



**NORTH CAROLINA  
PUBLIC STAFF  
UTILITIES COMMISSION**

October 16, 2020

Ms. Kimberley A. Campbell, Chief Clerk  
North Carolina Utilities Commission  
4325 Mail Service Center  
Raleigh, North Carolina 27699-4300

Re: Docket No. E-2, Sub 1252 - Application Pursuant to N.C.G.S. 62-133.9 and Commission Rule R8-69 for Approval of Demand-Side Management and Energy Efficiency Cost Recovery Rider

Dear Ms. Campbell:

Attached for filing is the Public Staff's Proposed Order Approving DSM/EE Rider and Requiring Filing of Customer Notice in the above-referenced docket.

By copy of this letter, I am forwarding a copy to all parties of record by electronic delivery.

Sincerely,

Electronically submitted  
s/ Lucy E. Edmondson  
Staff Attorney  
[lucy.edmondson@psncuc.nc.gov](mailto:lucy.edmondson@psncuc.nc.gov)

Attachment

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**STATE OF NORTH CAROLINA  
UTILITIES COMMISSION  
RALEIGH**

DOCKET NO. E-2, SUB 1252

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.G.S. § 62-133.9 and Commission Rule R8-69	)	PUBLIC STAFF'S PROPOSED ORDER APPROVING DSM/EE RIDER AND REQUIRING FILING OF PROPOSED CUSTOMER NOTICE

HEARD: Monday, September 15, 2020, in Commission Hearing Room 2115, Dobbs Building, 430 North Salisbury Street, Raleigh, North Carolina

BEFORE: Chair Charlotte A. Mitchell, Presiding; and Commissioners ToNola D. Brown-Bland, Lyons Gray, Daniel G. Clodfelter, Kimberly W. Duffley, Jeffrey A. Hughes, Floyd B. McKissick, Jr.

BY THE COMMISSION: N.C. Gen. Stat. § 62-133.9(d) authorizes the North Carolina Utilities Commission (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 (DSM) and energy efficiency (EE) programs. The Commission is also authorized to award incentives to electric utilities for adopting and implementing new DSM/EE measures, including rewards based on the sharing of savings achieved by the programs. Commission Rule R8-69(b) provides that the Commission will each year conduct a proceeding for each electric utility to establish an annual DSM/EE rider to recover the reasonable and prudent costs incurred for adopting and implementing new DSM/EE measures previously approved by the Commission pursuant to Commission Rule R8-68. Under Commission Rule R8-69, such rider consists of the utility's forecasted costs during the rate period, similarly forecasted

performance incentives (including net lost revenues (NLR)) as allowed by the Commission, and an experience modification factor (EMF) rider to collect the difference between the utility's actual reasonable and prudent costs and incentives incurred and earned during the test period and the actual revenues realized during the test period under the DSM/EE rider (based on previous forecasts) then in effect.

On June 9, 2020, Duke Energy Progress, LLC (DEP or the Company), filed an application for approval of its annual DSM/EE cost recovery rider (Application) pursuant to N.C. Gen. Stat. § 62-133.9 and Commission Rule R8-69. With the Application, DEP filed the associated testimony and exhibits of Shannon R. Listebarger and Robert P. Evans in support of recovery of DSM/EE costs and utility incentives forecasted for the rate period of January 1, 2021, through December 31, 2021, including program expenses, amortizations and carrying costs associated with deferred prior period costs, Distribution System Demand Response (DSDR) depreciation and capital costs, NLR, and program and portfolio performance incentives (PPI). In addition, DEP asked for approval of an EMF component of its DSM/EE rider to true-up its actual DSM/EE costs and utility incentives during the test period of January 1, 2019, through December 31, 2019.

On June 29, 2020, the Commission issued an order scheduling a public hearing in this matter for September 15, 2020, establishing discovery guidelines, providing for intervention and testimony by other parties, and requiring public notice. On September 14, 2020, DEP filed its affidavits of publication indicating

that the Company had provided notice in newspapers of general circulation as required by the Commission's June 29, 2020 order.

On August 7, 2020, the Commission issued an order scheduling remote hearings for expert witness testimony in this matter for September 15, 2020.

The intervention of the Public Staff is recognized pursuant to N.C. Gen. Stat. § 62-15(d) and Commission Rule R1-19(e). On June 17, 2020, the Carolina Utility Customers Association, Inc. filed a petition to intervene, which was granted by Commission order on June 18, 2020. On June 25, 2020, the North Carolina Sustainable Energy Association filed a petition to intervene, which was granted by Commission order on June 26, 2020. On July 15, 2020, the North Carolina Justice Center, the North Carolina Housing Coalition, and the Southern Alliance for Clean Energy (SACE) (collectively, NC Justice Center, et al.) filed a petition to intervene, which was granted by Commission order on July 16, 2020. On August 25, 2020, the Carolina Industrial Group for Fair Utility Rates II filed a petition to intervene, which was granted by the Commission the same day.

On August 17, 2020, DEP filed the supplemental testimony of Robert P. Evans and Evans Supplemental Exhibit D.

On August 25, 2020, the Commission extended to August 26, 2020, the date for the Public Staff and other intervenors to file direct testimony, and to September 4, 2020, the date for DEP to file rebuttal testimony.

On August 26, 2020, NC Justice Center, et al. filed the testimony and exhibits of Forest Bradley-Wright, and the Public Staff filed the testimony and exhibits of Michael C. Maness, David M. Williamson, and John R. Hinton. On August 28, 2020, the Public Staff filed a corrected Exhibit 2 to the testimony of John R. Hinton.

On September 4, 2020, DEP filed the rebuttal testimony of Robert P. Evans and Timothy J. Duff.

On September 10, 2020, DEP, the Public Staff, and NC Justice Center, et al., filed a Joint Motion for All Witnesses to be Excused from Appearance at Evidentiary Hearing in this matter.

On September 14, 2020, the Commission issued an order excusing all witnesses from testifying at the expert witness hearing, receiving the witnesses' prefiled testimony and exhibits into the record, canceling the expert witness hearing, directing the parties to file proposed orders on or before October 16, 2020, and providing that parties may file briefs, if they so desire, on or before October 16, 2020.

On September 14, 2020, the Public Staff filed a letter requesting that the review of Evans Exhibit C be held open until DEP's 2021 DSM/EE rider proceeding.

On September 15, 2020, the public hearing was held as scheduled. No public witnesses appeared at the hearing.

On September 28, 2020, the Public Staff filed a Motion for Judicial Notice, requesting that the Commission take judicial notice of Late-Filed Exhibit No. 2, filed by DEC and DEP in Docket Nos. E-7, Sub 1214, and E-2, Sub 1219, on September 3, 2020. On October 6, 2020, DEP filed a letter stating that it has no objection to the Public Staff's Motion for Judicial Notice.

On September 30, 2020, the Public Staff filed a letter to provide the Commission with the results of its review of the costs incurred for DEP's portfolio of DSM/EE programs during the 12-month period ended December 31, 2019. The Public Staff stated that it had completed its review of test year program costs and found no material differences between the program costs as filed by the Company and the costs as reflected in the supporting documentation examined. It also stated that the Public Staff is of the opinion that the Company has done a good job overall preventing inappropriate costs from being recorded as DSM/EE program costs. The Public Staff stated that its recommended DSM/EE EMF billing rates and projected DSM/EE rates remain (1) for the EMF billing rates, the rates set forth in the direct testimony and exhibits of DEP witness Listebarger, and (2) for the projected rates, the rates set forth in the testimony and exhibits of Public Staff witness Maness.

On October 8, 2020, the Commission issued an Order granting the Public Staff's September 28, 2020 Motion for Judicial Notice.

On October 16, 2020, DEP, the Public Staff, and NC Justice Center, et al., each filed proposed orders.

### Cost Recovery Mechanism

On June 15, 2009, in Docket No. E-2, Sub 931, the Commission issued an Order Approving Agreement and Stipulation of Partial Settlement, Subject to Certain Commission-Required Modifications in DEP's first DSM/EE rider proceeding (Sub 931 Order). In the Sub 931 Order, the Commission approved, with certain modifications, an Agreement and Stipulation of Partial Settlement (Stipulation) between DEP, the Public Staff, and Wal-Mart Stores East, LP, and Sam's East, Inc., setting forth the terms and conditions for approval of DSM/EE measures and the annual DSM/EE rider proceedings pursuant to N.C. Gen. Stat. § 62-133.9 and Commission Rules R8-68 and R8-69. The Stipulation included a Cost Recovery and Incentive Mechanism for DSM and EE Programs (Original Mechanism), which was modified by the Commission in its Sub 931 Order and subsequently in its Order Granting Motions for Reconsideration in Part issued on November 25, 2009, in the same docket. The Original Mechanism as approved after reconsideration allowed DEP to recover all reasonable and prudent costs incurred and utility incentives earned for adopting and implementing new DSM and EE measures in accordance with N.C. Gen. Stat. § 62-133.9, Commission Rules R8-68 and R8-69, and the additional principles set forth in the Original Mechanism.

On January 20, 2015, in Docket No. E-2, Sub 931, the Commission issued an Order Approving Revised Cost Recovery and Incentive Mechanism and Granting Waivers. In that Order, the Commission approved an agreement between DEP, the Public Staff, the Natural Resources Defense Council, and SACE proposing revisions to the Original Mechanism, generally to be effective

January 1, 2016 (Revised Mechanism). The Revised Mechanism allows DEP to recover all reasonable and prudent costs incurred and utility incentives earned for adopting and implementing new DSM and EE measures in accordance with N.C. Gen. Stat. § 62-133.9, Commission Rules R8-68 and R8-69, and the additional principles set forth in the Revised Mechanism.

On November 27, 2017, in Docket No. E-2, Sub 1145 (Sub 1145), the Commission issued its Order Approving DSM/EE Rider and Requiring Filing of Proposed Customer Notice (Sub 1145 Order), in which it approved the agreement to revise certain provisions of the Revised Mechanism reached by the Company and the Public Staff. The Revised Mechanism, as revised by the Sub 1145 Order, is set forth in Maness Exhibit I filed in Sub 1145, and is referred to herein as the “Mechanism.”

Paragraph 69 of the Mechanism provides:

For the PPI for Vintage Years 2019 and afterwards, the program-specific per kW avoided capacity benefits and per kWh avoided energy benefits used for the initial estimate of the PPI and any PPI true-up will be derived from the underlying resource plan, production cost model, and cost inputs that generated the avoided capacity and avoided energy credits reflected in the most recent Commission-approved Biennial Determination of Avoided Cost Rates for Electric Utility Purchases from Qualifying Facilities as of December 31 of the year immediately preceding the date of the annual DSM/EE rider



filing. However, for the calculation of the underlying avoided energy credits to be used to derive the program-specific avoided energy benefits, the calculation will be based on the projected EE portfolio hourly shape, rather than the assumed 24x7 100 MW reduction typically used to represent a qualifying facility.

Paragraphs 18 and 22A of the Mechanism, which govern the appropriate avoided costs to be used in calculating cost-effectiveness of new and existing programs, contain similar language.

In the present proceeding, based upon DEP's verified Application, testimony, and exhibits received into evidence, and the entire record, the Commission makes the following:

### **FINDINGS OF FACT**

1. DEP is a duly organized limited liability company existing under the laws of the State of North Carolina, is engaged in the business of developing, generating, transmitting, distributing, and selling electric power to the public in North and South Carolina, and is subject to the jurisdiction of the Commission as a public utility. DEP is lawfully before this Commission based upon its application filed pursuant to N.C. Gen. Stat. § 62-133.9 and Commission Rule R8-69.

2. The test period for purposes of this proceeding extends from January 1, 2019, through December 31, 2019.

3. The rate period for purposes of this proceeding extends from January 1, 2021, through December 31, 2021.

4. DEP has requested approval for the recovery of costs, and utility incentives where applicable, related to the following DSM/EE programs:

Residential

- Appliance Recycling Program
- EE Education Program
- Multi-Family EE Program
- My Home Energy Report (MyHER) Program
- Neighborhood Energy Saver Program
- Residential Smart \$aver EE Program (formerly, Home Energy Improvement Program)
- New Construction Program
- Load Control Program (EnergyWise Home)
- Save Energy and Water Kit Program
- Energy Assessment Program
- Low-Income Weatherization Pay for Performance Program

### Non-Residential

- Non-Residential Smart \$aver Energy Efficient Products and Assessment Program
- Non-Residential Smart \$aver Performance Incentive Program
- Small Business Energy Saver Program
- Commercial, Industrial, and Governmental (CIG) Demand Response Automation Program
- EnergyWise for Business

### Combined Residential and Non-Residential

- EE Lighting Program
- Distribution System Demand Response (DSDR) Program

Each of these programs is eligible for cost and utility incentive recovery, where applicable.

5. Pursuant to Paragraph 19 of the Mechanism, the Neighborhood Energy Saver Program is not required to have a TRC or UCT result greater than 1.0 to be eligible for inclusion in the Company's portfolio. Accordingly, the Commission finds and concludes that no further action by the Company is required with respect to this program.

6. The Residential Smart Saver EE Program has failed to demonstrate a prospective TRC result greater than 1.0 in the current proceeding and in the previous five rider proceedings. The Commission finds and concludes that if the program continues to demonstrate a prospective TRC result of less than 1.0 for Vintage 2022, the Company should include in its next rider filing a discussion of the actions being taken to maintain or improve cost-effectiveness, or alternatively, its plans to terminate the program.

7. The Company's proposed Grid Improvement Plan (GIP) has the potential to impact the cost-effectiveness of the Company's DSM/EE programs, and a detailed analysis of potential impacts, as well as status reporting of GIP implementation, is necessary in the DSM/EE rider proceedings in order to allow the Commission and the parties to fully evaluate the Company's DSM/EE portfolio during each year's rider proceeding. The Commission concludes that the Company shall: (1) perform an analysis explaining how GIP will affect the performance of individual DSM/EE programs and their ability to produce peak demand and energy savings, and file the report with the Commission in its next rider filing; (2) conduct an ongoing analysis, as Conservation Voltage Reduction (CVR) capabilities are being implemented, distinguishing peak demand and energy savings resulting from GIP from those resulting from DSM and EE programs, and provide the results of this analysis in the Company's next DSM/EE rider filing, with updates in future rider filings as more data become available; and (3) provide in its next rider filing a list of GIP projects that have been implemented and explain how those projects have affected the performance of the Company's DSM/EE portfolio, if at all.

8. For purposes of inclusion in this DSM/EE rider, the Company's portfolio of DSM and EE programs is cost-effective.

9. With the exception of Evans Exhibit C, the evaluation, measurement, and verification (EM&V) reports filed in this proceeding are acceptable for purposes of this proceeding and should be considered complete for purposes of calculating program impacts. With the exception of Evans Exhibit C, DEP has appropriately incorporated the results of the EM&V reports into its DSM/EE rider calculations.

10. The Company has complied with the Commission's requirement that DEP monitor the changes in annual ratios of allocations between non-DSDR and DSDR equipment and report the degree of change in its annual DSM/EE rider filing. Based on its review, the Company determined that the capacitor allocation ratio should be reduced from 21.08 to 20.48, and the regulator allocation ratio should be increased from 78.50 to 78.56 percent. Annual review of the allocation ratios should continue and be reported to the Public Staff each year, and any changes should be addressed in future rider proceedings.

11. It is inappropriate to include a reserve margin adder to the avoided capacity savings in the calculations of cost-effectiveness and utility incentives for the Company's Vintage 2021 DSM and EE programs.

12. It is appropriate to apply the seasonal allocation of 100% winter and 0% summer, as modeled in the most recently approved avoided cost proceeding, toward the capacity benefits in the calculations of cost-effectiveness and utility

incentives for all the Company's Vintage 2021 measures associated with its DSM and EE programs.

13. For purposes of the DSM/EE rider to be set in this proceeding and subject to review in DEP's future DSM/EE rider proceedings, the reasonable and appropriate estimate of the Company's North Carolina retail DSM/EE program rate period amounts, consisting of its amortized operations and maintenance (O&M) costs, depreciation, capital costs, taxes, amortized incremental administrative and general (A&G) costs, carrying charges, NLR, and PPI, is \$169,385,792 (excluding the North Carolina Regulatory Fee, or NCRF), and this is the appropriate amount to use to develop the forward-looking DSM/EE revenue requirement.

14. For purposes of the EMF component of its DSM/EE rider, DEP's reasonable and prudent North Carolina retail test period costs and incentives, consisting of its amortized O&M costs, capital costs, taxes, amortized incremental A&G costs, carrying charges, NLR, and PPI, are \$176,818,282 (excluding the NCRF). The reasonable and appropriate amount of test period DSM/EE rider revenues and miscellaneous adjustments to take into consideration in determining the test period DSM/EE under- or over-recovery is \$172,654,182 (excluding the NCRF). Therefore, the test period revenue requirement, as reduced by the test period revenues collected and miscellaneous adjustments, is \$4,164,100, which is the test period under-collection that is appropriate to use as the DSM/EE EMF revenue requirement in this proceeding.

15. After assignment or allocation to customer classes in accordance with N.C. Gen. Stat. § 62-133.9, Commission Rule R8-69, and the Commission Orders in Docket No. E-2, Sub 931, the revenue requirements for each rate class, excluding the North Carolina Regulatory Fee (NCRF), are as follows:

<b>DSM/EE PROSPECTIVE COMPONENT:</b>	
Residential	\$101,755,267
General Service EE	\$60,785,477
General Service DSM	\$6,504,609
Lighting	<u>\$340,439</u>
Total	\$169,385,792

<b>DSM/EE EMF:</b>	
Residential	\$1,988,124
General Service EE	\$3,131,509
General Service DSM	\$(931,458)
Lighting	<u>\$(24,075)</u>
Total	\$4,164,100

16. The appropriate and reasonable North Carolina retail class level kilowatt-hour (“kWh”) sales for use in determining the DSM/EE and DSM/EE EMF billing factors in this proceeding are:

<u>Rate Class</u>	<u>kWh Sales</u>
Residential	15,893,328,062
General Service EE	9,132,663,985
General Service DSM	9,064,020,676
Lighting	356,925,937

17. The appropriate DSM/EE EMF billing factors, excluding NCRF, are: 0.013 cents per kWh for the Residential class; 0.034 cents per kWh for the EE component of the General Service classes; (0.010) cents per kWh for the DSM component of the General Service classes, and (0.007) cents per kWh for the

Lighting class. These DSM/EE EMF billing factors do not change when the NCRF is included.

18. The appropriate forward-looking DSM/EE rates to be charged by DEP during the rate period, excluding NCRF, are: 0.640 cents per kWh for the Residential class; 0.666 cents per kWh for the EE component of the General Service classes; 0.072 cents per kWh for the DSM component of the General Service classes; and 0.095 cents per kWh for the Lighting class. The appropriate forward-looking DSM/EE rates to be charged by DEP during the rate period, including NCRF, are: 0.641 cents per kWh for the Residential class; 0.667 cents per kWh for the EE component of the General Service classes; 0.072 cents per kWh for the DSM component of the General Service classes; and 0.095 cents per kWh for the Lighting class.

#### **EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 1**

This finding of fact, which is supported by DEP's Application, is essentially informational, procedural, and jurisdictional in nature, and is uncontroverted.

#### **EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 2-3**

No party opposed DEP's proposed rate period and test period. The rate period and test period proposed by DEP are consistent with the Mechanism approved by the Commission. The proposed rate period and test period are reasonable.



## **EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 4**

The evidence for this finding of fact can be found in DEP's Application, the testimony and exhibits of DEP witnesses Listebarger and Evans, the testimony of Public Staff witness Williamson, and various Commission orders in program approval dockets.

DEP witness Listebarger's testimony shows the portfolio of DSM/EE programs that is associated with the Company's request for approval of this rider. (pp. 4-5 of the testimony of witness Listebarger) The direct testimony of DEP witness Evans lists the DSM/EE programs for which the Company is requesting cost recovery, and incentives where applicable, in this proceeding. (pp. 17-18 of the testimony of witness Evans) Those programs are:

### Residential

- Appliance Recycling Program
- EE Education Program
- Multi-Family EE Program
- MyHER Program
- Neighborhood Energy Saver Program
- Residential Smart \$aver EE Program
- New Construction Program

- Load Control Program (EnergyWise)
- Save Energy and Water Kit Program
- Energy Assessment Program

#### Non-Residential

- Non-Residential Smart \$aver Energy Efficient Products and Assessment Program
- Non-Residential Smart \$aver Performance Incentive Program
- Small Business Energy Saver Program
- CIG Demand Response Automation Program
- EnergyWise for Business

#### Combined Residential and Non-Residential

- EE Lighting Program
- DSDR

(Id.)

In his testimony, Public Staff witness Williamson also listed the DSM/EE programs for which the Company seeks cost recovery and noted that each of these programs has received Commission approval as a new DSM or EE program and

is eligible for cost recovery in this proceeding under N.C. Gen. Stat. § 62-133.9. (pp. 6-8 of the testimony of witness Williamson)

Thus, the Commission finds and concludes that each of the programs listed by witnesses Evans and Williamson has received Commission approval as a new DSM or EE program and is, therefore, eligible for cost recovery in this proceeding under N.C. Gen. Stat. § 62-133.9.

### **EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 5-8**

The evidence for these findings and conclusions can be found in the testimony and exhibits of Company witness Evans, the testimony and exhibits of Public Staff witness Williamson, and the testimony of SACE witness Bradley-Wright.

DEP witness Evans testified that the Company reviewed the portfolio of DSM/EE programs and performed a prospective analysis of each of its programs and the aggregate portfolio for the Vintage 2021 period, the results of which are contained in Evans Exhibit 7. (pp. 18-19 of the testimony of witness Evans) DEP's calculations indicate that, notwithstanding the Neighborhood Energy Saver Program (which was not cost-effective at the time it was approved by the Commission), the Residential Smart \$aver EE Program, and the EnergyWise for Business Program, the aggregate portfolio continues to project cost-effectiveness. (*Id.* at 19)

Public Staff witness Williamson stated in his testimony that the Public Staff reviewed cost-effectiveness under each of the four standard cost-effectiveness tests: Utility Cost (UC), Total Resource Cost (TRC), Participant, and Ratepayer Impact Measure. (p. 10 of the testimony of witness Williamson) The Public Staff also compared the cost-effectiveness test predictions in previous DSM/EE proceedings to the current filing and developed a trend of potential cost-effectiveness that serves as the basis for the Public Staff's recommendation on whether a program should continue as currently implemented, be monitored, or be terminated. (*Id.* at 12)

Witness Williamson testified that while many programs continue to be cost-effective, the TRC and UC scores as filed by the Company for all programs have a natural ebb and flow over the years of DSM/EE rider proceedings, mainly due to changes in avoided cost rate determinations. (*Id.*) He stated that changes in cost-effectiveness are also partially attributable to updates in the unit savings from the original estimates of savings as determined through EM&V of the programs. (*Id.* at 12-13) Witness Williamson noted that as programs mature, baseline standards increase, or avoided cost rates decrease, it becomes more difficult for a program to produce cost-effective savings. (*Id.* at 13) He added that some programs have experienced greater than expected participation, which typically results in greater savings per unit cost and increases cost-effectiveness. (*Id.*)

Witness Williamson further testified about the performance of DEP's overall portfolio of programs, stating that while the historical performance of the Company's programs is reasonable, he had a number of concerns with the

portfolio that he wished to bring to the Commission's attention for consideration in future rider proceedings. (*Id.* at 14-15)

First, witness Williamson expressed concern with the Company's lighting-related measures. He recalled that in past proceedings, the Public Staff has highlighted that the EE lighting market for North Carolina is transforming and that non-specialty Light Emitting Diode (LED) lighting will likely become the baseline standard for general service bulb technologies by January 2020, thereby decreasing savings from any EE program that continues to include general service bulb technologies. (*Id.* at 16) He noted that although federal standards for lighting measures did not change in 2020 as expected, the Public Staff continues to believe that the EE lighting market in North Carolina has transformed at a faster rate than was initially recognized, and that non-specialty LED lighting should be considered the baseline standard for general service bulb technologies. (*Id.* at 16-18) He noted that the Company's portfolio is focusing on specialty LED bulb technologies going forward, and that the Public Staff agrees with this approach. (*Id.* at 18-19) Witness Williamson recommended that the Commission require that, beginning in 2021, only specialty LED lighting be considered for recognition as energy efficiency. (*Id.* at 19)

In his rebuttal testimony, witness Evans testified that while the Company agrees in part with witness Williamson that significant market transformation with respect to LED non-specialty lighting has taken place, this transformation has not been universal, particularly with respect to low-income and multifamily residences. (p. 3 of the rebuttal testimony of witness Evans) He added that the Company still

sees an ongoing need for non-specialty energy efficient A-line bulbs in both low-income and multifamily residences, and that the Company intends to continue providing A-line bulbs to low-income customers through its Neighborhood Energy Saver Program and through outlets such as Good Will, Dollar General, Dollar Tree, and Habitat stores. (*Id.*) He also testified that the Company intends to continue replacing inefficient lighting through its Multi-Family direct install program. (*Id.* at 3-4) In light of the circumstances presented by witness Evans with respect to the current need for non-specialty energy efficient A-line bulbs for low-income and multifamily residences, the Commission finds and concludes that witness Williamson's recommendation regarding specialty LED lighting is an appropriate topic for discussion in the Collaborative.

Witness Williamson also expressed concerns with the impact of the Company's Grid Improvement Plan (GIP) on its DSM/EE programs. He testified that the GIP, as proposed, would drive enhancements to capacity, data analytics/collection, and power flow capabilities on almost all of the circuits within its service territory. (p. 20 of the testimony of witness Williamson) As more data analytics and technology enhancements are made to the Company's day-to-day operations, the base-level impacts and offerings of DSM/EE programs will be impacted. (*Id.*) He testified that the MyHER program relies heavily on data analytics that are currently being updated in various ways outside the program, and that as the Company deploys GIP, the MyHER program will need to be re-evaluated in order to (1) ensure that it continues to provide unique information from that available through GIP investments, (2) ensure that it remains cost-effective,

and (3) determine whether or not it has become part of the Company's standard operating procedures. (*Id.* at 21) Witness Williamson explained that the program relies on the collection of individual customers' data, and then analyzing that data in relation to similar nearby customers. (*Id.* at 22-23) As part of the GIP, the Company has been deploying Advanced Metering Infrastructure (AMI) throughout its service territory, which is expected to, among other things, provide customers with direct access to their interval usage data. (*Id.* at 23) The Company has also recently made available to customers the ability to download their usage data in a standard format. (*Id.* at 24) Witness Williamson stated that the services and access to data provided by the meters will be duplicative of the data provided under the MyHER program, with the exception of the energy efficiency tips offered through the MyHER report. He recommended that the Commission require DEP to assess the costs and benefits of continuing to offer the MyHER program, versus providing the same comparison and tips through another channel. (*Id.* at 24-25)

In his rebuttal testimony, witness Evans stated that Mr. Williamson's recommendation regarding the MyHER program ignored the real value of the MyHER report, which is the provision of the normative comparison of a customer's usage versus the usage of a similar group of customers, as well as a comparison of their usage to a model Efficient Home. (p. 5 of the rebuttal testimony of witness Evans) He added that when the Commission approved the MyHER program for Duke Energy Carolinas, LLC, it recognized that MyHER "has the potential to encourage EE by providing participants with periodic personalized reports *containing comparative usage data* for similar residences in the same geographic

area and personalized recommendations for more efficient use of energy in their homes . . . .” (*Id.* at 5-6) (emphasis in original) Witness Evans further testified that while witness Williamson suggested that the Commission should require the Company to assess the costs and benefits of the MyHER program versus providing the same comparison and tips through another channel, that the other channels identified by witness Williamson in his testimony do not contain the aspect of the MyHER program that provides a normative comparison of a customer’s usage to other similar customers. (*Id.* at 6)

Witness Williamson also expressed concern with the proposed conversion of DSDR to a CVR program under the Company’s GIP, and the impact of that conversion on the current DSM/EE portfolio. (p. 21 of the testimony of witness Williamson) He explained that the enablement of CVR will not require any additional assets to be placed on the system, and that the changes necessary to implement the CVR conversion are software in nature. (*Id.* at 25) When CVR is activated, it should be able to provide two percent voltage reduction to 98% of the DSDR circuits across the Company’s North Carolina system. (*Id.* at 26) Witness Williamson testified that the Company has not assessed the potential impacts of reduced energy or demand savings that will result from the CVR initiative, but that the Company has noted that such impacts will be reflected in future cost-effectiveness evaluations. (*Id.*)

Witness Williamson also testified that the Public Staff is concerned that, because of the direction in which the Company is taking its grid enhancements, the DSDR program will no longer fit within the Company’s DSM/EE portfolio. He



noted that unlike the Company's other DSM/EE programs, DSDR is intertwined with the Company's day-to-day grid activities. (*Id.* at 27) He explained that the grid's need for operational evolution has continued since the original deployment of DSDR, and that, as explained by the Company in a discovery response provided as Williamson Exhibit 3, the capabilities of CVR mode are completely dependent on the infrastructure of the DSDR program. (*Id.* at 27-28) Witness Williamson also noted that the Company has acknowledged that the type of grid enhancements being deployed under the GIP will generally become standard practice. (*Id.* at 28) He stated that "[t]his is no different for DSDR," and that the Company has acknowledged that "nearly all DSDR equipment is the same type of equipment used for normal/routine [transmission and distribution] work." (*Id.*) Witness Williamson explained that the Public Staff has concerns that DSDR is treated differently than normal operational efficiency improvements being made by electric utilities, and that this separate treatment is due to the differences in the cost recovery mechanism applied to DSDR, and the cost recovery of the GIP. (*Id.* at 29) He emphasized that while DSDR is now similar to the work that is currently categorized as normal and routine, it is also being provided special ratemaking treatment in the form of DEP's DSM/EE rider, pursuant to which the Company is allowed recovery of all program costs on an annual basis. (*Id.* at 30) Witness Williamson then listed three overlapping technologies that exist in both DSDR and GIP. The total dollar amount on a system basis for the overlapping technologies is approximately \$5.7 million for Vintage year 2019. (*Id.* at 31)

Based on his concerns with the impacts of the Company's GIP proposal on the DSM/EE rider, witness Williamson recommended that the Commission require the Company to: (1) perform an analysis to explain how GIP will affect the performance of DSM/EE programs and their ability to produce peak demand and energy savings; (2) in the next rider proceeding, explain how the Company will distinguish peak demand and energy savings resulting from GIP from those resulting from DSM and EE programs; and (3) provide in its next rider filing a list of GIP projects that have been implemented and how those projects have affected the performance of the Company's DSM/EE portfolio, if at all. (*Id.* at 32-33)

In his rebuttal testimony, witness Evans disagreed with witness Williamson's recommendation that an analysis be performed by the Company to explain how GIP will impact the performance of its DSM/EE programs. He testified that the Company has provided voluminous amounts of data, analyses, and general information regarding the Company's proposed GIP, including its Integrated Volt-VAR Control program, as part of the pending rate cases for DEC and DEP in Docket Nos. E-7, Sub 1214 and E-2, Sub 1219. (p. 9 of the rebuttal testimony of witness Evans) Witness Evans explained that the Company is not opposed to reporting information about the DSDR to CVR project and that the Company has agreed to work with the Public Staff on reporting for GIP programs as outlined in the Company's Second Agreement and Partial Settlement with the Public Staff in the pending DEP rate case, but that the additional analysis recommended by witness Williamson is not necessary, and any influence or

interaction between GIP and DSM/EE programs will be evaluated and captured in the existing reporting protocols. (*Id.*)

Witness Evans also disagreed with witness Williamson's recommendation that the Company, in its next rider proceeding, explain how it will distinguish peak demand and energy savings resulting from GIP from those resulting from DSM and EE programs. He testified that although the Company acknowledges that changing the predominant operational strategy in DEP from DSDR to CVR would affect the amount of maximum peak shaving capability, time is needed to allow the Company to complete testing and analysis. (*Id.* at 11) He stated that the Company will first need to implement CVR capabilities in the DEP Distribution Management System and then perform testing to determine the amount of maximum peak shaving capability with the CVR enhancements. (*Id.*) He added that because this CVR testing has not been implemented yet, determining treatment of DSDR in this proceeding is premature, and discussions on the treatment of DSDR in subsequent DSM/EE proceedings are more appropriate. (*Id.*)

Lastly, witness Evans disagreed with witness Williamson's recommendation that the Company provide in its next rider filing a list of GIP projects that have been implemented and how those projects have impacted the Company's DSM/EE portfolio. He testified that recommendations on reporting on the status of GIP are addressed extensively in the pending rate cases, and that including additional GIP reporting in the DSM/EE proceedings is unnecessary and will likely lead to confusion. (*Id.* at 10) He added that because neither the Company nor any other party has recommended having the programs in the GIP be filed or considered as

part of the DSM/EE rider proceeding, that the DSM/EE rider proceeding is not the appropriate forum for the information witness Williamson is recommending for reporting. (*Id.*) He also noted that any influence or interaction between GIP and DSM/EE programs will be evaluated and captured in the existing reporting protocols. (*Id.*)

With respect to witness Williamson's recommendations concerning the GIP, the Commission finds and concludes that the potential impacts of the Company's proposed GIP on the cost-effectiveness of the Company's DSM/EE programs warrants further examination. Furthermore, while the Commission acknowledges that the Company has provided information concerning the GIP in the pending rate cases, it is the opinion of the Commission that information concerning the potential impact of the Company's proposed GIP on its DSM/EE programs is also relevant to, and should be presented in, the Company's DSM/EE rider proceedings. In addition, with respect to distinguishing peak demand and energy savings resulting from GIP from those resulting from DSM and EE programs, the Commission notes DEP and DEC's Late-Filed Exhibit No. 2, filed on September 3, 2020 in Docket Nos. E-2, Sub 1219 and E-7, Sub 1214.<sup>1</sup> Late-Filed Exhibit No. 2 indicates that the DEP DSDR Annual Report filed in June 2020 "did not include effects of the DSDR program primarily transitioning to [CVR] . . . ." It also stated the following:

Changing the predominant operational strategy in DEP from DSDR to CVR is expected to change the amount of maximum peak shaving capability. If the distribution management system (DMS) is operating in CVR mode, transitioning to DSDR mode (peak shaving) when load

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<sup>1</sup> The Commission took judicial notice of this document in its October 8, 2020 Order Granting Motion to Take Judicial Notice.

has already been reduced, through CVR mode, will not provide the peak shaving benefit realized today. The net result is that the amount of peak shaving would be reduced. In order to determine the reduction in peak shaving capability the Company will need to implement CVR capabilities in the DEP DMS system and then perform testing to determine the amount of maximum peak shaving capability with CVR.

The Commission is persuaded that the Company does not currently have the information necessary to conduct the analysis requested by the Public Staff, but based on the record, believes that such an analysis is critical to evaluating the Company's portfolio of DSM/EE programs. Therefore, to ensure that peak demand and energy savings are not being double counted or offered through other rate recovery channels, the Commission requests that the Company conduct an ongoing analysis as CVR capabilities are being implemented, and that the results of this analysis be provided in the Company's next DSM/EE rider filing and updated in future rider filings as more data become available.

Lastly, with respect to the question of whether the additional analyses recommended by witness Williamson will be adequately covered by existing reporting protocols, the Commission is persuaded that a yearly analysis of any impacts on cost-effectiveness will be essential to evaluating the Company's DSM/EE portfolio during each year's rider proceeding, and that the existing EM&V reporting protocol is therefore not sufficient. The Commission concludes that the Company shall: (1) perform an analysis explaining how GIP will affect the performance of DSM/EE programs and their ability to produce peak demand and energy savings, and file the report with the Commission in its next rider filing; (2) conduct an ongoing analysis, as CVR capabilities are being implemented, distinguishing peak demand and energy savings resulting from GIP from those

resulting from DSM and EE programs, and provide the results of this analysis in the Company's next DSM/EE rider filing, with updates in future rider filings as more data become available; and (3) provide in its next rider filing a list of GIP projects that have been implemented and explain how those projects have affected the performance of the Company's DSM/EE portfolio, if at all.

SACE witness Bradley-Wright testified that DEP's DSM/EE portfolio is cost-effective and that DEP customers realize considerable value from the Company's investment in energy efficiency programs. (p. 7 of the testimony of witness Bradley-Wright)

Overall, the Commission concludes that DEP's portfolio of DSM and EE programs is cost-effective and eligible for inclusion in the current rider.

The Commission makes specific findings and conclusions as to the individual programs that DEP and/or the Public Staff have identified as not being cost-effective below.

#### Neighborhood Energy Saver Program

Witness Evans testified that the Neighborhood Energy Saver (NES) Program, which was not cost-effective at the time of Commission approval, is not projected to be cost-effective for the Vintage 2021 period. (p. 19 of the testimony of witness Evans)

Pursuant to Paragraph 19 of the Mechanism (which provides an exception for low-income programs and other non-cost-effective programs with similar

societal benefits), the NES program is not required to pass the TRC or UCT tests to be eligible for inclusion in the Company's portfolio. Accordingly, the Commission finds and concludes that no further action by the Company is required with respect to this program.

### Residential Smart Saver

In his direct testimony, DEP witness Evans indicated that the Residential Smart Saver EE program is not projected to be cost-effective for the Vintage 2021 period. (*Id.*) The Company projected a TRC score of 0.40 for the program for Vintage 2021. (Evans Exhibit 7)

Public Staff witness Williamson testified that the Company has expanded the scope of the Smart Saver referral channel to include a variety of items and services beyond its original focus on HVAC equipment-related contractor referrals. (p. 38 of the testimony of witness Williamson) The referral channel now also provides customers with contractor referrals related to rooftop solar systems, plumbing, and tree removal services. (*Id.*) Witness Williamson explained that all funds that DEP receives from contractors participating in the referral channel, including those associated with non-EE-related services, are used to offset the program costs for the Smart Saver program. (*Id.* at 40) He also noted that, at this time, the funds associated with rooftop solar and tree service contractors represent only a "very small portion" of the overall revenues received. (*Id.*)

Witness Williamson stated that while the Public Staff does not believe the Company has violated any Commission rules or the Flexibility Guidelines that

address how program modifications are to be handled, that the expansion of the referral channel into areas not specifically related to DSM and EE programs does seem to be the type of program change that should be brought to the Commission's attention for approval in advance of the change, particularly for a change that would give the appearance of impacting the performance or cost recovery of a particular DSM or EE program. (*Id.* at 40-41) He testified that the Public Staff will continue to discuss this matter with the Company, and that such discussions could include the potential for revisions to the Flexibility Guidelines to address this type of program modification. (*Id.* at 41)

The Commission, however, notes that the Residential Smart \$aver EE program has failed to demonstrate a prospective TRC result greater than 1.0 in the current proceeding and in the last five rider proceedings: Subs 1070, 1108, 1145, 1174, 1206, and 1252. Paragraph 23 of the Mechanism requires the Company, in each annual DSM/EE cost recovery filing, to perform prospective cost-effective test evaluations for each of its approved DSM and EE programs. Pursuant to Paragraph 23B of the Mechanism, when a program initially demonstrates a prospective TRC of less than 1.0, the Company must include a discussion in its annual DSM/EE rider proceeding concerning actions being taken to maintain or improve cost-effectiveness, or, alternatively, plans to terminate the program. Pursuant to Paragraph 23C, if a program demonstrates a prospective TRC of less than 1.0 in a second DSM/EE rider proceeding, the Company must include a discussion in its annual filing concerning what actions it has taken to improve cost-effectiveness. Pursuant to Paragraph 23D, if a program demonstrates a



prospective TRC of less than 1.0 in a third DSM/EE rider proceeding, the Company must terminate the program, unless otherwise ordered by the Commission. Because the Residential Smart \$aver EE program has now demonstrated a prospective TRC of less than 1.0 in a sixth consecutive DSM/EE rider proceeding, the Commission is of the opinion that it is necessary to determine whether there are steps that can be taken to improve the cost-effectiveness of the program, or whether the program should be terminated.

Based on the foregoing, the Commission determines that no changes are required to the Company's Residential Smart \$aver EE program. The Commission also finds and concludes that if the program continues to demonstrate a prospective TRC result of less than 1.0 for the Vintage 2022 forecast in the next rider proceeding, the Company should include in its next rider filing a discussion of the actions being taken to maintain or improve cost-effectiveness, or alternatively, its plans to terminate the program.

#### EnergyWise for Business

In his direct testimony, DEP witness Evans stated that the EnergyWise for Business Program is not projected to be cost-effective for the Vintage 2021 period. (p. 19 of the testimony of witness Evans) He further stated that the cost-effectiveness of the program is a concern for the Company with its 0.52 TRC score. (*Id.*) He explained that the Company is examining the program and intends to determine if program modifications can increase its cost effectiveness or if discontinuation is appropriate, and that the Company will provide the Commission

with further information regarding the program's continuation on or before the filing of its 2021 cost recovery request. (*Id.*)

Based on the foregoing, the Commission finds and concludes that the Company is not required to take any action with respect to the EnergyWise for Business Program at this time.

### **EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 9**

The evidence for this finding of fact can be found in the testimony and exhibits of DEP witness Evans, the testimony of Public Staff witness Williamson, and the letter filed in this docket by the Public Staff on September 14, 2020.

DEP witness Evans testified regarding the EM&V process, activities, and results presented in this proceeding. (pp. 22-25 of the testimony of witness Evans) He explained that the EMF component of the Company's DSM/EE rider incorporates actual customer participation and evaluated load impacts determined through EM&V and applied pursuant to the Revised Mechanism. (*Id.*) In this proceeding, the Company submitted, as exhibits to witness Evans' testimony, EM&V reports for the following programs:

- My Home Energy Report – June 2017 – May 2018 (Evans Exhibit A)
- Neighborhood Energy Saver Program – 2018 (Evans Exhibit B)
- Save Energy and Water Kits – 2018 – 2019 (Evans Exhibit C)

- Commercial, Industrial, and Governmental Demand Response Automation Program – 2018 (Evans Supplemental Exhibit D)

Witness Williamson recommended that the EM&V reports filed in this proceeding as Evans Exhibits A and B and Evans Supplemental Exhibit D be considered complete. (p. 47 of the testimony of witness Williamson) He testified that he had confirmed through sampling that the changes to program impacts and participation were appropriately incorporated into the rider calculations for each DSM and EE program, as well as the actual participation and impacts calculated with the EM&V data. (*Id.*) Witness Williamson further testified that the Company has appropriately incorporated the findings from its EM&V studies and annual participation into its rider calculations, consistent with Commission orders and the Revised Mechanism. (*Id.* at 47-48)

With respect to the EM&V report for the Save Energy and Water Kit (SEWK) Program, Evans Exhibit C, Public Staff witness Williamson testified that during the course of the Public Staff's review, it had discovered a discrepancy between the savings resulting from the engineering analysis that was applied to these measures and a billing analysis. He explained that the Public Staff would continue to evaluate Evans Exhibit C, coordinate with DEP to conduct additional review of the data used in the evaluation, and offer further recommendations to the Commission before the close of this proceeding. (*Id.* at 45) On September 14, 2020, the Public Staff filed a letter in this proceeding stating that it had concluded its review of Evans Exhibit C and that there appeared to be an error in the calculation of impacts. The Public Staff added that the Company stated that it

would not be able to incorporate a correction to this error before the conclusion of the proceeding, and that DEP and the Public Staff had therefore agreed that the impacts should be corrected through the Experience Modification Factor (EMF) in the 2021 DSM/EE rider proceeding. The Public Staff then requested that the review of Evans Exhibit C therefore be held open until the 2021 proceeding.

Witness Williamson also noted several concerns with the EM&V report for the Neighborhood Energy Saver (NES) Program, Evans Exhibit B. First, he testified that the EM&V report determined program savings using an engineering analysis, which relied on information from other sources (namely, technical reference manuals from other states), rather than using a DEP-specific billing analysis. (*Id.* at 42) He explained that while the use of an engineering analysis is an acceptable analytical approach for the NES program, a billing analysis is preferable because it provides a more accurate representation of actual program performance. (*Id.* at 43) In his rebuttal testimony, DEP witness Evans agreed with witness Williamson that a billing analysis is a preferable evaluation methodology for the NES Program. (p. 7 of the rebuttal testimony of witness Evans)

Also with respect to the NES Program, witness Williamson raised a concern related to the evaluation of the net-to-gross ratio (NTGR). He testified that the engineering analysis assumes an NTGR of 1.0, which is standard practice for income-qualified programs. (p. 43 of the testimony of witness Williamson) He also testified, however, that lighting accounts for 37% of the program's gross savings, and that there have been significant changes in the lighting market in recent years. (*Id.* at 43-44) The EM&V report indicated that many bulbs could not be installed

because efficient bulbs were already present, which suggested an NTGR of less than 1.0 for lighting measures. (*Id.* at 44) In addition, he testified that the engineering analysis assumes the baseline wattage is equal to the federal standard (equivalent to a halogen bulb), when at the time of the evaluation, halogen bulbs likely only represented a small fraction of shelf space at stores selling bulbs to prospective lighting purchasers. (*Id.*) According to witness Williamson, the NTGR assumption and the presumed baseline wattage in the engineering analysis may overestimate the LED bulb savings component of the program. (*Id.*) In his rebuttal testimony, witness Evans stated that while the deemed NTGR of 1.0 is standard practice for income-qualified programs, the independent evaluator will examine whether an NTGR is applicable for this program and jurisdiction. (p. 8 of the rebuttal testimony of witness Evans) He stated that, if feasible, the evaluator will investigate framing free ridership questions as they relate to the broader lighting market, and that the evaluator will also review whether a baseline wattage assumption is appropriate given the region, target population, and types of lamps included in the program. (*Id.*)

Witness Williamson stated that while Evans Exhibit B is acceptable for purposes of verifying the NES program savings, it would be appropriate to perform the next evaluation of the NES program as soon as possible, and to incorporate a billing analysis in that evaluation. (p. 45 of the testimony of witness Williamson) In his rebuttal testimony, witness Evans stated that while the Company agrees with witness Williamson's recommendation that the next NES Program evaluation rely on a billing analysis, the Company asks for flexibility, should the results of the

billing analysis determine that such a methodology is not appropriate. (pp. 7-8 of the rebuttal testimony of witness Evans) Witness Evans also disagreed with conducting the next NES evaluation as soon as possible, with a target completion date on or before 2021. (*Id.* at 8) He stated that due to COVID-19, the NES program suspended in-home operations in March 2020 and has not yet resumed normal operations. (*Id.*) He added that the suspension in operations will reduce the number of participants available as a comparison control group and create delays as the evaluator tries to evaluate anomalous consumption patterns due to stay-at-home restrictions. (*Id.* at 8-9) Witness Evans testified that the Company will endeavor to work through the evaluation as quickly as possible post-suspension, but that a 2021 timeframe may be impossible to achieve. (*Id.* at 9)

Witness Williamson also raised a concern regarding cases in which similar or identical measures are offered across multiple programs. He testified that in such cases, the Company should ensure that the measures are evaluated consistently and using the same assumptions, including where the Company uses different contractors in the evaluations of those programs. He further recommended that where similar or identical measures are not evaluated consistently across programs, the Company should explain the differences justifying each case. (p. 46 of the testimony of witness Williamson) The Commission finds and concludes, with respect to witness Williamson's concerns regarding the NES program and the evaluation of measures where similar or identical measures are offered across multiple programs, that such concerns are appropriate topics for discussion in the Collaborative.

With the exception of Evans Exhibit C, no party contested the EM&V information submitted by the Company. The Commission therefore finds that the EM&V reports filed as Evans Exhibits A and B and Evans Supplemental Exhibit D are acceptable for purposes of this proceeding and should be considered complete for purposes of calculating program impacts. Further, the Commission concludes that DEP is appropriately incorporating the results of Evans Exhibits A and B and Evans Supplemental Exhibit D into its DSM/EE rider calculations.

With respect to Evans Exhibit C, the Commission will hold open review of the SEWK Program EM&V report until the Company's 2021 DSM/EE rider proceeding.

#### EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 10

The evidence for this finding of fact can be found in the testimony of DEP witness Evans.

The Commission's Order Approving DSM/EE Rider and Requiring Filing of Proposed Customer Notice, issued November 16, 2015, in Docket No. E-2, Sub 1070, directed DEP to file all changes in annual ratios of allocations between non-DSDR and DSDR equipment, report the degree of change in its annual DSM/EE rider filing, and provide such changes to the Public Staff as they become available. Witness Evans informed the Commission that the Company conducted a review of 2018 units during the summer of 2019 and determined that the capacitor allocation ratio should be reduced from 21.08 to 20.48 percent, and the regulator allocation ratio should be increased from 78.50 to 78.56 percent.

(Evans Direct at 14) Witness Evans indicated that the 2019 units would be reviewed this summer, and any further changes would be communicated to the Public Staff and implemented on January 1, 2021. (Evans Direct at 14-15.) The Commission concludes that DEP should continue to file reports of changes to its allocations between non-DSDR and DSDR equipment in future proceedings and provide the Public Staff with information on any changes to the allocation factor as they become available.

#### EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 11-12

The evidence for these findings of fact can be found in the testimony and exhibits of Public Staff witnesses Hinton and Williamson and DEP witness Duff.

#### Avoided Costs Used in Calculating the PPI

In his testimony, Public Staff witness Hinton proposed two adjustments to the avoided capacity costs benefits used by DEP in the calculation of its PPI.<sup>2</sup> First, Mr. Hinton recommended that the Commission require DEP to remove the 17% adder it had applied to all of the megawatt (MW) reductions (demand reduction benefits) associated with the Company's EE programs beginning with vintage year 2021. Second, he recommended that the Company apply a seasonal capacity allocation factor of 100% for the winter season and 0% seasonal allocation factor for the summer season to its entire portfolio of programs consistent with the

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<sup>2</sup> As discussed by Public Staff witness Williamson, the adjustments to avoided capacity costs (benefits) proposed by Mr. Hinton also impact the projections of ongoing cost-effectiveness for DEP's DSM programs. However, even with Mr. Hinton's proposed adjustments, the DSM programs continue to be cost-effective.



seasonal allocation factor approved in Docket No. E-100, Sub 158. (Testimony of John R. Hinton (Hinton) at 6.)

#### Parties Discussion of the Issues

Mr. Hinton explained that in Docket No. E-100, Sub 158 (Sub 158), the Commission issued its Notice of Decision on October 7, 2019, on its determination of avoided energy and avoided capacity rates, DEP filed its compliance rates on November 1, 2019, and the Commission issued its Final Order on April 15, 2020, establishing these rates. (Hinton at 5.) He noted that in this proceeding, the Company updated its underlying avoided cost inputs for both capacity and energy to be derived from the Sub 158 rates. (Id.)

Mr. Hinton indicated that for the first time, the Company is proposing in this proceeding to increase the value of the demand reduction benefits from EE programs by 17%. (Id. at 8-9.) He explained that in DEP's Integrated Resource Plan (IRP), DEC reduces its peak load by the amount of the demand reduction from EE programs, which DEP considers to be a demand-side resource, as shown in the Load, Capacity, and Reserve (LCR) Tables included in DEP's IRP. (Id. at 8.) Mr. Hinton acknowledged the Company's argument that since it increases the amount of supply-side resources required to meet the projected peak load by a 17% reserve margin, a similar reserve margin adjustment is appropriate for demand-side resources. (Id.) He noted that prior to the merger of DEP's parent company with Duke Energy Corporation, DEP indicates that its Strategist model

had included a reserve margin adjustment, but it had not included the adjustment since the 2012 merger. (Id.)

Mr. Hinton pointed out that under DEP's premise, a reduction of 100 MW of EE during 2021 would increase the load forecast by 100 MW, while shifting to a supply side resource, DEP's load serving capacity would increase by 117 MW, leading to a 17.7% reserve margin as compared to a 17.0% reserve margin. (Id. at 9.) However, he noted, the key question is the appropriate value of a MW of load reduction to customers. (Id. at 10.) Mr. Hinton argued that it would be unfair to customers to force them to pay 17% more for the same amount of demand reduction from a demand-side resource. (Id. at 10-11.)

Mr. Hinton also noted that the avoided capacity rate currently includes a 5% Performance Adjustment (PAF) factor. (Id. at 12-13.) He explained the PAF was approved in Sub 158 and increases the annual combustion turbine (CT) carrying cost by approximately 23% over the cost of an avoided CT underlying the avoided capacity rates. (Id. at 13.)

Mr. Hinton opined that the proposed reserve margin adder was inconsistent with the Sub 1145 revisions to the Sub 931 Mechanism as it did not properly apply the Sub 158 avoided capacity rates. (Id. at 11-12.) Further, he noted that including a reserve margin adder was a significant change to the Mechanism, and thus should be considered in a total review of the Mechanism, where the impact of this change would be balanced against other elements such as the PPI percentage. (Id. at 15.)

In regard to the seasonal allocation adjustment, Mr. Hinton explained that the Company had accorded avoided capacity benefits to “legacy” DSM programs using a 100% summer seasonal allocation weighting, while applying to “incremental” measures avoided capacity benefits using the Sub 158 seasonal allocation of 100% winter and 0% summer.<sup>3</sup> (Id. at 16.) He stated that the Company justified this approach on the basis that these “legacy” measures and participation are included in its IRP. (Id.)

Mr. Hinton pointed out that the Company has maintained that it had switched to being a winter planning system as documented in its 2016 Resource Adequacy Study, 2016 and 2018 Biennial Avoided Cost proceedings, and 2016 and 2018 biennial IRPs. (Id.) He noted that the Commission approved seasonal allocation factors in Docket No. E-100, Sub 148 of 80% winter and 20% summer, while shifting to even more of a winter allocation in the Sub 158 proceeding. (Id. at 17.) Mr. Hinton said that in Sub 158, the Company indicated that these allocation factors recognized the loss of load risk that was greater in the winter and would send appropriate price signals to QFs. (Id.)

Mr. Hinton expressed skepticism about the merit of the proposal to treat legacy and incremental DSM differently when there had been increasing emphasis on winter planning in the Sub 158 proceeding. (Id. at 18.) He stated that summer DSM now has less value as both a capacity resource at the expected time of peak

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<sup>3</sup> DEP makes a distinction between “legacy” and “incremental” DSM programs in its evaluation of the portfolio and program cost effectiveness. “Legacy” DSM is the level of DSM activation capability that was originally projected for the year 2021 in DEP’s 2018 IRP, while “incremental” is all activation capability that is above the projected levels of the 2018 IRP for year 2021.

and in dollars per kW associated with the demand reductions. (Id.) Mr. Hinton pointed out that if the Sub 158 seasonal allocation was applied to DEC's legacy DSM programs, all would continue to be cost effective. (Id. at. 29) Mr. Hinton pointed out that application of the Sub 158 allocation of seasonal capacity value to these legacy DSM programs would encourage the Company to emphasize programs that reduce load during the winter season. (Id. at 19.) He noted that the Company has already begun an investigation aimed at reducing winter peak loads, and has filed modifications to its Residential Load Control Rider, Docket No. E-2, Sub 927, to provide a winter-focused load control program. (Id. at 19.) He also provided evidence using system lambdas and dates of activation of DEP's DSM programs that tended to show that the capacity value of these DSM programs in the summer has gone down over time as DEP becomes more and more of a winter planning utility. (Id. at. 20-28.) Therefore, Mr. Hinton recommended that the Commission require DEC to apply the current biennial avoided cost proceeding seasonal allocation of capacity benefits to all of its DSM programs. (Id. at 28-29.)

DEC witness Duff testified that since EE is treated as a load reduction resource in the IRP, it is appropriate to apply a 17% reserve margin to it as to an increase in system load. (Duff Rebuttal at 22.) He pointed out that for every kW of load reduction from EE, the Company does not have to plan for 1.17 kW of load serving capacity. (Id.) He noted that in actuality, DEP included a reserve margin adjustment in its rider calculations until vintage year 2016. (Id. at 23.) In regard to Mr. Hinton's argument that the PAF included in avoided capacity rates was equivalent to a reserve margin adjustment, Mr. Duff argued that if the Commission

were to find that the PAF was equivalent to the reserve margin adjustment, it should only reduce the reserve margin adder by the amount of the PAF. (Id. at. 29)

DEP witness Duff testified that the Company made one change to its application of avoided capacity costs in this proceeding from previous proceedings by voluntarily applying the 100% Winter and 0% Summer allocation approved in Sub 158 for all new incremental participation in both EE and DSM programs. (Id. at 10.) He explained that the Company voluntarily adopted this seasonal allocation to encourage the development of programs that provide winter capacity and because it better aligns with how QFs receive capacity value. (Id. at 10-11.) Mr. Duff defended the application of these seasonal allocation factors to only incremental programs by pointing out that in Sub 158, the 100/0% seasonal allocation factors were applied only to future QF capacity and not to existing power purchase agreements. (Id. at 14.) He also noted that this treatment of legacy DSM was consistent with the Commission's Order in the Sub 1174 proceeding. (Id.) Mr. Duff contended that the Public Staff's proposal would devalue existing DSM resources as opposed to encouraging new winter capacity. (Id. at 19.) He pointed out that under the Public Staff's proposal, the UCT results for the Company's Commercial, Industrial and Governmental Demand Response Automation Program would fall to 0.65, and that this program provides 9 MW of the Company's 27 MW of legacy summer demand response. (Id. at 20-21.)

## Commission Discussion

Based on the foregoing, the Commission concludes that the appropriate avoided capacity benefits and per kWh avoided energy benefits to be used for the initial estimate of the Vintage 2021 PPI and any Vintage 2021 PPI true-up should be derived from the approved Docket No. E-100, Sub 158 PURPA production cost model as outlined in Docket No. E-2, Sub 1174 (Sub 1174), which includes capacity weighting by season. Thus, it was appropriate for DEP to allocate avoided capacity benefits by season to its Vintage 2021 DSM programs, but it should have applied the seasonal allocation to all of those measures. The Commission notes that its decision in the Sub 1174 case did not rule on the Company's legacy/incremental distinction, but rather whether the use of a "zero capacity" value when the IRP did not show a capacity need was consistent with the Mechanism as revised or when it would undervalue DSM programs or send the correct price signals. This case is different. As the Public Staff points out, the Commission has for a number of years emphasized the need for the Company to develop winter DSM programs based on DEP's contention that it is winter planning. Use of a seasonal allocation does not undervalue programs; instead, it appropriately values the load reductions associated with its DSM programs, thereby sending the correct price signal.

The Commission is persuaded that the avoided capacity benefits should be calculated using the approved production model from the most recent Biennial Avoided Cost proceeding; moreover, legacy programs should not be exempt from the approved season weighting of capacity value. It is inequitable to ratepayers to

weight the value of capacity offered by QFs during the summer season at 0%, while according summer load reductions generated by the Company's DSM programs beginning in 2021 a capacity value of 100%. The Commission acknowledges its prior acceptance of the Company's Astrapé reserve margin studies that have documented the shifting of its loss of load risk from summer to winter, which has been applied in various IRPs and avoided cost proceedings. These studies have played a significant role in shifting the Company's focus to managing its capacity resources in the winter season and reassessing the capacity value of solar generation in avoided cost proceedings. As such, the Commission finds that the avoided capacity benefits for Vintage 2021 measures of both legacy and new incremental programs should be based on the approved cost inputs in the production model with the approved seasonal weighting as provided in Docket No. E-100, Sub 158. The Commission notes that the Public Staff's recommendation and the Commission's conclusion in this regard does not apply to DSM measures that are implemented prior to year 2021; therefore, application of its conclusion will not change the avoided cost benefits found to have resulted from measures implemented in prior years, even when those measures are associated with the same DSM programs for which the Sub 158 change in seasonal allocation will apply to the 2021-vintage measures.

Furthermore, the Commission finds that the use of seasonal capacity weighting is consistent with the Company's past IRPs, Reserve Adequacy Studies, and Biennial Avoided Cost proceedings. As such, it is reasonable to recognize the increased value of winter-related DSM programs. This recognition does not

penalize summer DSM programs; rather, it provides the Company an appropriate incentive to aggressively pursue programs that reduce load in the appropriate (at this time, winter) season. This incentive appears to be necessary given the slow progress the Company has made in making winter season DSM programs available to its customers.

With regard to the use of the reserve margin adder, the Commission agrees with the Public Staff that it is inappropriate for the Company to increase the capacity savings value of EE programs by 17%. First, use of this adder is inconsistent with the current Mechanism, and as Public Staff witness Hinton points out, should be considered along with any other changes to the Mechanism during an overall Mechanism review. Second, the avoided capacity cost rates already include an allowance for a 1.05 PAF, which prior to the Sub 148 proceeding, had some equivalence to the reserve margin. DEP's application of a different reserve margin when the capacity rates already include an amount that accounts for the reserve margin is not appropriate. Finally, the Commission agrees with Mr. Hinton that allowing the application of a reserve margin adder inappropriately gives EE a higher value than DSM. The playing field should be level for both types of demand-side resources. DEP's choice as to how it models DSM and EE in its IRP should not result in disparate treatment of these two resources.

Additionally, the Commission notes that DEP applied its proposed seasonal allocation and the reserve margin adder to its rider calculations, but did not include a request to change the Mechanism or any testimony noting this change in methodology. This is not appropriate. In future cases, any changes to the



methodology used for calculating the rider should be identified in testimony, including the reasons for the change and the impact of the change, as well as whether a change to the Mechanism is requested.

#### EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 13-18

The evidence for these findings of fact can be found in the testimony and exhibits of DEP witnesses Listebarger and Evans and the testimony of Public Staff witness Maness.

In her direct testimony and exhibits, DEP witness Listebarger calculated proposed North Carolina retail NLR in the amount of \$38,111,736 and a PPI in the amount of \$26,905,577 for the EMF component of the total DSM/EE rider, and North Carolina retail NLR of \$34,768,785 and a PPI of \$21,191,901 for the forward-looking, or prospective component of the total rider. In her exhibits, DEP witness Listebarger calculated DEP's total North Carolina retail adjusted test period costs and utility incentives, consisting of its amortized DSM/EE O&M costs, capital costs, taxes, amortized incremental A&G costs, carrying charges, NLR, and PPI to be \$176,818,282. Witness Listebarger's testimony and exhibits also indicated that the amount of test period DSM/EE rider revenues and miscellaneous adjustments to take into consideration in determining the test period DSM/EE under- or over-recovery is \$172,654,182. Therefore, the aggregate DSM/EE under-recovery recommended by DEP for purposes of this proceeding is \$4,164,100. The Public Staff found no errors or other issues with the EMF amounts proposed by DEP.

Witness Listebarger also calculated DEP's estimate of its North Carolina retail DSM/EE program rate period amounts, consisting of its amortized O&M costs, depreciation, capital costs, taxes, amortized incremental A&G costs, carrying charges, NLR, and PPI, as \$169,661,531.

According to the exhibits of DEP witness Listebarger, after assignment or allocation to customer classes in accordance with N.C. Gen. Stat. § 62-133.9, Commission Rule R8-69, and the Commission Orders in Docket No. E-2, Sub 931, the revenue requirements for each class, excluding NCRF, are as follows:

DSM/EE PROSPECTIVE COMPONENT	
Residential	\$101,854,909
General Service EE	\$60,865,888
General Service DSM	\$6,600,295
Lighting	\$6,600,295

Witness Listebarger's exhibits also set forth the North Carolina retail class level kWh sales that DEP believes are appropriate and reasonable for use in determining the DSM/EE and DSM/EE EMF billing factors in this proceeding. She adjusted the kWh sales to exclude estimated sales to customers who have opted out of participation in DEP's DSM/EE programs. The Public Staff did not oppose these amounts. The adjusted sales amounts are as follows: Residential class – 15,893,328,062 kWh; General Service EE class – 9,132,663,985 kWh; General Service DSM class – 9,064,020,676; and Lighting class – 356,925,937 kWh.

According to her exhibits, witness Listebarger calculated the DSM/EE billing factors without NCRF as follows:

DSM/EE PROSPECTIVE BILLING FACTORS (cents/kWh):

Residential	0.641
General Service EE	0.666
General Service DSM	0.073
Lighting	0.095

DSM/EE EMF BILLING FACTORS (cents/kWh):

Residential	0.013
General Service EE	0.034
General Service DSM	(0.010)
Lighting	(0.007)

Including the NCRF, the factors calculated by witness Listebarger are as follows:

DSM/EE PROSPECTIVE BILLING FACTORS (cents/kWh):

Residential	0.642
General Service EE	0.667
General Service DSM	0.073
Lighting	0.095

DSM/EE EMF BILLING FACTORS (cents/kWh):

Residential	0.013
General Service EE	0.034
General Service DSM	(0.010)
Lighting	(0.007)

Witness Listebarger also testified that DEP had incorporated a placeholder for the return of excess deferred income taxes (EDIT) into Rider 11 to mitigate potential overcollection with respect to the Company's DSM/EE Rider by including a reduction of \$5 million to Year 2020 lost revenues collected from Vintage 2017,

Vintage 2018, Vintage 2019, and Vintage 2020. She noted that this would be trued up to the actual EDIT impact on the lost revenue in the next DSM/EE rider filing after an Order is issued in DEP's pending base rate case, Docket No. E-2, Sub 1219. (Listebarger at 14.)

Public Staff witness Maness indicated that the focus of the Public Staff's investigation of DEP's filing in this proceeding was whether the proposed DSM/EE rider was calculated in accordance with the Mechanism and otherwise adhered to sound ratemaking concepts and principles. (Testimony of Michael C. Maness (Maness) at 11.) The Public Staff's investigation included a review of the Company's filing and relevant prior Commission proceedings and orders, and workpapers and source documentation used by the Company to develop the proposed billing rates (including the selection and review of a sample of source documentation for test period costs included by the Company for recovery). (Id. at 11-12.)

Besides the adjustments recommended by Public Staff witnesses Hinton and Williamson regarding removal of the reserve margin adder and including an adjustment for the seasonal allocation, witness Maness testified that he believed that the Company has calculated its proposed prospective DSM/EE and DSM/EE EMF billing factors in a manner consistent with N.C. Gen. Stat. § 62-133.9, Commission Rule R8-69, and the Mechanism. (Id. at 12.)

In his testimony, Mr. Maness filed calculations that took into account the adjustments recommended by Public Staff witness Hinton and Williamson to adjust

seasonal weightings of avoided capacity benefits associated with DSM programs and to remove inappropriately added reserve margins to the avoided cost savings of EE programs. (Id. at 13.) Mr. Maness filed Maness Exhibit I, which developed DSM/EE revenue requirements and billing factors consistent with Mr. Hinton's and Mr. Williamson's recommendations. Based on the Public Staff's adjustments, Mr. Maness recommended the following Vintage 2021 prospective factors (excluding NCRF):

<u>(In cents per kWh)</u>	
Res. DSM/EE factor	0.640
General Service EE factor	0.666
General Service DSM factor	0.072
Lighting EE factor	0.095

(Id. at 14)

Witness Maness concluded that other than these issues, the Public Staff found no errors or other issues necessitating an adjustment to DEP's proposed billing factors. (Id. at 199.) Finally, witness Maness testified that when the Public Staff's review of program costs was complete, it would file the results with the Commission. (Id.) On September 30, the Public Staff filed a letter indicating that it had completed its review and found no material differences between the program costs as filed by the Company and the costs as reflected in the supporting documentation examined.

### Conclusions on Calculations of Rider EE

Based on the foregoing, the Commission finds and concludes that the components of the Vintage 2021 DSM and EE Riders as adjusted by the Public Staff are in compliance with the Commission's findings and conclusions herein, as well as the Commission's findings and conclusions as set forth in the Sub 931 Stipulation and the Mechanism approved in the Sub 1145 Order, as revised by the Sub 1174 Order.

Therefore, the Commission concludes that for purposes of the DSM/EE EMF billing rates to be set in this proceeding, DEP's reasonable and prudent North Carolina retail test period costs and incentives, consisting of its amortized DSM/EE O&M costs, capital costs, taxes, amortized incremental A&G costs, carrying charges, NLR, and PPI, are \$176,818,282 (excluding the NCRF). The reasonable and appropriate amount of test period DSM/EE rider revenues and adjustments to take into consideration in determining the test year and prospective period DSM/EE under- or over-recovery is \$172,654,182 (excluding the NCRF). Therefore, the aggregate DSM/EE under-recovery for purposes of this proceeding is \$4,164,100.

For purposes of the DSM/EE rider to be set in this proceeding, and subject to review in DEP's future DSM/EE rider proceedings, the Commission concludes that DEP's reasonable and appropriate estimate of its North Carolina retail DSM/EE program rate period amounts, consisting of its amortized O&M costs, capital costs, taxes, amortized incremental A&G costs,

carrying charges, NLR, and PPI, is \$169,385,792 (excluding the NCRF), based on Maness Exhibit I, which is the appropriate amount to use to develop the prospective component of the DSM/EE revenue requirement.

For the revenue requirements per class, the Commission concludes that after assignment or allocation to customer classes in accordance with N.C. Gen. Stat. § 62-133.9, Commission Rule R8-69, and the orders in Docket No. E-2, Sub 931, the revenue requirements for each class, excluding NCRF, are as follows:

<b>DSM/EE PROSPECTIVE COMPONENT:</b>	
Residential	\$101,755,267
General Service EE	\$60,785,477
General Service DSM	\$6,504,609
Lighting	<u>\$340,439</u>
Total	\$169,385,792

<b>DSM/EE EMF:</b>	
Residential	\$1,988,124
General Service EE	\$3,131,509
General Service DSM	\$(931,458)
Lighting	<u>\$(24,075)</u>
Total	\$4,164,100

Furthermore, the Commission finds that the appropriate and reasonable North Carolina retail class level kWh sales for use in determining the DSM/EE and DSM/EE EMF billing factors in this proceeding are as follows: Residential

class – 15,893,328,062; General Service class EE – 9,132,663,985; General Service class DSM – 9,064,020,676; and Lighting class – 356,925,937.

Based on the testimony and exhibits of Company witnesses Listebarger and Evans, the testimony and exhibits of Public Staff witnesses Maness, Hinton, and Williamson, and the entire record in this proceeding, the Commission finds and concludes that the forward-looking DSM/EE rates as proposed by Public Staff witness Maness to be charged during the rate period for the Residential, General Service, and Lighting rate schedules are appropriate. The Commission further concludes that the DSM/EE EMF billing factors as proposed by DEP and the Public Staff are appropriate.

IT IS, THEREFORE, ORDERED as follows:

1. That the Commission hereby approves the calculation of DEP's Vintage 2021 DSM/EE Rider as filed in the Testimony and Exhibit I of Michael C. Maness, and the resulting billing factors as set forth in Maness Exhibit I, to go into effect for the rate period January 1, 2021, through December 31, 2021, subject to appropriate true-ups in future cost recovery proceedings consistent with the Sub 931 Order, the Sub 1174 Order, and other relevant orders of the Commission.

2. That DEP shall work with the Public Staff to prepare a proposed Notice to Customers of the rate changes approved herein. Within 30 days from the date of this Order, the Company shall file said notice and the proposed time for service of such notice for Commission approval.



3. That in future proceedings, should DEP make any changes to the methodology used for calculating the rider, it should identify the changes in testimony, including the reasons for and the impacts of the changes, as well as whether a revision to the Mechanism is requested.

4. That if the Residential Smart \$aver program continues to demonstrate a prospective TRC result of less than 1.0 for Vintage 2022, the Company should include in its next rider filing a discussion of the actions being taken to maintain or improve cost-effectiveness, or alternatively, its plans to terminate the program.

5. That the Company shall: (1) perform an analysis explaining how GIP will affect the performance of individual DSM/EE programs and their ability to produce peak demand and energy savings, and file the report with the Commission in its next rider filing; (2) conduct an ongoing analysis, as CVR capabilities are being implemented, distinguishing peak demand and energy savings resulting from GIP from those resulting from DSM and EE programs, and provide the results of this analysis in the Company's next DSM/EE rider filing, with updates in future rider filings as more data become available; and (3) provide in its next rider filing a list of GIP projects that have been implemented and explain how those projects have affected the performance of the Company's DSM/EE portfolio, if at all.

6. That review of the Save Energy and Water Kit Program shall be held open until DEP's 2021 DSM/EE rider proceeding.

ISSUED BY ORDER OF THE COMMISSION.

This the \_\_\_\_ day of \_\_\_\_\_, 2020.

NORTH CAROLINA UTILITIES COMMISSION

Kimberley A. Campbell, Chief Clerk