

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-2, SUB 1174

In the Matter of )  
Application of 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 )

**REBUTTAL**  
**TESTIMONY OF ROBERT P. EVANS**  
**FOR DUKE ENERGY PROGRESS,**  
**LLC**

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Robert P. Evans. My business address is 150 Fayetteville Street,  
3 Raleigh, North Carolina 27602.

4 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

5 A. I am employed by Duke Energy Corporation (“Duke Energy”) as Senior  
6 Manager-Strategy and Collaboration for the Carolinas in the Market Solutions  
7 Regulatory Strategy Evaluation group, supporting both Duke Energy  
8 Carolinas, LLC (“DEC”) and Duke Energy Progress, LLC (“DEP” or the  
9 “Company”).

10 **Q. DID YOU PREVIOUSLY FILE DIRECT TESTIMONY IN SUPPORT**  
11 **OF DEP’S APPLICATION IN THIS DOCKET?**

12 A. Yes.

13 **Q. DID YOU ALSO CAUSE TO BE FILED SUPPLEMENTAL EVANS**  
14 **EXHIBITS 1 AND 2?**

15 A. Yes. As a result of the adjustments discussed in the Supplemental Testimony  
16 of Carolyn T. Miller, Evans Exhibits 1 and 2 were updated and filed on  
17 September 10, 2018 as Supplemental Evans Exhibits 1 and 2.

18 **Q. WERE SUPPLEMENTAL EVANS EXHIBITS 1 AND 2 PREPARED**  
19 **BY YOU OR AT YOUR DIRECTION AND SUPERVISION?**

20 A. Yes, they were.

21 **Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?**

22 A. The purpose of my rebuttal testimony is to respond to the testimony of Public  
23 Staff witness David M. Williamson and witness Chris Neme testifying on

1           behalf of the North Carolina Justice Center, North Carolina Housing  
2           Coalition, Natural Resources Defense Council, and Southern Alliance for  
3           Clean Energy.

4   **Q.   WHAT COMMENTS DO YOU HAVE RELATED TO WITNESS**  
5   **WILLIAMSON’S TESTIMONY?**

6   A.   My rebuttal testimony addresses: (1) Mr. Williamson’s comments on the  
7           appropriate avoided capacity rates to be utilized in DEP’s calculation of cost  
8           effectiveness; (2) his recommendation regarding the Company’s programs that  
9           include lighting measures; (3) his observations relating to the Company’s My  
10          Home Energy Report (“MyHER”) program; (4) his recommendation for  
11          closure of the Company’s Residential Smart \$aver Program; (5) his comments  
12          regarding the cost effectiveness of certain Demand-Side Management  
13          (“DSM”) and Energy Efficiency (“EE”) programs; and (6) his  
14          recommendations relating to the Company’s Evaluation, Measurement, and  
15          Verification (“EM&V”) reports.

16   **Q.   WILL YOU SUMMARIZE WITNESS WILLIAMSON’S POSITION ON**  
17   **THE AVOIDED COSTS USED TO DETERMINE THE COST**  
18   **EFFECTIVENESS OF THE COMPANY’S PROGRAMS?**

19   A.   In summary, Witness Williamson indicates that the Public Staff believes DEP  
20          should reflect zero avoided capacity value for its DSM/EE programs in years  
21          prior to the identified need for new capacity in the Company’s IRP.

22   **Q.   WHAT IS THE COMPANY’S VIEW OF WITNESS WILLIAMSON’S**  
23   **POSITION?**

1 A. The Company does not agree with the application of zero avoided capacity  
2 cost values proposed by the Public Staff for the determination of DSM/EE  
3 program cost-effectiveness or calculation of the Company's Portfolio  
4 Performance Incentive ("PPI"). The impropriety of employing zero avoided  
5 capacity cost values is discussed in the rebuttal testimony of Company witness  
6 Timothy J. Duff.

7 In addition, as discussed later in my testimony, use of zero avoided  
8 capacity values has a major impact on the cost-effectiveness of the  
9 Company's existing and future DSM/EE portfolios.

10 **Q. HAVE YOU REVIEWED THE COMMISSION'S ORDER APPROVING**  
11 **DSM/EE RIDER AND REQUIRING FILING OF CUSTOMER NOTICE**  
12 **ISSUED ON SEPTEMBER 11, 2018 IN DOCKET NO. E-7, SUB 1164**  
13 **("SUB 1164 ORDER")?**

14 A. Yes. In DEC's DSM/EE cost recovery proceeding in Docket No. E-7, Sub  
15 1164, the Commission rejected the exact same argument that the Public Staff  
16 is making in this proceeding. In particular, the Commission found that "It is  
17 inappropriate to calculate the avoided capacity cost benefits for purposes of  
18 the PPI and cost-effectiveness of the Company's DSM/EE programs under the  
19 assumption that capacity avoided prior to year 2023 be assigned a zero dollar  
20 value. The Public Staff's recommendation of such, and the corresponding  
21 reduction to the Company's Vintage 2019 PPI, is rejected."

22 **Q. WHAT IS THE IMPACT OF THE SUB 1164 ORDER ON THE ISSUES**  
23 **IN THIS PROCEEDING?**

1 A. As explained in Witness Duff's testimony, the Company believes that the  
2 Commission's ruling in the Sub 1164 Order relating to avoided costs is  
3 dispositive of the avoided cost issue in this proceeding. Accordingly, the  
4 Company believes that the Commission should reach the same result and  
5 decline to accept the Public Staff's downward adjustment to DEP's PPI in this  
6 docket and accept the Company's calculations of cost-effectiveness for  
7 purposes of this rider proceeding.

8 **Q. WILL YOU DESCRIBE WITNESS WILLIAMSON'S**  
9 **RECOMMENDATION CONCERNING EE PROGRAMS THAT**  
10 **INCLUDE LIGHTING MEASURES?**

11 A In light of the likely implementation of phase 2 of the Energy Independence  
12 and Security Act ("EISA") standards in January 2020, Witness Williamson  
13 recommends that DEP include in its 2019 DSM/EE cost recovery filing its  
14 plans for general use lighting measures in all of its EE programs that include  
15 lighting measures.

16 **Q. IS THE COMPANY AMENABLE TO SUBMITTING ITS PLANS FOR**  
17 **EE PROGRAMS THAT CONTAIN GENERAL USE LIGHTING**  
18 **MEASURES IN ITS 2019 DSM/EE COST RECOVERY FILING?**

19 A. Yes.

20 **Q. DO YOU HAVE ANY CONCERNS REGARDING WITNESS**  
21 **WILLIAMSON'S OBSERVATIONS ON ADVANCED METERING**  
22 **INFRASTRUCTURE ("AMI") AND THE UPDATED BILLING/**

1           **INFORMATION SYSTEM WITH RESPECT TO THE COMPANY'S**  
2           **MYHER PROGRAM?**

3    A.    Yes. Given that the updated customer information system and billing system  
4           will not be in service for several years, I believe that Witness Williamson's  
5           observations are premature. That being said, the Company will work with the  
6           Public Staff to evaluate the MyHER Program's energy savings, recognizing  
7           the impacts of AMI and the updated billing/information system.

8    **Q.    DO YOU HAVE ANY COMMENTS RELATING TO THE PUBLIC**  
9           **STAFF'S RECOMMENDATION THAT THE RESIDENTIAL SMART**  
10          **\$AVER EE PROGRAM BE CLOSED AT THE END OF 2018?**

11   A.    The Company agrees with Witness Williamson that the Residential Smart  
12          Saver EE Program is not cost-effective at this time. However, the Company  
13          believes that terminating the only program that offers assistance for making  
14          the largest single energy user in the home, a customer's HVAC system, more  
15          energy efficient does not seem reasonable, especially when the decision to  
16          make said investment only comes around once every fifteen years.  
17          Furthermore, the recommended termination of the program does not take into  
18          consideration the Company's relationships with HVAC contractors. The  
19          proposed termination will likely erode trust and engagement with these  
20          valuable "trade allies," making it difficult to offer similar types of programs  
21          that would require trade ally support in the future.

22                    In the past, when the program's cost-effectiveness has struggled due to  
23                    efficiency standard changes, the Company has demonstrated the ability to

1 effectively modify the program to restore cost-effectiveness and should have  
2 the opportunity to attempt to restore to the cost-effectiveness of the program  
3 that was eroded by reduction in avoided costs. The Company is currently  
4 investigating several opportunities to increase the cost-effectiveness of the  
5 program, including the following:

- 6 1. While the Company does have some concerns with respect to the  
7 Public Staff's recommendation to move the program to an all-referral  
8 structure, the Company is not opposed to adopting this proposal so  
9 long as the Commission deems it appropriate. However, in lieu of  
10 moving to a referral only approach, the program management team has  
11 developed a number of potential revisions to the referral program that  
12 will improve cost-effectiveness and lead to a more gradual transition to  
13 a referral only approach. The Company believes that these  
14 modifications would result in improving the program and the cost-  
15 effectiveness tests referenced in Witness Williamson's testimony;
- 16 2. The Company has been reevaluating and updating the cost studies of  
17 the incremental costs actually being paid by customers to adopt higher  
18 efficiency equipment. This work will ensure that the Company's cost-  
19 effectiveness analysis is consistent with the current market conditions  
20 and reflects the changes in equipment pricing that occur as the new  
21 higher efficiency standards have been in place for a longer period of  
22 time. Such information could lead to improvements in the program's  
23 TRC scores; and

1           3. Finally, the program management team has been working with the  
2           third-party vendor used in program administration (payment  
3           processing) to further reduce program costs and increase the TRC  
4           score.

5           The Company is confident that the combination of these actions will  
6           allow it to again result in a cost-effective program and that shutting down the  
7           current operations without an appropriate time frame for planning and  
8           adjustment is not the best answer for its customers.

9           Based on the Company's persistent efforts to maintain the viability of  
10          the program through program modifications, as well as the negative impact on  
11          the Company's PPI if the program continues to struggle to maintain cost-  
12          effectiveness, it is clear that DEP is highly motivated to continue to find ways  
13          to improve cost-effectiveness. As approved in the Sub 1164 Order for DEC's  
14          companion Residential Smart Saver EE Program, given the importance of the  
15          program to DEP's residential portfolio and the Company's relationships with  
16          its trade allies, DEP would appreciate the opportunity to propose  
17          modifications to this program with the goal of restoring the TRC score to 1.0  
18          or greater.

19       **Q. DO YOU HAVE ANY COMMENTS RELATING TO THE COST-**  
20       **EFFECTIVENESS OF THE RESIDENTIAL NEW CONSTRUCTION,**  
21       **ENERGYWISE FOR BUSINESS, AND NON-RESIDENTIAL SMART**  
22       **\$AVER PROGRAMS DISCUSSED IN WITNESS WILLIAMSON'S**  
23       **TESTIMONY?**



1 A. Witness Williamson has indicated that these programs are not cost-effective when  
2 the Public Staff's proposed zero avoided capacity values are employed.  
3 However, these programs are all cost-effective under the Company's  
4 calculations. As the application of zero avoided capacity cost values is not  
5 appropriate, as discussed by Witness Duff and as decided by the Commission  
6 in the Sub 1164 Order, these programs are, in fact, cost-effective and therefore  
7 do not fall under paragraphs 22B or 22C of the Mechanism. It is important to  
8 recognize that these programs constitute a significant portion of the  
9 Company's DSM/EE portfolio, which demonstrates the devastating impact  
10 that the Public Staff's position on avoided costs could have on the Company's  
11 portfolio.

12 **Q. DO YOU HAVE ANY CONCERNS RELATING TO WITNESS**  
13 **WILLIAMSON'S COMMENTS RELATING TO THE COST-**  
14 **EFFECTIVENESS OF THE COMPANY'S MYHER AND NON-**  
15 **RESIDENTIAL SMART \$AVER PERFORMANCE INCENTIVE**  
16 **PROGRAMS?**

17 A. As filed, the Company's MyHER program has EM&V cost-effectiveness  
18 UCT/TRC results of 0.96. For practical purposes, a score of 0.96 is essentially  
19 1.0. It is important to note that there has only been a single EM&V study  
20 performed on the MyHER Program and that this single program constitutes a  
21 significant portion of the Company's portfolio. Given the closeness of the  
22 applicable cost-effectiveness tests to 1.0 and the importance of the program, I

1 would not recommend that MyHER fall under the provisions of paragraph 22B of  
2 the Mechanism at this time.

3 The Non-Residential Smart \$aver Performance Incentive Program has  
4 been in place since January 1, 2017. The program was intended to encompass  
5 large EE-related projects with uncertainty relative to their performance (e.g.,  
6 projects that employ new technologies). Related program incentives are  
7 provided in installments based on actual savings. In this manner, participants  
8 are properly incentivized for their EE-related investments, and other  
9 customers are shielded from the impacts of overstated performance. That  
10 said, very few projects are appropriate for participation in the program. The  
11 0.92 TRC test score reflected in Evans Exhibit 7 to my Direct Testimony was  
12 based upon participation forecasts and costs used in the Company's 2016  
13 program filing. During 2017, only five projects were involved. Currently,  
14 there are seventy-four projects underway in the DEP service territory. The  
15 Company's estimated TRC score for this program, based on these and other  
16 projects under review, should exceed 1.5. In short, we do not believe that this  
17 program requires additional scrutiny at this time, due to both the short time it  
18 has been in place and its anticipated cost-effectiveness results.

19 **Q. DO YOU HAVE ANY OBSERVATIONS WITH RESPECT TO**  
20 **WITNESS WILLIAMSON'S POSITIONS RELATED TO THE**  
21 **COMPANY'S EM&V REPORTS?**

22 A. Yes. Witness Williamson recommended that future evaluations of the  
23 Residential Multi-Family EE Program should include a billing analysis, if

1 feasible, and more specific data on bulbs being replaced. The Company is  
2 unable to determine at this time if such a billing analysis would be feasible.  
3 The Company agrees that it will include such a billing analysis if feasible; if a  
4 billing analysis is not feasible, the evaluation results will indicate the rationale  
5 as to why it was not feasible.

6 Witness Williamson recommended for future evaluations of the  
7 Energy Efficient Lighting Program that the program evaluator should include  
8 the basis for the selected weighting methodology (weightings based on bulb  
9 sales, measure savings, or other metric) when assessing program savings. The  
10 Company agrees to ensure that in future evaluations, the evaluator will detail  
11 rationale for selected weighting methodology and indicate the reasons why it  
12 was chosen over other weighting methodologies.

13 Also with respect to the Energy Efficient Lighting Program, Witness  
14 Williamson recommended that the program evaluator should, in future  
15 evaluations, provide further clarity into the sales of incentivized bulbs at  
16 dollar/discount stores to determine the income levels of customers purchasing  
17 these bulbs. This information would be used as an element in the  
18 determination of Net-to-Gross (“NTG”) levels. The Company recognizes that  
19 in-store intercepts are the most reliable method to estimate NTG among  
20 dollar/discount stores. With the use of in-store intercepts, there is no need to  
21 determine the income levels of customers purchasing these bulbs, since the  
22 NTG would be determined by customers’ responses to the NTG battery of  
23 questions. That said, evaluators initially planned to conduct in-store intercepts

1 for the Program Year 2015 evaluation; however, the evaluators could not gain  
2 access to the retail stores. Even if retailer access was provided, the cost of  
3 such an endeavor would be prohibitive, considering generally low LED sales  
4 volume at each individual store. In order to satisfy confidence and precision  
5 requirements around the NTG estimate, the evaluators would have to either  
6 spend a lot of time at each store, or conduct intercepts in many stores – or  
7 more likely, both. No other options exist to determine the income levels of  
8 customers purchasing these bulbs at dollar/discount stores. A weighted NTG  
9 value could be determined for the dollar/discount segment that is based on the  
10 assumption of a 1.0 NTG for the dollar/discount stores located in low-income  
11 neighborhoods, and a NTG of other retailers (established through sales data  
12 modeling or supply-side interviews) for dollar/discount stores located in non-  
13 low-income neighborhoods. It is possible, however, that this option would  
14 unfairly penalize the program since even in non-low-income neighborhoods,  
15 customers who choose to shop at dollar/discount stores may be more price-  
16 sensitive, and in the absence of the program discounts at those stores, could  
17 show a higher propensity to purchase the least costly alternative.

18 Witness Williamson also recommended for future evaluations of the  
19 Energy Efficient Lighting Program that the program should update its study  
20 on the percentage of bulb sales to residential and non-residential customers.  
21 The Company believes that in-store intercepts are the only method that would  
22 allow evaluators to update an estimate of bulb sales share between residential  
23 and non-residential customers. As noted above, without access to

1 participating retailers to conduct intercepts, the evaluator is unable to develop  
2 an updated estimate. The Company will continue to work with Lighting  
3 Program Management to identify alternative methods to potentially update the  
4 residential/non-residential sales split.

5 **Q. DO YOU HAVE ANY COMMENTS REGARDING WITNESS NEME'S**  
6 **TESTIMONY?**

7 A. Yes. Witness Neme has brought up several issues and ideas relating to EE  
8 programs and their relative mix. In addition, Witness Neme discussed the  
9 employment of a Technical Resource Manual ("TRM") as well as issues  
10 associated with determination of cost-effectiveness. He also indicated that  
11 proper venues to examine these issues would be the DEC/DEP Collaborative  
12 and associated working groups.

13 **Q. DO YOU AGREE WITH WITNESS NEME'S RECOMMENDATION**  
14 **THAT THE ISSUES BROUGHT UP IN HIS TESTIMONY BE**  
15 **DISCUSSED IN THE DEC/DEP COLLABORATIVE AND**  
16 **ASSOCIATED WORKING GROUPS?**

17 A. While the Company does not necessarily agree with all of the  
18 recommendations included in Witness Neme's testimony, it does agree that it  
19 is appropriate for the recommendations to be discussed at the DEC/DEP  
20 Collaborative.

21 As mentioned in my rebuttal testimony in DEC's DSM/EE cost  
22 recovery proceeding in Docket No. E-7, Sub 1164, I believe that given the  
23 commonality between DEC's and DEP's programs, a combined DEC/DEP

1 Collaborative would be preferable to a DEC-only Collaborative. Furthermore,  
2 as Witness Neme indicated, given the consideration needed to evaluate his  
3 program ideas, more than quarterly meetings will be required. Accordingly, I  
4 recommend that the Collaborative meetings be expanded from meeting  
5 quarterly to meeting every two months, as approved in the Sub 1164 Order.

6 **Q. DOES THIS CONCLUDE YOUR PRE-FILED REBUTTAL**  
7 **TESTIMONY?**

8 A. Yes.