

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-2, SUB 1273

In the Matter of )  
Application by Duke Energy Progress, )  
LLC, for Approval of Demand-Side )  
Management and Energy Efficiency )  
Cost Recovery Rider Pursuant to N.C. )  
Gen. Stat. § 62-133.9 and Commission )  
Rule R8-69 ) TESTIMONY OF  
DAVID M. WILLIAMSON  
PUBLIC STAFF – NORTH  
CAROLINA UTILITIES  
COMMISSION

**BEFORE THE NORTH CAROLINA UTILITIES COMMISSION**

**DOCKET NO. E-2, SUB 1273**

**Testimony of David M. Williamson**

**On Behalf of the Public Staff**

**North Carolina Utilities Commission**

**September 9, 2021**

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

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

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

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

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

10 A. The purpose of my testimony is to present the Public Staff's analysis  
11 and recommendations with respect to the following aspects of the  
12 June 15, 2021 application, testimony, and exhibits, and August 11,  
13 2021 supplemental testimony and exhibit of Duke Energy Progress,  
14 LLC (DEP or the Company), for approval of its demand-side

1 management (DSM) and energy efficiency (EE) cost recovery rider  
2 for 2022 (2022 Rider).

3 This testimony discusses: (1) the portfolio of DSM/EE programs  
4 included in the proposed 2022 Rider, including modifications of those  
5 programs made pursuant to the Flexibility Guidelines;<sup>1</sup> (2) the  
6 ongoing cost-effectiveness of each DSM/EE program; (3) the  
7 concerns of the Public Staff with various DSM/EE programs going  
8 forward; and (4) the evaluation, measurement, and verification  
9 (EM&V) studies filed as Exhibits A through D to the testimony of  
10 Company witness Robert P. Evans, and the additional EM&V study  
11 filed as Evans Supplemental Exhibit E to the supplemental testimony  
12 of witness Evans.

13 **Q. WHAT DOCUMENTS HAVE YOU REVIEWED IN YOUR**  
14 **INVESTIGATION OF DEP’S PROPOSED 2022 RIDER?**

15 A. I reviewed the application and supporting testimony and exhibits, the  
16 Company’s supplemental testimony and exhibits, and DEP’s  
17 responses to Public Staff data requests. In addition, I reviewed  
18 previous Commission orders related to DEP’s DSM and EE

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<sup>1</sup> The “Flexibility Guidelines” were included as Attachment A to the Cost Recovery and Incentive Mechanism approved by the Commission by Order dated January 20, 2015 in Docket No. E-2, Sub 931.

1 programs and cost recovery rider proceedings, including the  
2 Commission's Order Approving DSM/EE Rider, Revising DSM/EE  
3 Mechanism, and Requiring Filing of Proposed Customer Notice  
4 issued November 27, 2017, in Docket No. E-2, Sub 1145, which  
5 revised the Cost Recovery and Incentive Mechanism originally  
6 approved in Docket No. E-2, Sub 931 (2017 Mechanism). I also  
7 reviewed the Cost Recovery and Incentive Mechanism approved on  
8 October 20, 2020 in the Commission's Order Approving Revisions to  
9 Demand-Side Management and Energy Efficiency Cost Recovery  
10 Mechanisms in Docket No. E-2, Sub 931 (2020 Mechanism).

11 **Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS.**

12 A. The Public Staff makes the following recommendations to the  
13 Commission:

- 14 1. That the method for calculating the Reserve Margin  
15 Adjustment Factor, as proposed, be accepted and used for  
16 the calculation of avoided capacity benefits for EE measures  
17 for future vintages;  
18
- 19 2. That the Company work with the Public Staff in an expeditious  
20 manner to draft language to incorporate in its cost recovery  
21 mechanism to reflect inclusion of the reserve margin  
22 adjustment factor; and  
23
- 24 3. That the Evaluation, Measurement, and Verification reports  
25 filed by DEP as Evans Exhibits A through D and Evans  
26 Supplemental Exhibit E be accepted.

27 **Q. ARE YOU PROVIDING ANY EXHIBITS WITH YOUR TESTIMONY?**

1 A. Yes. I have two exhibits, described below:

- 2 • Exhibit 1: Proposed Cost Effectiveness Scores for Vintage  
3 Years 2020, 2021, and 2022; and  
4 • Exhibit 2: Current Actual Cost Effectiveness Scores for  
5 Vintage Years 2018, 2019, and 2020.  
6

DSM/EE Programs in the 2022 Rider

7 **Q. PLEASE IDENTIFY THE DSM/EE PROGRAMS FOR WHICH DEP**  
8 **IS SEEKING COST RECOVERY THROUGH THE DSM/EE RIDER**  
9 **IN THIS PROCEEDING.**

10 A. In its proposed 2022 Rider, DEP included the costs and incentives  
11 associated with the following programs:

- 12 • Residential
- 13 ○ EE Education Program (Sub 1060)
- 14 ○ Multi-Family EE Program (Sub 1059)
- 15 ○ My Home Energy Report (MyHER) Program (formerly  
16 the EE Benchmarking Program) (Sub 989)
- 17 ○ Neighborhood Energy Saver (Low-Income) Program  
18 (Sub 952)
- 19 ○ Residential Smart \$aver EE Program (formerly HEIP)  
20 (Sub 936)
- 21 ○ New Construction Program (Sub 1021)
- 22 ○ Load Control Program (EnergyWise Home) (Sub 927)

- 1                   ○ Save Energy and Water Kit Program (Sub 1085) (now  
2                   part of the EE Appliance and Devices Program)
- 3                   ○ Energy Assessment Program (Sub 1094)
- 4                   ○ Low-Income Weatherization Pay for Performance  
5                   Program (Sub 1187)
- 6                   ○ Energy Efficient Appliance and Devices Program (Sub  
7                   936 and 1174)
- 8                   • Non-Residential
- 9                   ○ Non-Residential Smart \$aver Energy Efficient Products  
10                  and Assessment Program (formerly Energy Efficiency for  
11                  Business Program) (Sub 938)
- 12                  ○ Non-Residential Smart \$aver Performance Incentive  
13                  Program (Sub 1126)
- 14                  ○ Small Business Energy Saver Program (Sub 1022)
- 15                  ○ CIG Demand Response Automation (CIG DRA) Program  
16                  (Sub 953)
- 17                  ○ EnergyWise for Business (Sub 1086)
- 18                  • Combined Residential and Non-Residential
- 19                  ○ Energy Efficient Lighting Program (EE Lighting) (Sub 970)



1           annually in the rider proceedings. Pursuant to both the 2017  
2           Mechanism and 2020 Mechanism, cost-effectiveness is evaluated at  
3           both the program and portfolio levels. The Public Staff reviews cost-  
4           effectiveness using the Utility Cost (UC), Total Resource Cost (TRC),  
5           Participant, and Ratepayer Impact Measure (RIM) tests. Under each  
6           of these four tests, a result above 1.0 indicates that a program is  
7           cost-effective.

8           A program may be above 1.0 on one or more tests, and below 1.0 on  
9           other tests. The Public Staff, as well as the Revised Mechanism,  
10          places greater weight on the UC test.

11          The TRC test represents the combined utility and participant benefits  
12          that will result from implementation of the program; a result greater  
13          than 1.0 indicates that the benefits outweigh the costs of a program  
14          to both the utility and the program's participants. A UC test result  
15          greater than 1.0 means that the program is cost beneficial<sup>2</sup> to the  
16          utility (the overall system benefits are greater than the utility's costs,  
17          including incentives paid to participants). The Participant test is used  
18          to evaluate the benefits against the costs specific to those ratepayers

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<sup>2</sup> "Cost beneficial" in this sense represents the net benefit achieved by avoiding the need to construct additional generation, transmission, and distribution facilities related to providing electric utility service, and/or avoiding energy generation from existing or new facilities or purchased power.

1 who participate in a program. The RIM test is used to understand  
2 how ratepayers who do not participate in a program will be impacted  
3 by the program.

4 **Q. HOW IS COST-EFFECTIVENESS EVALUATED IN DSM/EE RIDER**  
5 **PROCEEDINGS?**

6 A. In each DSM/EE rider proceeding, DEP files the projected  
7 cost-effectiveness of each program and for the portfolio as a whole  
8 for the upcoming rate period (Evans Exhibit 7). Subsequently, when  
9 new DSM/EE programs are approved under Commission Rule  
10 R8-68, potential cost-effectiveness is evaluated over a three to five  
11 year period using estimates of participation and measure attributes  
12 that can be reasonably expected over that period. The evaluations in  
13 DSM/EE rider proceedings look more specifically at the actual  
14 performance of a typical measure, providing an indication of what to  
15 expect over the next year. Each year's rider filing is updated with the  
16 most current EM&V data and other program performance data.

17 **Q. HOW DOES THE PUBLIC STAFF ASSESS COST-**  
18 **EFFECTIVENESS IN EACH RIDER?**

19 A. The Public Staff compares the cost-effectiveness test projections  
20 from previous DSM/EE proceedings to the current filing, and  
21 develops a trend of cost-effectiveness projections that serves as the

1 basis for the Public Staff's recommendation on whether a program  
2 should: (1) continue as currently implemented, (2) be watched for  
3 signs of continued decreasing cost-effectiveness combined with  
4 Company efforts to improve cost-effectiveness, or (3) be terminated.

5 **Q. HOW DO THE FORWARD-LOOKING COST-EFFECTIVENESS**  
6 **TEST SCORES FILED IN THIS RIDER COMPARE TO SCORES**  
7 **IDENTIFIED IN PREVIOUS RIDERS?**

8 A. While many programs continue to be cost-effective, the TRC and UC  
9 scores as filed by the Company for all programs have a natural ebb  
10 and flow over the years of DSM/EE rider proceedings, meaning that  
11 the value of the inputs used in determining their scores change over  
12 time. Such changes are mainly driven by updates to the avoided cost  
13 rate determinations. In addition, changes to cost-effectiveness are  
14 also attributable to updates in the unit savings as determined through  
15 EM&V of the program. As programs mature and baseline standards  
16 increase, or as avoided cost rates decrease, it becomes more difficult  
17 for a program to produce cost-effective savings. On the other hand,  
18 some programs have experienced greater than expected

1 participation, which usually results in greater savings per unit cost,  
2 generally increasing cost-effectiveness.

3 Changes in the Company's forward-looking cost-effectiveness test  
4 scores are shown for Vintage Years 2020, 2021, and 2022 in  
5 Williamson Exhibit No. 1.

6 In addition to the forward-looking cost-effectiveness test results, as  
7 most of the EM&V reports for the Company's portfolio of programs  
8 are completed, the Company has been able to provide the Public  
9 Staff with updated, actual cost-effectiveness test results for each  
10 program and program year over the Vintage Years 2018, 2019, and  
11 2020.

12 **Q. HOW DO THE ACTUAL COST-EFFECTIVENESS TEST SCORES**  
13 **COMPARE TO THE FORWARD-LOOKING SCORES IDENTIFIED**  
14 **IN PREVIOUS RIDERS?**

15 A. Understanding that the incorporation period of EM&V within the  
16 portfolio may be different from one program to another, having a  
17 rolling record of actual cost-effectiveness results provides the Public  
18 Staff with confirmation that the activities within the portfolio have  
19 been and continue to be worthwhile. In addition, actual test results  
20 highlight programs that ultimately do not perform at or above the  
21 original projection. The actual cost-effectiveness results for DEP's

1 portfolio of programs are shown in Williamson Exhibit No. 2. These  
2 test results are a reflection of the annual updates in cost-  
3 effectiveness due to completed EM&V and finalized participation  
4 numbers.

5 The current state of actual cost-effectiveness is showing a downward  
6 trend for most programs, with regard to the TRC and UC tests. The  
7 remaining programs appear to be stable with their annual TRC and  
8 UC test results.

9 Program Performance

10 **Q. PLEASE DISCUSS THE PERFORMANCE OF THE PORTFOLIO.**

11 A. The Company's DSM/EE portfolio offers a wide variety of measures  
12 to support the everyday activities of its customers. Our review of  
13 program performance involves: (1) reviewing cost-effectiveness  
14 trends; and (2) reviewing Evans Exhibit 6, which provides specific  
15 information on each program's marketing strategy, potential areas of  
16 concern, and an overall qualitative analysis.

17 The Public Staff also uses its involvement in the Company's bi-  
18 monthly EE collaborative meetings to determine how a program is  
19 performing. During these meetings, the Collaborative discusses  
20 program performance (participation, customer engagement, and

1 potential barriers to entry and continuation of the program), recently  
2 completed EM&V and market potential study activities, and potential  
3 new program offerings.

4 Relying on all of the resources mentioned above, the Public Staff  
5 believes that the historical performance of the Company's programs  
6 is reasonable. However, I have a number of concerns with the  
7 portfolio that I wish to bring to the Commission's attention for  
8 consideration in future rider proceedings.

9 Public Staff's Concerns

10 **Q. PLEASE DISCUSS THE PUBLIC STAFF'S CONCERNS**  
11 **REGARDING THE PORTFOLIO.**

12 A. I have the following areas of concern regarding DEP's DSM/EE  
13 portfolio:

- 14 a. Changes to the Company's Referral Channel for its  
15 Residential Smart Saver EE program to incorporate  
16 referrals to services unrelated to DSM/EE; and  
17 b. The recovery of DSDR-related costs in the Company's  
18 DSM/EE rider.

19

20

1                    Residential Smart Saver EE Program – Referral Channel

2    **Q.    PLEASE DISCUSS THE SMART SAVER “FINDITDUKE”**  
3                    **PLATFORM.**

4    A.    As noted in my testimony in Sub 1252, in the last few years, the  
5                    Company transitioned its referral channel for the Residential Smart  
6                    Saver program into a broader channel providing a gamut of services  
7                    (EE-related and non EE-related) for customers.

8                    During the discovery process, the Public Staff learned that the  
9                    FindItDuke channel is available to both customers and non-  
10                    customers. Anyone needing a contractor for one of the “FindItDuke”  
11                    listed services may contact Duke Energy for recommendations  
12                    related to residential and non-residential projects. The contractors  
13                    have paid a fee to Duke Energy to participate in the program. All of  
14                    these revenues flow into the Residential Smart Saver Program.

15                    To begin the process, Duke Energy first refers a contractor to the  
16                    customer/non-customer. Several of the services provided through  
17                    this channel are not related to EE, such as building electrical  
18                    services, solar installation, and tree removal services. The contractor  
19                    will assess the problem that the customer is experiencing, then  
20                    perform the necessary work, either EE or non-EE, to resolve the  
21                    issue or complete the request.

1           Additionally, the Public Staff recently learned in the public  
2           stakeholder group meeting for the Electric Transportation Pilot that  
3           the Company intends to utilize the FindItDuke initiative to provide  
4           referrals to customers for installations of electric vehicle charging  
5           stations.

6           The Public Staff has concerns about how the FindItDuke channel  
7           allows all the benefits to flow to the Residential Smart Saver  
8           program, a residential EE program for DEP customers, when the  
9           work done is not always related to an actual EE installation, a  
10          residential customer, or even a customer of Duke Energy. While the  
11          Public Staff appreciates DEP's efforts to improve the cost-  
12          effectiveness of the Residential Smart Saver Program by having the  
13          revenues from the participating contractors flow to the program, it  
14          appears that some of these revenues should be booked into other  
15          non-EE accounts.

16       **Q.    DOES THE PUBLIC STAFF HAVE ANY RECOMMENDATIONS**  
17       **REGARDING THE SMART SAVER FINDITDUKE PLATFORM?**

18       A.    The Public Staff believes that the Company should work to refine its  
19          referral channel accounting to only allow referral dollars specifically  
20          related to Residential EE work to be included in the referral channel  
21          for the Residential Smart Saver program, and book other revenues

1 appropriately. Public Staff witness Maness discusses other  
2 accounting issues involving the FindItDuke platform.

3 Since the filing of the Company's application in this proceeding, the  
4 Public Staff and DEP have reached an agreement regarding the  
5 FindItDuke Program. The Public Staff and DEP have agreed to work  
6 to resolve the Public Staff's concerns with the FindItDuke program in  
7 the coming months and report on these efforts in their testimony filed  
8 in the 2022 DSM/EE Rider proceeding. Thus, for the purposes of this  
9 proceeding, the Public Staff and DEP have agreed that DEP should  
10 not be required to make any changes to its accounting related to  
11 FindItDuke costs or revenues at this time. This is subject to the  
12 caveat that the Public Staff is still in the process of reviewing data  
13 responses received from the Company regarding FindItDuke costs,  
14 and that once this review is complete, the Public Staff will file with  
15 the Commission any findings related to the program not already set  
16 forth in testimony.

17 Recovery of DSDR Costs

18 **Q. PLEASE DISCUSS YOUR CONCERNS REGARDING THE**  
19 **RECOVERY OF DSDR-RELATED COSTS**

1 A. In DEP's most recent rate case, the Commission ordered that "in its  
2 next general rate case DEP shall file a proposal for moving all DSDR  
3 and CVR costs into base rates."<sup>3</sup> The Commission explained that:

4 [w]hile the CVR conversion costs are included in the  
5 deferral requested in this rate case, DEP apparently  
6 plans to recover other DSDR-related GIP costs in the  
7 Company's DSM/EE rider. The Commission finds this  
8 bifurcated approach to cost recovery for CVR/DSDR to  
9 be potentially problematic. In addition, the Commission  
10 notes that fuel savings from CVR will flow to all  
11 customers via the fuel rider (as DSDR fuel savings do  
12 currently), while the bulk of costs for the legacy DSDR  
13 system are being recovered via DEP's DSM/EE rider.  
14 Pursuant to N.C.G.S. § 62-133.9(f), industrial  
15 customers can avoid DSM/EE rider charges and hence  
16 would receive the additional fuel savings benefits of the  
17 CVR conversion without paying their share of a major  
18 portion of the related system costs. Due to this  
19 misalignment of costs and benefits the Commission will  
20 require DEP to file a proposal to move all DSDR and  
21 CVR costs into base rates when the Company files its  
22 next general rate case.<sup>4</sup>

23 The Public Staff agrees with the Commission that the Company's  
24 DSDR-related costs belong in base rates, and looks forward to  
25 reviewing the Company's proposal for implementing this change in  
26 its next general rate case.

27 Avoided Cost

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<sup>3</sup> April 16, 2021 Order Accepting Stipulations, Granting Partial Rate Increase, and Requiring Customer Notice, Docket No. E-2, Sub 1219, at 202.

<sup>4</sup> *Id.* at 142.

1 **Q. HAS THE COMPANY PROPOSED A MODIFICATION TO THE**  
2 **WAY AVOIDED COST BENEFITS ARE VALUED?**

3 A. Yes, the Company has proposed to include in future proceedings a  
4 Reserve Margin Adjustment Factor (RMAF) as an adder in its  
5 calculation for avoided capacity rates that are applied to EE  
6 measures that contribute system demand savings.

7 **Q. PLEASE DESCRIBE THE RMAF ADJUSTMENT.**

8 A. The RMAF adjustment is an adder applied to the avoided capacity  
9 benefits associated with the demand reductions of EE measures on  
10 the system. No RMAF adjustment is made to the avoided capacity  
11 benefits generated from DSM programs as they are treated as  
12 resources for planning purposes. The RMAF adjustment attempts to  
13 align how the reserve margin is impacted by the inclusion of EE on  
14 the system. Given that EE measures are treated in the Integrated  
15 Resource Plan (IRP) as a reduction to the load forecast, it lowers the  
16 need to build capacity to, among other things, meet the reserve  
17 margin.

18 The RMAF percentage is applied to the capacity benefits of the EE  
19 programs much in the same manner as the Performance Adjustment  
20 Factor (PAF) is applied to the avoided capacity benefits provided by  
21 Qualifying Facilities (QFs) that are compensated under a standard

1 offer PURPA<sup>5</sup> contract. The RMAF attempts to treat the impacts of  
2 EE programs the same as the reserve margin does for the capacity  
3 resources identified in the IRP (i.e., 17%).

4 To take into consideration the PAF, the Company has proposed  
5 removing the impacts associated with the PAF from the 17% target,  
6 resulting in an RMAF percentage of 11.429%.

7 **Q. HAS THE COMPANY INCLUDED AN RMAF ADJUSTMENT IN**  
8 **PRIOR VINTAGES?**

9 A. Yes. An RMAF was included for the first time in Rider 12 in Docket  
10 No. E-2, Sub 1252 (Sub 1252). Prior to Vintage Year 2021, an RMAF  
11 has not been included in the avoided capacity rates calculated from  
12 the applicable Avoided Cost Proceeding, as determined from the  
13 Mechanism. However, a PAF has been recognized in both the  
14 Avoided Cost proceedings and in the DSM/EE application of avoided  
15 cost.

16 **Q. DID THE COMMISSION RULE ON THIS MATTER IN SUB 1252?**

17 A. Yes. The Commission, in its December 17, 2020 Order Approving  
18 DSM/EE Rider, Subject to Filing of Final Billing Factors and  
19 Proposed Customer Notice issued in Sub 1252 (Sub 1252 Order),

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<sup>5</sup> Public Utility Regulatory Policies Act (PURPA), Pub. L. 95-617, 92 Stat. 3117, enacted November 9, 1978.

1 stated that it agreed with Public Staff witness J. Robert Hinton that  
2 there was a theoretical basis for such an adjustment, and continued  
3 on to say that:

4 The Commission notes that EE is treated as a load  
5 resource in the Company's IRP and agrees that with  
6 every kW of load reduction that comes from EE, the  
7 amount of load serving capacity for which the  
8 Company must plan is reduced by more than one kW.  
9 However, exactly how much the reserve margin  
10 adjustment should be is not supported by substantial  
11 evidence in this docket. The Commission concludes  
12 that, for purposes of calculating the avoided capacity  
13 cost benefits for DSM/EE programs, deviation from the  
14 approved methodology for calculating the avoided  
15 capacity costs that form the basis for rates paid to QFs  
16 is appropriate and that this matter should be studied by  
17 the Collaborative.

18 **Q. DO YOU AGREE WITH THE COMPANY'S PROPOSAL OF THE**  
19 **RMAF ADJUSTMENT?**

20 A. Yes, for purposes of this proceeding, as currently proposed, the  
21 Public Staff accepts the inclusion of an RMAF adjustment.

22 However, the Public Staff opposes the Company making changes to  
23 the methodology for calculating inputs to the Mechanism or for  
24 calculating the Mechanism without first bringing the changes to the  
25 attention of the other parties for review and to the Commission for  
26 approval. The Company should explain in direct testimony in each  
27 rider proceeding the rationale for, and the effect of, any changes it  
28 has made, or wishes to make, in its methodology or calculations.

1 **Q. WHAT IS THE PUBLIC STAFF'S RECOMMENDATION?**

2 A. The Public Staff believes that the RMAF adjustment should be  
3 included in the calculation of avoided capacity benefits of EE  
4 measures for future vintages. In calculating the RMAF adjustment,  
5 the currently approved PAF should be removed from the recognized  
6 IRP reserve margin, as DEP has proposed in this proceeding.

7 In addition, the Company should collaborate with the Public Staff to  
8 codify this language in its cost recovery mechanism in an expeditious  
9 manner in order to reflect this process change.

10 EM&V

11 **Q. HAVE YOU REVIEWED THE EM&V REPORTS FILED BY DEP?**

12 A. Yes. The Public Staff contracted the services of GDS Associates,  
13 Inc. (GDS) to assist with review of EM&V. With GDS's assistance, I  
14 have reviewed the EM&V reports filed in this proceeding as Evans  
15 Exhibits A through D, as well as Evans Supplemental Exhibit E.

16 I also reviewed previous Commission orders to determine if DEP  
17 complied with provisions regarding EM&V contained in those orders.

18 My review leads me to conclude that the Company is complying with  
19 the various Commission orders regarding EM&V of their DSM/EE  
20 portfolio.

1 **Q. DO YOU HAVE ANY RECOMMENDATIONS REGARDING THE**  
2 **EM&V REPORTS YOU REVIEWED?**

3 A. I have recommendations regarding the EM&V reports for the Save  
4 Energy and Water Kit (SEWK) Program (Evans Exhibit A) and Non-  
5 Residential Smart Saver Prescriptive Program (Evans Exhibit C).

6 **Q. PLEASE EXPLAIN YOUR RECOMMENDATION FOR THE SEWK**  
7 **PROGRAM.**

8 A. The savings and impacts of the SEWK program were evaluated by  
9 Nexant (Evans Exhibit A) for the period spanning September 2018  
10 to August 2019. The Public Staff's recommendation in the recent  
11 DEP proceeding (Sub 1252) noted that a continued review was  
12 needed to investigate the discrepancies between the billing and  
13 engineering analyses.

14 **Q. WHAT ARE YOUR FINDINGS FROM THE CONTINUED**  
15 **INVESTIGATION?**

16 A. The results of the continued investigation have not led to a definitive  
17 answer as to why the billing and engineering analyses for this  
18 program are so different. Thus, the Public Staff has advocated, and  
19 will continue to advocate, for the appropriate application of billing  
20 versus engineering analyses when it comes to determining impacts.  
21 However, for purposes of this proceeding, the Public Staff  
22 recommends that the SEWK program report not be delayed, and for

1 it to be accepted, with the condition that further reports presented by  
2 Duke Energy that have discrepancies between the billing and  
3 engineering analyses provide additional information regarding why a  
4 particular analysis was chosen for purposes of that report.

5 **Q. PLEASE EXPLAIN YOUR RECOMMENDATION FOR THE NON-**  
6 **RESIDENTIAL SMART SAVER PRESCRIPTIVE PROGRAM.**

7 A. The savings and impacts of the Non-Residential Smart Saver  
8 Prescriptive program were evaluated by Opinion Dynamics (Evans  
9 Exhibit C) for the period spanning March 1, 2017, to December 31,  
10 2018. Our review found that the data recording process for this  
11 evaluation could be optimized, specifically for lighting-related  
12 measures since these measures provide a bulk of the total savings  
13 associated with this program. During discovery, the Company  
14 provided information that revealed that while lighting impacts were  
15 being accurately accounted for, measure descriptions provided a  
16 range of wattages. This makes it challenging to review the data  
17 associated with this program. The Public Staff's investigation  
18 indicates that the impacts of these measures were accounted for  
19 appropriately and that this report should be accepted; however, the  
20 Company and its evaluator should work to refine how the Company  
21 records its measure-level impacts for this program.

22

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

4 A. Yes. As in previous cost recovery proceedings, I was able, through  
5 sampling, to verify that the changes to program impacts and  
6 participation were appropriately incorporated into the rider  
7 calculations for each DSM/EE program, as well as the actual  
8 participation and impacts calculated with EM&V data. I reviewed: (1)  
9 workpapers provided in response to data requests; (2) a sampling of  
10 the EE programs; and (3) Evans Exhibit 1, which incorporates data  
11 from various EM&V studies. I also met with DEP personnel to review  
12 the calculations, EM&V, DSMore, and other data related to the  
13 program/measure participation and impacts. Based on my ongoing  
14 review of this data, I believe DEP has appropriately incorporated the  
15 findings from EM&V studies and annual participation into its rider  
16 calculations consistent with Commission orders and the 2020  
17 Mechanism. I will continue to review this information and, if  
18 necessary, file further information with the Commission should my  
19 review reveal any relevant issues that would cause me to alter my  
20 recommendations or conclusions.

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

22 A. Yes.

## DAVID M. WILLIAMSON

I am a 2014 graduate of North Carolina State University with a Bachelor of Science Degree in Electrical Engineering. I began my employment with the Public Staff's Electric Division in March of 2015. In August of 2020, the Electric Division merged with the Natural Gas Division to form the Energy Division, where I am a part of the Electric Section - Rates and Energy Services. My current responsibilities include reviewing applications, making recommendations for certificates of public convenience and necessity of small power producers, master meters, and resale of electric service, and interpreting and applying utility service rules and regulations. Additionally, I am currently serving as a co-chairman of the National Association of State Utility and Consumer Advocates' (NASUCA) DER and EE Committee.

My primary responsibility within the Public Staff is reviewing and making recommendations on DSM/EE filings for initial program approval, program modifications, EM&V evaluations, and on-going program performance of Electric and Natural Gas' portfolio of EE programs. I have filed testimony in various DEC, DEP, and DENC Demand Side Management/Energy Efficiency rider proceedings, as well as recent Electric and Natural Gas general rate case proceedings.

Program	Evans Exhibit 7 in Sub 1206 Vintage 2020				Evans Exhibit 7 in Sub 1252 Vintage 2021				Evans Exhibit 7 in Sub 1273 Vintage 2022				Percent Change from previous V2020 to V2021	
	UCT	TRC	RIM	PCT	UCT	TRC	RIM	PCT	UCT	TRC	RIM	PCT	UCT	TRC
<b>Residential Programs</b>														
Energy Education Program for Schools	1.35	1.38	0.51	10.30	1.37	1.39	0.56	9.10	1.46	1.50	0.60	8.95	6%	8%
Energy Efficient Appliances & Devices	14.59	15.40	0.88	34.77	8.44	10.13	0.84	31.03	2.78	1.70	0.55	4.37	-67%	-83%
Energy Efficient Lighting	2.01	2.70	0.71	6.42	1.99	2.96	0.63	7.09	1.92	3.24	0.58	9.47	-3%	9%
Residential Smart Saver (Home Energy Improvement)	1.60	0.97	0.69	1.66	0.57	0.40	0.33	1.39	1.01	0.49	0.43	1.38	77%	23%
Multi-Family	2.65	2.65	0.54	24.31	2.64	2.65	0.58	20.70	2.59	2.85	0.57	10.49	-2%	7%
Neighborhood Energy Saver	0.49	0.49	0.31	2.23	0.87	0.90	0.49	2.51	0.85	0.90	0.48	2.61	-3%	0%
Residential Energy Assessments	2.15	2.19	0.56	49.13	2.03	1.96	0.54	30.63	2.29	2.21	0.56	31.28	13%	12%
Residential New Construction	1.55	4.93	1.30	6.84	1.31	1.38	0.58	3.40	1.35	1.46	0.58	3.48	3%	5%
My Home Energy Report	1.01	1.01	0.43	-	1.61	1.61	0.65	-	1.64	1.64	0.64	-	2%	2%
EnergyWise Home	5.27	15.93	5.27	-	1.96	5.83	1.96	-	3.77	26.74	3.77	-	93%	359%
<b>Residential Total</b>	<b>2.56</b>	<b>3.68</b>	<b>1.11</b>	<b>7.90</b>	<b>1.76</b>	<b>1.95</b>	<b>0.68</b>	<b>5.95</b>	<b>1.77</b>	<b>1.69</b>	<b>0.60</b>	<b>5.22</b>	<b>0%</b>	<b>-13%</b>
<b>Non-Residential Programs</b>														
Energy Efficient Lighting	4.03	2.03	0.86	4.04	3.93	1.92	0.88	3.69	4.31	7.27	1.30	9.47	9%	278%
Smart Saver Performance (Custom) <sup>1</sup>	2.61	1.17	0.94	2.19	3.16	1.52	0.89	-	2.89	1.68	0.87	3.26	-9%	11%
Smart Saver Performance (Prescriptive) <sup>1</sup>	4.05	0.99	1.09	1.54	2.83	1.09	1.00	1.79	2.80	1.11	1.00	1.83	-1%	2%
Smart Saver Performance Incentive	2.51	1.55	0.86	2.85	2.01	1.24	0.76	2.50	2.48	1.46	0.85	2.76	24%	18%
EnergyWise ® for Business	0.27	0.46	0.27	-	0.27	0.52	0.27	-	0.28	0.81	0.28	-	3%	55%
Commercial Industrial Governmental Demand Response	1.84	28.03	1.84	-	1.77	29.70	1.77	-	2.11	26.31	2.11	-	19%	-11%
<b>Non-Residential Total</b>	<b>2.59</b>	<b>1.77</b>	<b>0.92</b>	<b>3.21</b>	<b>2.41</b>	<b>1.49</b>	<b>0.86</b>	<b>2.72</b>	<b>2.48</b>	<b>1.66</b>	<b>0.86</b>	<b>3.18</b>	<b>3%</b>	<b>12%</b>
<b>Overall Portfolio total</b>	<b>2.57</b>	<b>2.51</b>	<b>1.02</b>	<b>4.52</b>	<b>2.01</b>	<b>1.71</b>	<b>0.75</b>	<b>3.90</b>	<b>2.07</b>	<b>1.68</b>	<b>0.71</b>	<b>4.09</b>	<b>3%</b>	<b>-2%</b>

<sup>1</sup> Similar to what DEC has done, DEP is combining the Performance Custom and Performance Prescriptive programs due to their similarities in participants and renaming them Non-Residential Smart Saver (formerly known as EE for Business)

Program	Evans Exhibit 7 in Sub 1145 Vintage 2018				Evans Exhibit 7 in Sub 1174 Vintage 2019				Evans Exhibit 7 in Sub 1206 Vintage 2020			
	UCT	TRC	RIM	PCT	UCT	TRC	RIM	PCT	UCT	TRC	RIM	PCT
<b>Residential Programs</b>												
Energy Education Program for Schools	1.86	2.60	0.76	-	1.39	1.37	0.48	11.58	1.17	1.16	0.35	11.38
Energy Efficient Appliances & Devices	12.37	24.52	1.11	-	4.82	4.27	0.75	12.30	2.83	2.47	0.40	10.35
Energy Efficient Lighting (Res and Non-Res)	3.44	17.07	0.91	-	2.63	3.78	0.70	8.52	3.35	4.07	0.50	9.65
Residential Smart \$aver (Home Energy Improvement)	0.88	0.59	0.48	1.40	0.84	0.63	0.44	1.78	0.84	0.63	0.35	1.78
Multi-Family	3.53	5.19	0.67	-	2.77	2.70	0.56	21.75	1.56	1.58	0.35	21.54
Neighborhood Energy Saver	0.91	2.89	0.63	-	0.86	0.82	0.47	2.68	0.49	0.49	0.31	2.47
Residential Energy Assessments	2.90	3.32	0.71	473.05	2.06	2.03	0.54	38.16	1.87	1.88	0.38	56.26
Residential New Construction	1.73	1.92	0.74	3.88	1.28	1.42	0.54	3.96	1.21	1.44	0.39	4.22
My Home Energy Report	1.28	1.28	0.56	-	1.85	1.85	0.66	-	1.48	1.48	0.43	-
EnergyWise Home	9.62	87.79	9.62	-	9.17	281.08	9.17	-	7.94	7.94	7.94	-
<b>Residential Total</b>	<b>3.04</b>	<b>4.15</b>	<b>1.32</b>	<b>10.71</b>	<b>2.65</b>	<b>3.13</b>	<b>1.11</b>	<b>7.84</b>	<b>1.77</b>	<b>1.83</b>	<b>0.47</b>	<b>7.36</b>
<b>Non-Residential Programs</b>												
Smart \$aver Performance (Custom) <sup>1</sup>	3.69	1.43	1.18	2.21	3.48	1.60	0.99	2.78	2.70	1.55	0.56	3.42
Smart \$aver Performance (Prescriptive) <sup>1</sup>	5.79	2.59	1.19	3.53	4.00	2.29	0.90	4.33	3.63	2.00	0.58	3.77
Smart \$aver Performance Incentive	4.02	1.14	1.06	1.82	2.27	0.98	0.75	2.37	3.21	2.03	0.47	5.07
Small Business Energy Saver	2.52	1.73	0.99	2.75	2.39	1.48	0.85	2.78	2.17	1.39	0.57	2.59
EnergyWise® for Business	0.07	0.10	0.07	-	0.38	0.60	0.30	17.15	0.36	0.68	0.27	24.28
Commercial Industrial Governmental Demand Response	1.22	-42.56	1.22	-	2.43	7.73	2.43	-	2.19	26.91	2.19	-
<b>Non-Residential Total</b>	<b>3.80</b>	<b>2.13</b>	<b>1.11</b>	<b>3.19</b>	<b>2.87</b>	<b>1.88</b>	<b>0.91</b>	<b>3.57</b>	<b>2.68</b>	<b>1.80</b>	<b>0.59</b>	<b>3.54</b>
<b>Overall Portfolio total</b>	<b>3.29</b>	<b>3.03</b>	<b>1.22</b>	<b>4.48</b>	<b>2.72</b>	<b>2.60</b>	<b>1.02</b>	<b>4.90</b>	<b>2.04</b>	<b>1.82</b>	<b>0.52</b>	<b>4.87</b>

<sup>1</sup> Similar to what DEC has done, DEP is combining the Performance Custom and Performance Prescriptive programs due to their similarities in participants and renaming them Non-Residential Smart Saver (formerly known as EE for Business)