Line Number	Year (A)	Month (B)	kWh (C)	Base Revenue* (D)	Average Base Rate (E)=(D)/(C)
1	2016	1	625,044	\$36,093	\$0.05774
2	2016	2	699,636	\$39,799	\$0.05689
3	2016	3	653,001	\$38,329	\$0.05870
4	2016	4	558,922	\$33,166	\$0.05934
5	2016	5	648,863	\$38,048	\$0.05864
6	2016	6	729,717	\$44,822	\$0.06142
7	2016	7	949,722	\$59,926	\$0.06310
8	2016	8	896,631	\$53,175	\$0.05931
9	2016	9	1,027,149	\$62,326	\$0.06068
10	2016	10	822,072	\$45,878	\$0.05581
11	2016	11	629,670	\$41,576	\$0.06603
12	2016	12	680,724	\$43,334	\$0.06366

\*Base Revenue reflects the applicable rate schedules non-fuel revenues , excluding Basic Customer Charge and excludes 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>kWh (C)</b>	<b>Base Revenue* (D)</b>	<b>Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	311,550	\$16,962	\$0.05444
<b>2</b>	2016	2	343,917	\$17,969	\$0.05225
<b>3</b>	2016	3	255,530	\$13,773	\$0.05390
<b>4</b>	2016	4	216,479	\$11,786	\$0.05444
<b>5</b>	2016	5	201,236	\$10,328	\$0.05132
<b>6</b>	2016	6	264,386	\$19,900	\$0.07527
<b>7</b>	2016	7	257,497	\$19,037	\$0.07393
<b>8</b>	2016	8	339,303	\$24,916	\$0.07343
<b>9</b>	2016	9	317,120	\$23,769	\$0.07495
<b>10</b>	2016	10	288,233	\$14,685	\$0.05095
<b>11</b>	2016	11	202,891	\$11,852	\$0.05842
<b>12</b>	2016	12	294,596	\$17,233	\$0.05850

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

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**NON RESIDENTIAL DUCT TESTING & SEALING PROGRAM**

**RATE SCHEDULE - 5**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>kWh (C)</b>	<b>Base Revenue* (D)</b>	<b>Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	2,289,787	\$124,973	\$0.05458
<b>2</b>	2016	2	2,407,828	\$130,991	\$0.05440
<b>3</b>	2016	3	2,262,076	\$123,505	\$0.05460
<b>4</b>	2016	4	2,237,937	\$121,258	\$0.05418
<b>5</b>	2016	5	2,254,427	\$121,314	\$0.05381
<b>6</b>	2016	6	3,275,514	\$193,148	\$0.05897
<b>7</b>	2016	7	3,380,849	\$197,086	\$0.05829
<b>8</b>	2016	8	4,071,103	\$237,587	\$0.05836
<b>9</b>	2016	9	3,618,870	\$211,077	\$0.05833
<b>10</b>	2016	10	2,680,592	\$140,824	\$0.05253
<b>11</b>	2016	11	2,275,517	\$137,712	\$0.06052
<b>12</b>	2016	12	2,273,294	\$137,203	\$0.06035

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

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**RATE SCHEDULE - 5P**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>kWh (C)</b>	<b>Base Revenue* (D)</b>	<b>Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	1,879,860	\$144,929	\$0.07710
<b>2</b>	2016	2	1,969,659	\$151,277	\$0.07680
<b>3</b>	2016	3	1,958,175	\$156,637	\$0.07999
<b>4</b>	2016	4	1,915,502	\$145,893	\$0.07616
<b>5</b>	2016	5	1,880,012	\$147,402	\$0.07840
<b>6</b>	2016	6	2,286,430	\$174,740	\$0.07642
<b>7</b>	2016	7	2,491,035	\$190,998	\$0.07667
<b>8</b>	2016	8	2,551,236	\$195,611	\$0.07667
<b>9</b>	2016	9	2,515,674	\$191,368	\$0.07607
<b>10</b>	2016	10	2,209,585	\$164,451	\$0.07443
<b>11</b>	2016	11	1,913,461	\$168,658	\$0.08814
<b>12</b>	2016	12	2,013,614	\$165,931	\$0.08240

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

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**RATE SCHEDULE - 6P**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>kWh (C)</b>	<b>Base Revenue* (D)</b>	<b>Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	285,000	\$17,796	\$0.06244
<b>2</b>	2016	2	252,300	\$15,679	\$0.06214
<b>3</b>	2016	3	263,400	\$16,846	\$0.06396
<b>4</b>	2016	4	239,700	\$15,561	\$0.06492
<b>5</b>	2016	5	234,600	\$15,807	\$0.06738
<b>6</b>	2016	6	295,800	\$18,693	\$0.06319
<b>7</b>	2016	7	318,300	\$18,891	\$0.05935
<b>8</b>	2016	8	347,400	\$19,356	\$0.05572
<b>9</b>	2016	9	341,400	\$19,121	\$0.05601
<b>10</b>	2016	10	328,500	\$20,376	\$0.06203
<b>11</b>	2016	11	247,200	\$19,792	\$0.08006
<b>12</b>	2016	12	308,100	\$22,870	\$0.07423

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

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NORTH CAROLINA JURISDICTIONAL

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	2016	1	338,880	\$19,563	\$0.05773
2	2016	2	279,240	\$16,233	\$0.05813
3	2016	3	282,933	\$17,088	\$0.06040
4	2016	4	295,881	\$16,815	\$0.05683
5	2016	5	311,121	\$18,244	\$0.05864
6	2016	6	445,324	\$29,188	\$0.06554
7	2016	7	421,868	\$27,160	\$0.06438
8	2016	8	672,358	\$42,519	\$0.06324
9	2016	9	533,675	\$34,316	\$0.06430
10	2016	10	451,350	\$24,514	\$0.05431
11	2016	11	250,979	\$16,100	\$0.06415
12	2016	12	299,842	\$19,139	\$0.06383

\* Base Revenue reflects Rate Schedules 5, 30, and 42 non-fuel revenues, excluding the 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 17 on pages 2 to 4 in Columns (C) & (D) of each non residential rate table.

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**NON-RESIDENTIAL HEATING & COOLING EFFICIENCY**

**RATE SCHEDULE - 30**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>kWh (C)</b>	<b>Base Revenue* (D)</b>	<b>Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	110,349	\$6,674	\$0.06048
<b>2</b>	2016	2	93,005	\$5,788	\$0.06223
<b>3</b>	2016	3	99,141	\$6,533	\$0.06590
<b>4</b>	2016	4	104,496	\$6,267	\$0.05997
<b>5</b>	2016	5	117,332	\$7,206	\$0.06142
<b>6</b>	2016	6	161,163	\$10,368	\$0.06433
<b>7</b>	2016	7	168,357	\$10,372	\$0.06161
<b>8</b>	2016	8	166,201	\$10,361	\$0.06234
<b>9</b>	2016	9	199,709	\$12,388	\$0.06203
<b>10</b>	2016	10	165,840	\$9,559	\$0.05764
<b>11</b>	2016	11	118,660	\$8,252	\$0.06954
<b>12</b>	2016	12	98,317	\$6,528	\$0.06640

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

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**NON-RESIDENTIAL HEATING & COOLING EFFICIENCY**

**RATE SCHEDULE - 42**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>kWh (C)</b>	<b>Base Revenue* (D)</b>	<b>Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	85,920	\$4,568	\$0.05317
<b>2</b>	2016	2	67,440	\$3,600	\$0.05338
<b>3</b>	2016	3	68,880	\$3,579	\$0.05196
<b>4</b>	2016	4	70,560	\$3,731	\$0.05288
<b>5</b>	2016	5	74,160	\$3,961	\$0.05341
<b>6</b>	2016	6	106,800	\$8,034	\$0.07522
<b>7</b>	2016	7	98,160	\$7,413	\$0.07552
<b>8</b>	2016	8	157,440	\$11,469	\$0.07285
<b>9</b>	2016	9	128,320	\$9,627	\$0.07502
<b>10</b>	2016	10	139,840	\$7,060	\$0.05049
<b>11</b>	2016	11	71,680	\$4,207	\$0.05869
<b>12</b>	2016	12	77,360	\$4,445	\$0.05746

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

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**NON-RESIDENTIAL HEATING & COOLING EFFICIENCY****RATE SCHEDULE - 5**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>kWh (C)</b>	<b>Base Revenue* (D)</b>	<b>Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	142,611	\$8,321	\$0.05835
<b>2</b>	2016	2	118,795	\$6,845	\$0.05762
<b>3</b>	2016	3	114,912	\$6,976	\$0.06071
<b>4</b>	2016	4	120,825	\$6,817	\$0.05642
<b>5</b>	2016	5	119,629	\$7,077	\$0.05916
<b>6</b>	2016	6	177,361	\$10,786	\$0.06081
<b>7</b>	2016	7	155,351	\$9,375	\$0.06035
<b>8</b>	2016	8	348,717	\$20,689	\$0.05933
<b>9</b>	2016	9	205,646	\$12,301	\$0.05982
<b>10</b>	2016	10	145,670	\$7,895	\$0.05420
<b>11</b>	2016	11	60,639	\$3,641	\$0.06004
<b>12</b>	2016	12	124,165	\$8,166	\$0.06577

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

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NON-RESIDENTIAL LIGHTING SYSTEMS AND CONTROLS

SUMMARY

Line Number	Year (A)	Month (B)	Sum of kWh** (C)	Sum of Base* Revenue** (D)	Average Base Rate (E)=(D)/(C)
1	2016	1	1,873,926	\$156,763	\$0.08365
2	2016	2	2,041,803	\$145,178	\$0.07110
3	2016	3	1,738,073	\$130,628	\$0.07516
4	2016	4	1,828,799	\$133,332	\$0.07291
5	2016	5	1,550,157	\$118,981	\$0.07675
6	2016	6	1,811,682	\$141,746	\$0.07824
7	2016	7	2,002,645	\$153,136	\$0.07647
8	2016	8	2,182,884	\$160,213	\$0.07340
9	2016	9	2,358,466	\$162,841	\$0.06905
10	2016	10	1,963,503	\$133,837	\$0.06816
11	2016	11	1,588,251	\$129,099	\$0.08128
12	2016	12	1,992,754	\$164,892	\$0.08275

\* Base Revenue reflects Rate Schedules 5, 5P, 6P, and 42 non-fuel revenues, excluding the 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 18 on pages 2 to 5 in Columns (C) & (D) of each non residential rate table.

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**NON-RESIDENTIAL LIGHTING SYSTEMS AND CONTROLS**

**RATE SCHEDULE - 42**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>kWh (C)</b>	<b>Base Revenue* (D)</b>	<b>Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	121,200	\$5,917	\$0.04882
<b>2</b>	2016	2	91,680	\$4,228	\$0.04612
<b>3</b>	2016	3	87,680	\$4,009	\$0.04572
<b>4</b>	2016	4	102,720	\$4,832	\$0.04704
<b>5</b>	2016	5	114,320	\$5,338	\$0.04669
<b>6</b>	2016	6	122,560	\$8,636	\$0.07046
<b>7</b>	2016	7	166,320	\$12,061	\$0.07252
<b>8</b>	2016	8	164,320	\$11,541	\$0.07023
<b>9</b>	2016	9	166,400	\$11,760	\$0.07067
<b>10</b>	2016	10	136,240	\$6,368	\$0.04674
<b>11</b>	2016	11	98,480	\$5,431	\$0.05515
<b>12</b>	2016	12	93,280	\$4,726	\$0.05066

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

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**NON-RESIDENTIAL LIGHTING SYSTEMS AND CONTROLS**

**RATE SCHEDULE - 5**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>kWh (C)</b>	<b>Base Revenue* (D)</b>	<b>Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	553,538	\$32,989	\$0.05960
<b>2</b>	2016	2	590,998	\$35,206	\$0.05957
<b>3</b>	2016	3	506,805	\$30,946	\$0.06106
<b>4</b>	2016	4	588,552	\$35,735	\$0.06072
<b>5</b>	2016	5	425,069	\$24,425	\$0.05746
<b>6</b>	2016	6	609,325	\$39,676	\$0.06511
<b>7</b>	2016	7	601,243	\$37,567	\$0.06248
<b>8</b>	2016	8	626,454	\$39,102	\$0.06242
<b>9</b>	2016	9	610,911	\$38,600	\$0.06318
<b>10</b>	2016	10	527,028	\$30,437	\$0.05775
<b>11</b>	2016	11	386,689	\$25,141	\$0.06502
<b>12</b>	2016	12	555,663	\$36,217	\$0.06518

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

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**NON-RESIDENTIAL LIGHTING SYSTEMS AND CONTROLS**

**RATE SCHEDULE - 5P**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>kWh (C)</b>	<b>Base Revenue* (D)</b>	<b>Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	656,688	\$54,362	\$0.08278
<b>2</b>	2016	2	606,625	\$51,521	\$0.08493
<b>3</b>	2016	3	601,963	\$50,840	\$0.08446
<b>4</b>	2016	4	614,277	\$49,513	\$0.08060
<b>5</b>	2016	5	591,643	\$49,780	\$0.08414
<b>6</b>	2016	6	691,297	\$56,023	\$0.08104
<b>7</b>	2016	7	785,332	\$61,900	\$0.07882
<b>8</b>	2016	8	827,735	\$66,164	\$0.07993
<b>9</b>	2016	9	770,030	\$59,434	\$0.07718
<b>10</b>	2016	10	626,485	\$49,295	\$0.07869
<b>11</b>	2016	11	527,332	\$47,812	\$0.09067
<b>12</b>	2016	12	624,561	\$53,965	\$0.08640

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

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**NON-RESIDENTIAL LIGHTING SYSTEMS AND CONTROLS**

**RATE SCHEDULE - 6P**

<b>Line Number</b>	<b>Year (A)</b>	<b>Month (B)</b>	<b>kWh (C)</b>	<b>Base Revenue* (D)</b>	<b>Average Base Rate (E)=(D)/(C)</b>
<b>1</b>	2016	1	542,500	\$63,495	\$0.11704
<b>2</b>	2016	2	752,500	\$54,223	\$0.07206
<b>3</b>	2016	3	541,625	\$44,833	\$0.08277
<b>4</b>	2016	4	523,250	\$43,252	\$0.08266
<b>5</b>	2016	5	419,125	\$39,438	\$0.09410
<b>6</b>	2016	6	388,500	\$37,411	\$0.09630
<b>7</b>	2016	7	449,750	\$41,608	\$0.09251
<b>8</b>	2016	8	564,375	\$43,406	\$0.07691
<b>9</b>	2016	9	811,125	\$53,047	\$0.06540
<b>10</b>	2016	10	673,750	\$47,737	\$0.07085
<b>11</b>	2016	11	575,750	\$50,715	\$0.08809
<b>12</b>	2016	12	719,250	\$69,984	\$0.09730

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

**Rule R8-69(f)(l)(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, January 1, 2018 through December 31, 2018, are provided in the following table:

<b>MONTH</b>	<b>PROJKWH</b>
Jan-18	416,511,981
Feb-18	338,722,473
Mar-18	315,764,318
Apr-18	334,036,464
May-18	326,413,936
Jun-18	364,114,544
Jul-18	464,485,658
Aug-18	383,640,275
Sep-18	351,526,855
Oct-18	338,994,136
Nov-18	319,557,695
Dec-18	348,057,446
<b>TOTAL</b>	<b>4,301,825,781</b>

**Rule R8-69(f)(l)(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	0.113 ¢/kWh
Small General Service & Public Authority	0.146 ¢/kWh
Large General Service	0.112 ¢/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	0.007 ¢/kWh
Small General Service & Public Authority	0.008 ¢/kWh
Large General Service	0.006 ¢/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 18,074,033 kWh during the 12 months ended December 31, 2016. A similar review identified industrial sales of 1,479,591,323 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	2016	125,846,252
February	2016	126,146,718
March	2016	122,848,517
April	2016	123,798,729
May	2016	142,869,966
June	2016	133,435,673
July	2016	128,011,420
August	2016	130,783,815
September	2016	109,147,359
October	2016	124,541,035
November	2016	118,267,296
December	2016	111,968,576
<b>TOTAL</b>		<b>1,497,665,356</b>

**Rule R8-69(f)(l)(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