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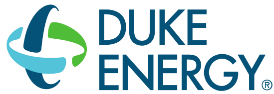

OFFICIAL COPY

Oct 16 2020

October 16, 2020

VIA ELECTRONIC FILING

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

Re: Duke Energy Progress, LLC's Proposed Order
Docket No. E-2 Sub 1252

Dear Ms. Campbell:

Please find enclosed for filing in the above-referenced docket Duke Energy Progress, LLC's Proposed Order Approving DSM/EE Rider and Requiring Filing of Proposed Customer Notice. An electronic copy is being emailed to briefs@ncuc.net.

If you have any questions, please do not hesitate to contact me.

Sincerely,

Kendrick C. Fentress

Enclosure

cc: Parties of Record

CERTIFICATE OF SERVICE

I certify that a copy of Duke Energy Progress, LLC's Proposed Order Approving DSM/EE Rider and Requiring Filing of Proposed Customer Notice, in Docket No. E-2, Sub 1252, has been served on all parties of record either by electronic mail, hand delivery or by depositing a copy in the United States mail, postage prepaid.

This the 16th day of October, 2020.

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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. Gen. Stat. § 62-133.9 and Commission Rule R8-69	)))))	PROPOSED ORDER APPROVING DSM/EE RIDER AND REQUIRING FILING OF PROPOSED CUSTOMER NOTICE

HEARD: On Tuesday, September 15, 2020, in Commission Hearing Room 2115, Dobbs Building, 430 North Salisbury Street, Raleigh, North Carolina (Public Witness hearing)

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

APPEARANCES:

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For the Carolina Industrial Group for Fair Utility Rates III:

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For the North Carolina Sustainable Energy Association:

Benjamin Smith, Regulatory Counsel
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For the North Carolina Justice Center, North Carolina Housing Coalition, and the Southern Alliance for Clean Energy:

David Neal
Tirrill Moore
Southern Environmental Law Center
601 West Rosemary Street, Suite 220
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For the Using and Consuming Public:

Lucy E. Edmondson
Nadia L. Luhr
Public Staff – North Carolina Utilities Commission
4326 Mail Service Center
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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, outside of a general rate case, for recovery of all reasonable and prudent costs incurred for adoption and implementation of new demand-side management ("DSM") and energy efficiency ("EE") measures. The Commission is also authorized to award incentives to electric companies for adopting and implementing new DSM/EE measures, including, but not limited to, appropriate rewards based on (1) the sharing of savings achieved by the DSM and EE measures and/or (2) the capitalization of a percentage of avoided costs achieved by the measures. Commission Rule R8-69(b) provides that every year the Commission will conduct a proceeding for each electric public utility to establish an annual DSM/EE rider to recover the reasonable and prudent costs incurred by the electric utility in adopting and implementing new DSM/EE measures previously approved by the

Commission pursuant to Commission Rule R8-68. Further, Commission Rule R8-69(b) provides for the establishment of a DSM/EE experience modification factor ("EMF") rider to allow the electric public utility to collect the difference between reasonable and prudently incurred costs and the revenues that were realized during the test period under the DSM/EE rider then in effect. Commission Rule R8-69(c) permits the utility to request the inclusion of utility incentives (the rewards authorized by the statute), including net lost revenues ("NLR"), in the DSM/EE rider and the DSM/EE EMF rider.

In the present proceeding, Docket No. E-2, Sub 1252, on June 9, 2020, Duke Energy Progress, LLC ("DEP" or the "Company") filed an application for approval of its DSM/EE rider for 2021 ("Application") and the direct testimony and exhibits of Shannon R. Listebarger, Manager – Rates and Regulatory Strategy for Duke Energy Carolinas, LLC but supporting DEP as well, and Robert P. Evans, Senior Manager – Strategy and Collaboration for the Carolinas in the Company's Market Solutions Regulatory Strategy and Evaluation group.

On June 29, 2020, the Commission issued an order scheduling a hearing for September 15, 2020, establishing discovery guidelines, providing for intervention and testimony by other parties, and requiring public notice. DEP filed the affidavits of publication for the public notice as required by the Commission's June 29, 2020 Order.

The intervention of the Public Staff – North Carolina Utilities Commission ("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. ("CUCA") filed a petition to intervene, which was granted on June, 2020. On June 25, 2020, the North Carolina Sustainable Energy Association ("NCSEA") filed a petition to intervene, which

was granted on June 26, 2020. On July 15, 2020, the North Carolina Justice Center ("NC Justice Center"), the North Carolina Housing Coalition ("NC Housing Coalition") and the Southern Alliance for Clean Energy ("SACE") filed a petition to intervene, which was granted on July 16, 2020. The Carolina Industrial Group for Fair Utility Rates III ("CIGFUR") filed a petition to intervene on August 25, 2020, which was granted on August 25, 2020.

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

On August 24, 2020, the Public Staff filed a motion for extension of time to file testimony. On August 25, 2020, the Commission granted the motion for extension.

On August 26, 2020, the NC Justice Center, et al. filed the testimony and exhibits of Forest Bradley-Wright, the Energy Efficiency Director for SACE; and the Public Staff filed the testimony and exhibits of Michael C. Maness, Director of the Accounting Division, David Williamson, Utility Engineer in the Electric Section of the Energy Division, and John R. Hinton, Director, Economic Research Division.

On August 7, 2020, the Commission issued an order scheduling a remote hearing for expert witness testimony and requiring parties to file written statements of consent or objection by September 1, 2020 and to file potential cross-examination exhibits by September 10, 2020. All parties filed statements of consent to holding the expert witness hearing by remote means.

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

On September 10, 2020, DEP, the Public Staff, and NC Justice Center, et al. filed a joint motion to excuse all witnesses from appearing at the September 15, 2020 expert witness hearing. On September 14, 2020, the Commission issued an order granting the motion, accepting all testimony and exhibits into the record, cancelling the expert witness hearing, and requiring the filing of proposed orders and briefs by October 16, 2020.

On September 14, 2020, the Public Staff filed a letter advising the Commission that it had completed its review of DEP's Save Energy & Water Kit Program and found an error in the calculation of impacts which DEP agreed to correct in the EMF in next year's DSM/EE rider proceeding.

The case came on for the public witness hearing as scheduled on September 15, 2020. No public witnesses appeared at the hearing.

On October 16, DEP filed its proposed order.

<u>Cost Recovery Mechanism</u>

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, 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."

Based upon consideration of DEP's Application, the pleadings, the testimony, and exhibits received into evidence, the parties' briefs, and the record, the Commission now 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
- EE Education Program
- Multi-Family EE
- My Home Energy Report ("MyHER")
- Neighborhood Energy Saver (Low-Income)
- Smart $aver EE Program (formerly, Home Energy Improvement Program)
- New Construction
- EnergyWise (Load Control)
- Save Energy and Water Kit
- Energy Assessment

Non-Residential

- Smart $aver Energy Efficient Products and Assessments (formerly, EE for Business)
- Smart $aver Performance Incentive Program
- Small Business Energy Saver
- Commercial, Industrial, and Governmental ("CIG") Demand Response Automation
- EnergyWise for Business

Residential and Non-Residential

- DSDR
- EE Lighting

These programs are eligible for cost and utility incentive recovery, where applicable.

5. For purposes of inclusion in this DSM/EE rider, the Company's portfolio of DSM and EE programs is cost-effective, and the Commission does not direct that any action be taken on any of these programs at this time.

6. The transformation of the lighting market with respect to LED non-specialty lighting continues, but to sustain the benefit that low-income customers and multifamily residences obtain from energy efficient A-line bulbs, the Company shall continue to provide energy efficient A-line bulbs to low-income and multifamily residences through its traditional outlets.

7. The Company has already provided the Commission information on its Grid Improvement Plan ("GIP"), and providing additional information in the next DSM/EE rider proceeding on potential future impacts of the GIP program on the Company's DSM/EE portfolio is premature as the Company has not had the opportunity to test and analyze any reduction in peak shaving and potentially duplicative of reports already made in other dockets.

8. Although customers are receiving additional and more precise data about their energy usage from smart meters or other channels, these channels do not provide the

normative comparison of their usage to that of their peers or empower customers to act on that data the way the Company's MyHER EE program does; therefore, the Company may continue to offer the MyHER program and an assessment of the continuation of the MyHER program is not necessary or justified at this time.

9. The evaluation, measurement, and verification ("EM&V") reports filed as Evans Exhibits A, B, C, and Evans Supplemental Exhibit D are acceptable for purposes of this proceeding and should be considered complete for purposes of calculating program impacts. DEP has appropriately incorporated the results of these EM&V reports into the 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 was elevated 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. The Company appropriately applied a 17% reserve margin adjustment to the avoided capacity associated with EE programs because it is consistent with past practices and reflective of how EE resources are treated in the Integrated Resource Plan ("IRP").

12. The Company's proposed seasonal allocation of avoided capacity value is consistent with the Commission's most recent avoided cost proceeding and is appropriate

for use in this proceeding; however, the seasonal allocation factors should not be applied to the Company's legacy DSM participation and measures.

13. In its direct testimony and exhibits, DEP requested the recovery of NLR in the amount of $38,111,736 and PPI in the amount of $26,905,577 through the EMF component of the total DSM/EE rider, and NLR of $34,768,785 and PPI of $21,191,901 for recovery in the forward-looking, or prospective component of the total rider. DEP's proposed recovery of NLR and PPI is consistent with the Mechanism and is appropriate.

14. 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 $169,661,531, and this is the appropriate amount to use to develop the forward-looking DSM/EE revenue requirement.

15. 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. 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.

16. 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:

DSM/EE PROSPECTIVE COMPONENT:

Residential	101,854,910
General Service EE	60,865,888
General Service DSM	6,600,295
Lighting	340,439
Total	169,661,531

DSM/EE EMF:

Residential	1,988,123
General Service EE	3,131,509
General Service DSM	(931,458)
Lighting	(24,075)
Total	4,164,100

17. 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:

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

18. 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. The factors do not change with the NCRF included.

19. The appropriate forward-looking DSM/EE rates to be charged by DEP during the rate period, excluding NCRF, are: 0.641 cents per kWh for the Residential class; 0.0.666 cents per kWh for the EE component of the General Service classes; 0.073 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: 0.642 cents per kWh for the Residential class; 0.667 cents per kWh for the EE component of the General Service classes; 0.073 cents per kWh for the DSM component of the General Service classes; and 0.095 cents per kWh for the Lighting class.

20. The appropriate total DSM/EE annual riders including the forward looking and the EMF rate (including NCRF) for the Residential, General Service, and Lighting rate classes are increments of 0.655 cents per kWh for the Residential class, 0.701 cents per kWh for the EE portion of the General Service class; 0.063 cents per kWh for the DSM portion of the General Service class, and 0.088 cents per kWh for the Lighting class.

21. DEP should continue to leverage its collaborative stakeholder meetings ("Collaborative") to expand on the existing discussions related to the expansion and improvements of low-income EE programs, EM&V issues, and other program design issues raised in the testimony of NC Justice Center, et al. witness Bradley-Wright and provide a summary of those discussions in the Company's next DSM/EE rider filing.

22. The Company should continue Collaborative meetings so that the combined DEP/Duke Energy Carolinas, LLC ("DEC") Collaborative meets every two months.

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 reasonable and consistent with the Mechanism approved by the Commission.

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. (Listebarger at 4-7.) 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. (Evans Direct at 18-19.) Those programs are:

Residential

- Appliance Recycling
- EE Education Program
- Multi-Family EE
- MyHER
- Neighborhood Energy Saver (Low-Income)
- Smart $aver EE Program (formerly, Home Energy Improvement Program)
- New Construction
- EnergyWise (Load Control)

- Save Energy and Water Kit
- Energy Assessment
- Low-Income Weatherization Pay for Performance

Non-Residential

- Smart $aver Energy Efficient Products and Assessments (formerly, EE for Business)
- Smart $aver Performance Incentive Program
- Small Business Energy Saver
- CIG Demand Response Automation
- EnergyWise for Business

Residential and Non-Residential

- DSDR
- EE Lighting

(*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 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. (Williamson at 6-7.)

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 can be found in the testimony and exhibits of Company witness Evans and Public Staff witness Williamson.

DEP witness Evans testified that the Company reviewed the portfolio of DSM/EE programs and performed prospective analyses of each of its programs and the aggregate

portfolio for the Vintage 2021 period, the results of which are incorporated in Evans Exhibit No. 7. (Evans Direct at 20.) He noted that the Company's aggregate portfolio continues to project cost-effectiveness. (*Id*. at 70.) DEP's calculations, however, indicate that the following programs do not pass the Total Resource Cost test ("TRC") threshold of 1.00: the Neighborhood Energy Saver Program, which was not cost-effective at the time of approval, but was instead approved based on societal benefits; Residential Smart $aver EE Program; and EnergyWise for Business. (*See* Evans Ex. 7.)

Witness Evans noted that the cost-effectiveness for EnergyWise for Business Program is a concern with its 0.52 TRC score and reported that the Company is reviewing the program to determine if it can increase its cost-effectiveness or if discontinuation is appropriate. Witness Evans committed the Company to providing the Commission with further information regarding the program's continuation in the filing of its 2021 cost recovery request. (Evans Direct at 20-21.)

Public Staff witness Williamson stated in his testimony that he reviewed DEP's calculations of cost-effectiveness under each of the four standard cost-effectiveness tests – the Utility Cost ("UC"), TRC, Participant, and Ratepayer Impact Measure ("RIM") tests. (Williamson at 10.) The Public Staff also compared the cost-effectiveness test results in previous DSM/EE proceedings to the current filing and developed a trend of cost-effectiveness that serves as the basis for the Public Staff's recommendation of whether a program should be terminated. (*Id*. at 12.) Witness Williamson testified that although many programs continue to be cost-effective, the TRC and Utility Cost ("UC") scores as filed by the Company for all programs tend to change back and forth over time, mainly due to changes in avoided costs and updated EM&V and program participation. (*Id*. at 12-14

and Williamson Exhibit 2.) Witness Williamson concluded that the rolling record of cost-effectiveness results confirms that activities within the portfolio have been and continue to be worthwhile. (*Id*. at 14.)

The Commission concludes that DEP's portfolio of DSM and EE programs is cost-effective and eligible for inclusion in the Company's DSM/EE rider. The Commission makes specific findings and conclusions as to the individual programs that the Public Staff has identified as a concern. These are discussed below.

<u>EE Lighting</u>

Public Staff witness Williamson testified that the goal of utility-sponsored EE programs is to build customer acceptance and adoption of EE technologies. He further testified that as technologies become more energy efficient, costs decrease, and consumer acceptance increases. (Williamson at 18.) With respect to EE lighting, he noted that the Public Staff had previously highlighted several trends in the adoption of EE lighting measures, including the likelihood that the non-specialty LED would become the baseline standard for general service bulb technologies by January 2020, thereby decreasing savings from any EE program that continued to include general service bulb technologies. He testified that the United States Department of Energy ("DOE") had previously published final rules for the second phase of the 2007 Energy Independence and Security Act ("EISA"). These final rules, EISA 2020, were to become effective January 1, 2020, and they had adopted revised definitions for the general service lamp ("GSL") and the general service incandescent lamp ("GSIL"). In 2019, however, the DOE ultimately determined that amending the energy conservation standards for GSILS would not be economically justified. (Williamson at 17.) Witness Williamson stated that the Public Staff continues

to believe that the EE lighting market has transformed at a faster rate than was initially recognized, as a result of EISA's changes to federal lighting standards since 2007 and customer preference for LEDs. Thus, he concluded that non-specialty LED lighting should be considered the baseline standard for general service bulb technologies. (Williamson at 17-18.)

Witness Williamson relayed that the Company had begun to minimize the impacts of EISA 2020 in updating its programs that incorporate lighting-related products to offer specialty LED bulb technologies as the only lighting offering. The Public Staff agreed with this approach; however, based on its review of the Company's lighting-related EM&V reports for the last three years, the Public Staff recommended that the Commission require that, beginning in 2021, only specialty LED lighting be recognized as energy efficient. (Williamson at 18-19.)

In his rebuttal testimony, Company witness Evans agreed that significant market transformation with respect to LED non-specialty lighting had taken place, but he disagreed that the transformation was universal. Witness Evans reported an ongoing need for non-specialty energy efficient A-line bulbs in both low-income and multifamily residences to enable those customers to participate in the benefits of energy efficient lighting. Therefore, the Company intended to continue to provide A-line bulbs to low-income customers through its direct install Neighborhood Energy Saver Program and to provide them through outlets such as Goodwill, Dollar General, Dollar Tree and Habitat Stores. Witness Evans also testified that the Company intended to replace inefficient lighting through its Multifamily direct install program. Future needs in low-income and multifamily residences will be closely monitored through independent EM&V studies for

these programs to determine their saturation with standard high efficiency lighting. (Evans Rebuttal at 3-4.)

Grid Improvement Plan

With respect to DEP's proposed Grid Improvement Plan ("GIP"), which is pending approval in the DEP general rate case in Docket No. E-2, Sub 1219, witness Williamson testified that he was concerned that GIP would impact the MyHER program and the proposed conversion of DSDR to Conservation Voltage Control ("CVR") and how that conversion would impact the current DSM and EE portfolio.

MyHER

Witness Williamson testified that GIP would enhance capacity, data analytics/collection, and power flow capabilities on almost all circuits within the service territory. He indicated that these GIP enhancements would thus impact the savings achieved through the DSM/EE portfolio, especially the savings associated with the MyHER program. Witness Williamson's concern resulted from his opinion that the success of that program relies on the Company's collection of individual customers' data and resulting analysis of that data in relation to similar, nearby customers. (Williamson at 22-23.) The deployment of Advanced Metering Infrastructure ("AMI"), which witness Williamson described as a "crucial component" of GIP, is expected to be used for better rate design opportunities and to provide customers with interval usage data. (*Id.* at 23.) Witness Williamson also discussed the Company's Energy Mobile App, which allows participants to see their usage comparison and disaggregation, as well as the new AMI usage charts, which show customers the difference in the average weekly usage by hour from one month to the next, both of which were launched in 2019. The Company has also

recently made available to customers a functionality like Green Button Download, enabling customers to download their usage data in a standard format. (Williamson at 23-24.) Witness Williamson concluded that through these services and access to data, the MyHER program will duplicate the provision of the same data to customers in other forms, with the only incremental difference being the EE tips the MyHER report provides to customers. Thus, witness Williamson expressed skepticism that the cost and utility incentives associated with the MyHER program are justified. He recommended that the Company assess the costs and benefits of continuing to offer the MyHER program. (Williamson at 24-25.)

In his rebuttal testimony, witness Evans disagreed with witness Williamson's recommendation on MyHER, noting that his testimony ignores that the MyHER report provides the normative comparison of a customer's usage to the usage of a similar group of customers, as well as to a model Efficient Home. The normative comparison is not included in the other methods of simply viewing customer usage data he referenced in his testimony. Instead witness Evans noted that customers' ability to see their own usage in comparison to their peers and the modeled Efficient Home is a value to customers. In support, he stated that the Commission recognized that value when concluding that MyHER has the potential to encourage EE by providing participants with periodic personalized reports containing comparative usage date for similar residences in the same geographic area and personalized recommendations. (Evans Rebuttal at 5-6.) Witness Evans concluded that, although customers may access their own AMI data to monitor their own usage, without having a way to compare their usage to their peers and Efficient Home,

they have no way to otherwise understand their own usage in the context of how they compare to similar customers. (Evans Rebuttal at 6.)

Proposed CVR Conversion

Witness Williamson's other concern with the Company's planning to modernize the grid is the impact these enhancements mean to DSM/EE programs and cost recovery for them in the rider. Witness Williamson testified that the proposed, pending CVR component of the Company's GIP proposal will begin in 2021. This conversion will allow the current assets of DSDR to allow a constant and consistent voltage reduction on the electric grid across all circuits designed to operate under CVR. Witness Williamson explained that the Company anticipated that the CVR mode will be active approximately 90% of the time and that when it is activated, it will provide two percent voltage reduction to all 98% of the DSDR circuits across the North Carolina service territory. (Williamson at 26.) He indicated that the Company had not assessed the potential impacts of the reduced energy or demand savings that will result from the CVR initiative, but he said the Company noted that the impacts will be reflected in future cost-effectiveness evaluations. Witness Williamson predicted that if the CVR conversion resulted in impacts to energy and demand savings, then energy and demand savings for all DSM and EE programs, including DSDR, will be reduced "to some degree." (Williamson at 26-27.) Witness Williamson described DSDR as intertwined with the Company's day-to-day grid activities, which produce certain efficiencies for customers. He noted that DSDR had allowed DEP to achieve peak shaving voltage reduction throughout the DEP distribution system during its activation. DEP's significant circuit conditioning, including the installation of substation and distribution voltage regulating devices and capacitators, telecommunications and IT infrastructure, and

some balancing of load on distribution circuits enabled these peak shaving voltage reductions. (Williamson at 27.)

Witness Williamson also relayed that, in the currently pending general rate case, the Company had detailed how the CVR capabilities are critical to enable greater application of Distributed Energy Resources on the grid and that these capabilities depend on the DSDR infrastructure. According to witness Williamson, because of the differences in cost recovery mechanisms, DSDR is treated differently than normal operational efficiency improvements. DSDR, he testified, receives "special" rate making treatment in DEP's DSM/EE rider, which some customers may opt out of, unlike normal and routine grid work, where costs are depreciated and allocated to all customer classes. (Williamson at 30-31.) He then opined that the need to differentiate between DSDR grid support work and GIP grid support work may no longer be needed.

Witness Williamson had also highlighted the potential for overlap between the Company's GIP and DSDR in the last DEP rider proceeding, and, in this proceeding, he identified specific overlaps in Capacitor Bank Controls, 2G/3G modem replacements to support 4G/5G and Gid/WAN Core routers. He also noted that a portion of the sensor equipment is being retired from DSDR and replaced as part of the Self-Optimizing Grid ("SOG") and specified that the costs associated with SOG are not charged to DSDR. (Williamson at 31.)

Witness Williamson did not recommend the removal or adjustment of any costs to be recovered from the Company's proposed DSM/EE rider based on his GIP concerns. Because the Company continues to implement GIP and as its grid capabilities and services continue to evolve, he recommended that the Commission direct the Company to:

- Analyze GIP to explain how it will affect DSM/EE programs' ability to produce peak demand and energy savings and file the results no later than the Company's next DSM/EE rider proceeding;
- Explain how the Company will distinguish peak demand and energy saving resulting from GIP from those resulting from DSM/EE in the next DSM/EE rider proceeding;
- List GIP projects that have been implemented and how they have affected the Company's DSM/EE portfolio's performance if at all. The Company should be prepared to discuss any impacts GIP projects have had on day-to-day system operations, as well as customer expectations for utility service in general, DSM/EE program performance, and the availability of customer data.

In his rebuttal testimony, Company witness Evans disagreed with Public Staff witness Williamson's recommendations and responded to his concerns. With respect to the recommendation that the Company analyze how GIP will affect the performance of DSM/EE programs and include reporting on GIP implementation in the next DSM/EE rider proceeding, witness Evans noted that the Company had already provided voluminous amounts of data to the Public Staff in response to their and other intervenors' data requests in the pending DEP rate case and the pending Duke Energy Carolinas, LLC rate case with respect to the Integrated Volt/Var Controls ("IVVC"). The Company does not oppose providing information about the DSDR conversion to CVR and has already agreed to work with the Public Staff on reporting GIP programs as outlined in the Company's Second Amendment and Partial Settlement with the Public Staff in the pending DEP rate case. Moreover, the direct and rebuttal testimony of Duke witness Jay W. Oliver in the pending rate cases addressed GIP status extensively. Witness Evans noted that because the DSM/EE programs and the GIP were separate initiatives with different goals, integrating additional GIP status reporting would likely lead to confusion. Further, because no party,

including the Company, has recommended that the Company file any GIP program for consideration as part of the DSM/EE rider, witness Evans did not support using the DSM/EE rider proceeding as an appropriate forum for the types of information Public Staff witness Williamson recommended for inclusion in the next DSM/EE rider proceeding. Thus, witness Evans concluded that additional analysis recommended by the Public Staff would be duplicative and is not necessary. He further stated that any influence or interaction between GIP and DSM/EE programs will be evaluated and captured in existing reporting protocols. (Evans Rebuttal at 9-10.)

Witness Evans also stated that Public Staff witness Williamson's recommendation that the Company explain in its next DSM/EE rider filing how it will distinguish peak demand and energy savings resulting from the GIP from those resulting from the DSM/EE portfolio is premature. Deferral accounting for the GIP program remains pending in DEP's general rate case. Thus, the Company has not completed testing and analysis of changing its operational strategy from DSDR to CVR. (Evans Rebuttal at 10-11.)

Residential Smart $aver EE Program

Witness Williamson described the Public Staff's review of the Residential Smart$aver program, which offers rebate options to customers for a variety of EE measures related to home heating and cooling to encourage energy efficiency. (Williamson at 37.) In 2016, to offset costs associated with this program and to improve its cost-effectiveness, the Commission approved the Company implementing a referral channel as part of this program. Additionally, witness Williamson noted that an on-line option store was added in 2017. Witness Williamson testified that the referral channel now includes referrals beyond its original scope of focusing on HVAC equipment referrals. The referral channel,

under the name FindItDuke, now includes referrals to rooftop solar systems, plumbing and tree removal services. All funds that DEP receives from customers participating in the FindItDuke, including funds from referrals for services that are beyond the original scope of the channel, are used to offset the Smart$aver program costs. Witness Williamson noted that funds from the rooftop solar and tree service contractors are only a very small portion of the overall revenues received. (Williamson at 38-40.) The Public Staff did not contend that the Company had violated any Commission Rules or Flexibility Guidelines in expanding the referral channel, but did opine that the expansion of referrals beyond DSM and EE programs seemed as if it should have been brought to the NCUC's review in advance of the change. The Public Staff will continue to discuss this matter with the Company, but it did not recommend that the NCUC take any other actions with respect to this program. (*Id.* at 40-41.)

Conclusions

No party challenged inclusion of the above listed programs in the Company's DSM/EE rider for cost recovery. Because the Commission is concerned that low-income and multifamily residences continue to share in the benefits of energy efficient lighting, however, it declines to adopt the Public Staff's recommendation that it consider only specialty LED lighting for recognition as energy efficiency in these proceedings. Instead, to sustain the benefit that low-income customers and multifamily residences obtain from A-line bulbs, the Commission directs the Company to continue to provide A-line bulbs to low-income customers through its direct install Neighborhood Energy Saver program and to provide them through outlets such as Good Will, Dollar General, and Habitat stores. The Commission further approves the Company's proposal to continue replacing inefficient

lighting through its Multifamily direct install program. The Company should continue to closely monitor the future needs of low-income and multifamily residences as independent EM&V studies for these programs to determine their saturation with standard high efficiency lighting.

The Commission further concludes that it will not require that the Company include reporting on its GIP implementation or reassess its MyHER program at this time. The Commission has received and reviewed voluminous evidence on GIP implementation in the pending general rate cases, especially through the direct and rebuttal testimony of Jay W. Oliver. Additional status reporting in the DSM/EE docket will only duplicate reporting done in other proceedings and complicate the already extensive reporting requirements in the DSM/EE proceedings. Moreover, requiring GIP status reporting in the DSM/EE proceedings does not appear narrowly tailored to convey only the GIP's actual impacts on the Company's DSM/EE portfolio. As witness Evans proposed, the more effective method for conveying GIP impacts on the DSM/EE portfolio for purposes of the DSM/EE rider proceedings is through EM&V reporting protocols that are already submitted in these proceedings. Witness Williamson did not appear to dispute that the EM&V reports would reflect events caused by GIP. With respect to the recommendation that the Company explain in its next rider proceeding how it will distinguish peak demand and energy savings resulting from the GIP from those resulting from the DSM/EE Portfolio, the Commission agrees that the shift from DSDR to CVR would affect the amount of maximum peak shaving capability. However, with the pending CVR component not beginning until 2021, the Company has not yet had time to test and analyze data related to the reduction in peak shaving and will likely not have time before the next rider proceeding. Thus, the

Commission concludes that compelling DEP to include information on projected future impacts on the DSM/EE portfolio is premature and unnecessary at this time.

Additionally, the Commission recognizes that there is a distinction between a customer receiving additional and more precise data about their energy usage from smart meters or from the smart meter usage app, which do not act as energy efficiency programs, and a utility program, like MyHER, that engages customers through normative comparison of their usage to that of their peers and empowers customers to act on that data. The Commission acknowledged that distinct and critical component of the MyHER program when it approved the program for DEC, stating 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 and personalized recommendations for more efficient use of energy in their homes, which should motivate participants to better manage and reduce their energy consumption." *Order Approving Program*, Docket No. E-7, Sub 1015, issued Sept. 11, 2012 at 6. Therefore, the Commission declines to accept the Public Staff's request to direct the Company to reassess continuing its successful MyHER program at this time.

Finally, the Commission agrees with Public Staff witness Williamson that the Company has not violated the flexibility guidelines or any Commission rules or orders in implementing the Residential Smart $aver EE Program's referral channel. The Commission directs the Public Staff and the Company to continue to discuss the matter as recommended by witness Williamson.

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 and the testimony of Public Staff witness Williamson.

DEP witness Evans testified regarding the EM&V process, activities, and results presented in this proceeding. (Evans Direct at 24-26.) 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. (Evans Direct at 25.) In this proceeding, the Company submitted, as exhibits to witness Evans' testimony, detailed completed EM&V reports or updates for the following programs:

- My Home Energy Report – June 2017 through 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 (Supplemental Evans Exhibit D)

In his testimony, Public Staff witness Williamson testified that the Company is complying with the various Commission orders regarding EM&V of their DSM/EE portfolio. He did, however, make recommendations to the Commission on the EM&V report for the Residential Income-Qualified EE program ("NES") (Evans Exhibit B) and the Save Energy and Water Kit ("SWEK") program (Evans Exhibit C.) (Williamson at 42.)

With respect to the NES program, witness Williamson described his review of Evans Exhibit B, which evaluated the performance of the NES program from June 1, 2017 through June 30, 2018. (Williamson at 42.) He testified that Evans Exhibit B is acceptable

for purposes of verifying the NES program savings. (Williamson at 45.) Witness Williamson recommended, however, that the evaluator of the NES program use a billing analysis to determine program savings in the next evaluation of the NES program in 2021. (Williamson at 45.) Witness Williamson explained that the evaluator used an engineering analysis that relied on information from other sources. Witness Williamson reported that the evaluator had indicated that a billing analysis was not appropriate in this evaluation because of the difference in usage patterns between the treatment group and the control group and the differences in weather patterns between pre- and post-treatment periods. Witness Williamson testified that a billing analysis was preferable to an engineering one, however, because a billing analysis is more accurate on program performance. He further indicated that the engineering analysis in this case produces per participant savings that are double the savings from the previous evaluation. (Williamson at 42-43.)

Witness Williamson also testified that the engineering analysis in this case assumes a net-to-gross ("NTGR") of 1.0, which is standard practice for income-qualified programs. The Public Staff recognizes this to be a standard practice, although Witness Williamson noted that lighting accounts for 37% of NES's gross savings and the lighting market has significantly changed in recent years. The evaluation indicates that many bulbs could not be installed because efficient bulbs were already present. He testified that the issue was further complicated because the engineering analysis assumes 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. During 2017-2018, LEDs and CFLs were already occupying much of the available shelf-space at big box stores. To witness Williamson,

this suggested that the NTGR assumption as well as the presumed baseline wattage in the engineering analysis may over-estimate the LED bulb savings component of the program. (Williamson at 43-44.) Witness Williamson concluded that the Company should perform the next evaluation of the NES program as soon as possible, and that the Company had agreed to do so. (*Id.*)

Company witness Evans testified in rebuttal that it agreed with Public Staff witness Williamson that a billing analysis method is preferable to an engineering evaluation method to determine program savings for the NES program. He requested flexibility, however, if the results of the billing analysis determined that methodology was not appropriate. Witness Evans stated that the independent evaluator anticipates utilizing a billing analysis for the next NES evaluation; however, witness Evans added caveats for this methodology. First, he cautioned that, should the billing analysis determine that inherent consumption differences cannot be controlled between the group of participants being evaluated (treatment group) versus the control group, utilizing an engineering analysis is better because, as witness Williamson agreed, an engineering analysis is an acceptable method. (Evans Rebuttal at 7-8.) Witness Evans also testified that an NTGR is standard practice for income-qualified programs; the independent evaluator will examine whether NTGR is applicable for this program, and more specifically, this jurisdiction. If feasible, the evaluator will investigate framing free ridership questions as they relate to the broader lighting market and will review whether a baseline wattage assumption is appropriate given the region, target population, and types of lamps included in the program. Finally, witness Evans clarified that the Company did not agree that the Company would conduct an NES evaluation as soon as possible with a target completion date on or before

2021. Because of COVID-19, the Company suspended in-home NES operations in March 2020 and has not yet resumed normal operations. Witness Evans committed to work through the evaluation activities as quickly as possible after suspension but noted that it may be impossible for the Company to complete the evaluation with a 2021 timeframe. (Evans Rebuttal at 8-9.)

On September 14, 2020, the Public Staff filed a letter advising the Commission that it had completed its review of DEP's SWEK and found an error in the calculation that DEP agreed to correct in the EMF of next year's DSM/EE rider proceeding.

No party contested the EM&V information submitted by the Company. The Commission therefore finds that: (1) the EM&V reports filed as Evans Exhibits A, B, C, and Supplemental Evans Exhibit D are acceptable for purposes of this proceeding and should be considered complete for purposes of calculating program impacts.

The Commission additionally concludes that the evaluator of the NES program should use a billing analysis to determine program savings in the next evaluation of the NES program, but, as requested by DEP witness Evans, the evaluator shall maintain flexibility if the results of the billing analysis determined that the methodology was not appropriate. The Commission further directs DEP to conduct an evaluation of NES as soon as possible, but recognizes that with the suspension of in-home NES operations, an evaluation may not be able to be completed with a 2021 timeframe.

Based upon the testimony and evidence cited above, the Commission finds that the net energy and capacity savings derived from the EM&V to be reasonable and appropriate. Further, the Commission concludes that DEP is appropriately incorporating the results of EM&V into the DSM/EE rider calculations.

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 was elevated from 78.50 to 78.56 percent. 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. (Williamson at 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 FINDING OF FACT NO. 11

The evidence for this finding of fact can be found in the testimony and exhibits of DEP witness Duff and the testimony of Public Staff witness Hinton.

The Public Staff opposed the Company's inclusion of a 17% reserve margin adder for the demand reduction benefits associated by energy efficiency programs. Public Staff witness Hinton acknowledged that prior to the 2012 merger of DEP's parent corporation

with Duke Energy Corporation, DEP maintained that its use of the Strategist Model included a reserve margin adjustment. Since the merger, however, DEP's IRP process had largely followed modeling practices of DEC, which, until its 2020 DSM/EE rider filing in Docket No. E-7, Sub 1230, had not proposed a reserve margin adjustment for demand-side resources.

To illustrate the reserve margin adjustment's effect on the IRP, witness Hinton referred to DEP's 2018 IRP Winter Projections from the LCR table for years 2019-2025. He explained that in 2021, DEP projected generating reserves of 2,405 MW, for an actual reserve margin of 17.0 percent. If DEP had 100 MW less EE during 2021, the load forecast would be increased by 100 MW 14,251. By shifting to a supply side resource, DEP maintained that, from a planning standpoint, it would effectively increase its 2021 load serving capacity by a 117 MW to 2,522 MW, which leads to 17.7 percent reserve margin, as compared to a 17 percent reserve margin. (Hinton at 9-10.) Witness Hinton acknowledged that "from a resource planning perspective" DEP had a theoretical basis, as shown in the table in his testimony, for valuing MW reductions from EE programs differently from DSM programs. He questioned, however, whether it was logical for customers to pay 17 percent more for the same MW reduction from an EE program as they did for a DSM program. (Hinton at 11.)

Witness Hinton was unable to agree that customers benefit from DEP's inclusion of the reserve margin in the short-run and unable to predict if they would realize any value in the long-run. He noted that the Company's EE reductions from their EE program were not any greater, but he stated that the resource was instead awarded a higher value from a planning perspective, which he contended resulted in the Company's increasing the

avoided cost benefits. This, he testified, ultimately would increase the Company's PPI and result in higher earnings. (Hinton at 10-11.) Finally, witness Hinton argued that including the 17 percent reserve margin was inconsistent with the Mechanism, which provides how capacity benefits should be determined. The Mechanism provides that the PPI would 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 Biennial Determination of Avoided Cost Rates from Electric Utility Purchase from QFs as of December 31 of the year immediately preceding the date of the annual DSM/EE rider filing. Witness Hinton testified that the reserve margin was not a component of current Biennial Determination of Avoided Cost Rates. Moreover, witness Hinton argued that the proposal effectively increases what customers will pay for the avoided capacity cost benefits of the EE programs by increasing the avoided capacity cost rate above the approved rates. The approved rate is comprised of an approved annual combustion turbine ("CT") carrying cost and, among other factors, a Performance Adjustment Factor ("PAF"). Witness Hinton testified that the approved PAF of 5% is a multiplier that increases the annual CT carrying cost which, according to DEP, should be increased by an additional 17%. From this perspective, the impact of this adjustment increases the value of the avoided demand reduction benefits by approximately 23% over the cost of a CT. (Hinton at 12-13.) Witness Hinton cited his previous testimony in another docket to further support his contention that this proceeding is not the appropriate one to evaluate such a significant change to the avoided capacity costs; instead, according to witness Hinton, changes to the dollar savings of avoided energy costs benefits should be evaluated in the context of the Mechanism. (Hinton at 15.)

DEP witness Duff testified that addition of the reserve margin factor in determining the avoided cost value of EE programs for vintage 2021 reflects their treatment in the IRP. He explained that because EE is treated as a load reduction resource in the IRP, instead of a load serving resource, it should have a 17% planning reserve margin factor. For every KW of load reduction that comes from EE, the Company does not need to plan for 1.17 KW of load serving capacity. Thus, witness Duff concluded that applying a 17% reserve margin factor to the avoided capacity associated with EE programs was logical and prudent from a planning standpoint. (Duff Rebuttal at 22.) Witness Duff also pointed out that witness Hinton's contention that the Company's proposal effectively increases what customers will pay for the avoided capacity cost benefits of the EE programs by increasing the avoided capacity rate above the approved rate is inaccurate. Witness Duff stated that this assertion ignored the Company's application to the reserve margin of the avoided capacity associated with EE savings and does not impact the avoided capacity rate applied to supply side resources in the resource plan, but rather reduces the magnitude of the supply side resources needed in the plan. (Duff Rebuttal at 26.)

Witness Duff confirmed that, as when this issue was discussed in DEC's recent DSM/EE proceeding where this was also an issue, the Company had included a reserve margin adjustment previously to model EE cost-effectiveness. (Duff Rebuttal at 21.) Witness Duff added that the inclusion continued after the 2012 merger. He reported that for all vintage years through 2014, DEP used the Strategist model to evaluate EE cost-effectiveness. Strategist included a variable for annual peak kW savings and a variable called deferred generation, which multiplied a reserve margin factor of (1 + planned reserve margin) times the annual peak kW savings. Beginning with vintage year 2015, DEP began

to use the DSMore tool for cost-effectiveness evaluations, but all the avoided cost inputs used for that vintage year continued to use the Strategist-based avoided costs, which included the adjustment for deferred generation described above. (Duff Rebuttal at 23.)

Although he acknowledged that DEP had not included the reserve margin since vintage year 2016, Witness Duff explained that the avoided capacity rates in that proceeding included a 1.20 PAF, which was also referred to as a 20% reserve margin adjustment. Thus, he concluded, it was no longer necessary for DEP to include its own reserve margin factor, so long as the 1.20 PAF was applied. Avoided capacity rates no longer contained the 1.20 PAF after the 2016 avoided cost proceeding, however, because the 1.20 PAF was lowered to 1.05. Instead of representing a 20% reserve margin, witness Duff explained, the PAF now accounts for a 5% forced outage rate. Thus, witness Duff concluded that because of that change in the PAF, and because DEP's IRP process treats EE peak load as a reduction to the load forecast, it is necessary to include the 17% reserve margin adjustment.

Even if the Commission determined that the PAF already included in the avoided capacity rates in this proceeding appropriately reflected a reserve margin, and not simply an effective forced outage rate, witness Duff testified that the Company should not be required to remove the 17% reserve margin adder. On the contrary, according to witness Duff, if the Commission determined that PAF represented a reserve margin, it would only account for a portion of the appropriate adjustment for the reserve margin associated with avoided capacity coming from EE programs. (Duff Rebuttal at 29.) In that case, witness Duff explained, an appropriate adjustment would be to only apply a 11.429% reserve margin adder to the avoided capacity to make the reduction reflect the 17% reserve margin

after factoring in the 5% PAF already included in the Company's approved avoided capacity rate in Docket No. E-100, Sub 158. (Duff Rebuttal at 29.)

Witness Duff also disputed witness Hinton's assertion that customers will not see any benefit from this adjustment. Witness Duff noted that, although the 2018 IRP shows DEP's actual reserve margin as equal to more than 17% in the near term, that does not mean that there is no capacity value to building new EE resources several years before the in-service date of a new generating unit. Most EE measures in DEP's vintage 2021 have a longer life than six years, which is about the time that DEP's 2018 IRP includes a need for a new combustion turbine.

The Commission concludes that the Company's inclusion of the 17% reserve margin adjustment is reasonable and appropriate in this proceeding. The Company's reserve margin adder accurately reflects the treatment of EE as a load reduction resource in the Company's IRP. As witness Duff explained, for every KW of load reduction that comes from EE, the Company does not need to plan for 1.17 KW of load serving capacity. Thus, just as it would be appropriate to apply a 17% planning reserve margin factor to an increase in system load, it logically and mathematically follows that it is appropriate to apply a 17% reserve margin adjustment to the Company's EE programs for vintage 2021. As Public Staff witness Hinton acknowledged, DEP's proposal is logical from a resource planning perspective, (Hinton at 11). The Commission agrees with DEP witness Duff's testimony that the IRP does address EE programs differently than DSM programs because the IRP treats EE programs as a reduction to the load forecast, which reflects EE programs eliminating the need to build a reserve. (Duff Rebuttal at 28.) On the other hand, the IRP treats DSM programs as a dispatchable resource, like a generating unit. As such, DSM

programs are recognized as additional supply-side capacity, not as peak load reduction to the load forecast. If there is no load forecast reduction, then there is no reserve margin savings. Accordingly, DEP's proposal appropriately reflects this distinction.

In support of its conclusion, the Commission notes that application of this reserve margin factor is hardly novel. Although it appears that there was a gap of approximately four years in its inclusion, DEP has included a reserve margin adjustment since prior to 2012 in its determination of avoided cost value associated with the Company's EE programs. As evidenced by Duff Rebuttal Exhibit No. 1, DEP used a 14.5% minimum planned reserve margin adjustment as reflected in its then IRP for vintage year 2015 DSMORE evaluations, and a 1.2 PAF for vintage year 2016. At the time DEP stopped including the reserve margin adjustment for vintage 2016, DEP's avoided cost rates included a 1.20 PAF, which had been referred to as a 20% reserve margin adjustment in the past; thus, inclusion of the reserve margin was no longer necessary. In Docket No. E-100, Sub 148, the 2016 Biennial Avoided Cost proceeding, by order issued October 11, 2017, the PAF was revised from 1.20 to 1.05 and intended to account for only a 5% forced outage rate, instead of a 20% reserve margin. Accordingly, inclusion of the 17% reserve margin adjustment in this proceeding is appropriate, and the revision of the PAF justifies the Company's 17% reserve margin adjustment. Although the Commission agrees that the Company's reserve margin adjustment is appropriate, it understands and agrees with the Public Staff's concerns about the Mechanism setting expectations on how the Company recovers its program costs, net lost revenues, and PPI. The Mechanism refers to the most recent avoided cost case as a guide to how the Company calculates if cost-effectiveness for programs. The Commission, however, must establish avoided cost rates based on the

economic and regulatory circumstances present every two years. Therefore, avoided cost methodologies may change from time to time. The PAF is a good example of evolving avoided cost policies and methodologies in North Carolina. The Mechanism cannot foresee and account for all these potential future changes in avoided cost methodologies, and it does not make sense to wait for the Mechanism to expressly provide for such changes before the Commission can consider them in the context of a DSM/EE recovery proceeding. Therefore, to better enable the Commission and interested parties to address whether a proposed change is supported by the Mechanism and to account for interim changes in avoided methodologies driven by changing economic and regulatory circumstances, the Commission directs the Company in future DSM/EE rider proceedings to specifically address in its direct testimony if it has altered its methodology for calculating avoided energy and capacity costs from the previous proceeding and identify how the most recent avoided cost proceeding justifies that change.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 12

The evidence for this finding of fact can be found in the testimony and exhibits of DEP witness Duff and Public Staff witness Hinton.

In his direct testimony, Public Staff witness Hinton opposed DEP's application of 100% summer seasonal allocation weighting to the avoided capacity benefits from the approximately 400 MW of DSM programs. Witness Hinton explained that DEP distinguished between "legacy" and "incremental" DSM programs in the evaluation of its DSM portfolio and cost-effectiveness. Legacy DSM is the level of DSM activation capability that was originally projected for the year 2021 in the 2018 IRP. Incremental means all activation capability that is above the MW projected in the year 2018 for year

2021. (Hinton at 16, fn. 4.) The Company values incremental measures and participation using the seasonal allocation weightings of 100% winter and 0% summer. (*Id*. at 4.)

With respect to seasonal allocation weightings, Witness Hinton agreed that the Company is winter planning, and he agreed to the Company's treatment of incremental DSM programs, but he opposed the Company's treatment of its legacy DSM programs. Because the Company is now winter planning, he concluded that the value of summer DSM is diminished for resource planning purposes in terms of a capacity resource at the expected time of peak and the dollar per kW associated with the demand reductions. Witness Hinton stated that this shift to winter planning, and the resulting recent change in the seasonal allocation factors, should "take precedence over the MW reductions" projected in the 2018 IRP. Therefore, witness Hinton recommended that the Company treat its legacy DSM as it had treated its incremental DSM. (Hinton at 18-19.)

Witness Hinton also supported his recommendation by testifying that his proposal would provide "added motivation" to the Company to find ways to reduce winter peak and predicted that "the allocation of seasonal capacity value to all of the DSM programs would appropriately direct the Company to emphasize programs that focus on reducing load during the winter season." (Hinton at 19.) He acknowledged, however, that DEP had already begun such an investigation aimed at reducing winter peak loads and had, prior to his testimony, filed modifications to its Residential Load Control Rider in Docket No. E-2, Sub 927, that would provide a winter-focused load control program. (*Id*.)

Witness Hinton also supported his recommendation that the Company not use the 100% seasonal allocation for its DSM programs by illustrating that the Company's highest cost for generation typically occurs in the winter, therefore activating DSM programs

during that period was in the Company's best interest. He further indicated that activations of DEP's EnergyWise and other DSM programs (2015-2019) most often occurred in the winter. Witness Hinton did not intend to imply that DSM programs are not valuable, but instead to point out that their capacity value has changed relevant to the shifting of the seasonal weighting capacity needs from summer to winter. (Hinton at 28.) Thus, witness Hinton concluded that the Commission should deny DEP's proposal to give its legacy DSM/EE programs a 100% summer weighting under the current IRP winter planning scenario and require DEP to recalculate its cost-effectiveness and its PPI using 100% winter and 0% summer allocation of avoided capacity benefits. In making this recommendation, witness Hinton acknowledged that using the 0% summer allocation of avoided capacity benefits reduces the cost-effectiveness of the programs and overall cost-effectiveness of the portfolio. (Hinton at 29.)

Company witness Duff supported DEP's calculation of its avoided capacity costs using the seasonal allocation approved in the most recent avoided cost proceeding by first summarizing the agreement that DEP had reached with the Public Staff in Docket No. E-2, Sub 1145 ("Sub 1145 Agreement"). He testified that the Sub 1145 Agreement did not change the methodology by which the Company was to calculate avoided capacity costs and he confirmed that, consistent with the Sub 1145 Agreement, DEP had derived by the avoided energy and avoided capacity using the underlying resource plan, production cost model, and cost inputs approved in the Company's most recent avoided cost proceeding, Docket No. E-100, Sub 158. (Duff Rebuttal at 8.)

Witness Duff disputed that the Sub 1145 Agreement changed how the Company calculated its avoided capacity costs to evaluate existing programs that had already been

approved by the Commission and are part of the Company's existing portfolio of programs and have been factored into the Company's IRP. Witness Duff explained that to recognize the growing need for winter capacity and to encourage EE and DSM programs that will provide winter capacity savings, the Company made a change to its application of avoided capacity costs in this proceeding from the previous ones. Beginning with Vintage 2021 the Company voluntarily applied the 100% winter 0% summer seasonal allocation weightings approved in the most recent avoided cost proceeding to avoided capacity savings for all new incremental participation in EE programs and new incremental participation in DSM programs where the projected DSM summer peak capability exceeds the levels forecasted in the 2018 IRP. (Duff Rebuttal at 10-11.)

In addition to encouraging winter DSM, witness Duff believed that this approach aligned better with how new QFs receive capacity value from the last avoided cost proceeding. He pointed out that this approach is consistent with how new QF capacity is treated in the Commission's Notice of Decision and April 15, 2020 *Order Establishing Standard Rates and Contract Terms for Qualifying Facilities* in Docket No. E-100, Sub 158 ("Sub 158 Order"). In the Sub 158 Order, the Commission acknowledged that the currently high solar penetrations in Duke's service territory that it expects to continue in the future will impact summer versus winter loads net of solar contribution differently than in the past. (Duff Rebuttal at 11.)

Witness Duff acknowledged that neither the Commission's Sub 158 Order nor the Sub 1145 Agreement expressly required adoption of the seasonal allocation for this cost-recovery proceeding, but he believed that the Company's application of the seasonal allocation factor to new and incremental DSM programs is appropriate here. He testified

that the Company's treatment of legacy DSM programs is consistent with the treatment of existing QFs with respect to application of the Commission's determinations in its recent avoided cost proceeding. The Commission has previously concluded that the net benefits and financial incentives for DEP's DSM/EE programs are linked, although not identical, to the avoided cost rates DEP pays QFs for avoided energy and capacity. Witness Duff recalled that the Commission itself noted in its Sub 158 Order that seasonal allocation factors may change based on the then prevailing circumstances reviewed in the biennial cost proceedings. Therefore, witness Duff concluded that just as the Commission approved applying the seasonal allocation factors of 100% winter and 0% summer to future QF capacity in its Sub 158 Order, the Company applied the approved seasonal allocation factors to new and incremental DSM programs in this proceeding. As a corollary, just as the Commission did not retroactively apply its Sub 158 seasonal allocation factors to QFs that had previously established power purchase agreements at avoided cost rates that were approved based on past prevailing circumstances, the Company did not retroactively apply the seasonal allocations approved in Sub 158 to its legacy DSM programs. (Duff Rebuttal at 14.)

Moreover, witness Duff testified that the Commission's review of the Company's 2018 DSM/EE application supports the Company's treatment of its legacy DSM/EE in this proceeding. In that proceeding, Docket No. E-2, Sub 1174, the Public Staff recommended that the Commission assign zeros to capacity for legacy DSM programs until the first year of need as shown in the Company's IRP, based on the Commission's order in the then preceding avoided cost case, Docket No. E-100, Sub 148, and House Bill 589's recent amendments to N.C. Gen. Stat. § 62-156(b)(3). The Company opposed this

recommendation, arguing that the MW reductions of those programs were already included in the IRP and that its DSM programs had been established over several years and were a useful resource. Witness Duff indicated that he is not arguing that existing DSM capacity must be valued the same as existing QF capacity. Instead he argued that, just as it would be improper and contrary to the Commission's policies under the Public Utility Regulatory Policies Act ("PURPA") to change the avoided capacity value for an existing QF, it would be likewise improper to change the avoided capacity value for an existing DSM resource (Duff Rebuttal at 14-15.)

Witness Duff also stated that DEC's legacy DSM programs were viewed from an IRP standpoint as a "dispatchable resource that is available for the entire fifteen-year planning period." (Duff Rebuttal at 16.) Specifically, he cited EnergyWise, which is available to dispatch into the evening hours when net load is still high due to diminished solar output, a circumstance known as the "duck curve." Conversely, he indicated that, if solar is lost due to midafternoon cloud cover, demand response can be used to make up for diminished irradiance. As an IRP resource, both existing demand response and existing solar resources are oriented toward summer peak demand reduction, helping to meet customer peak demand in the summer. The capacity value from these resources is at least in part why incremental resource decisions are now geared toward winter peak demand needs.

Witness Duff also noted that witness Hinton had disagreed in the recent DEC DSM/EE proceeding DSM/EE rider proceeding ("Sub 1230") that DSM resources in legacy DSM programs are short-lived and, hence, each year's participation is new and incremental. Witness Hinton, however, had not continued with that argument in this

proceeding. As witness Duff had explained in Sub 1230, although DEC and DEP use similar hardware on the residential side and similar contractual agreements on the non-residential side with respect to their legacy DSM programs, differences in cost-recovery mechanisms between the Companies result in DEC using a one-year measure life and DEP using a 25-year measure life. Witness Duff explained that regardless of the measure life for cost recovery purposes, legacy DSM resources have been built over time and the terms of implicit contract with customers more closely resembles the life of the load control switch than it does a one-year measure life. The Company's legacy DSM programs retain customers year after year, with only an approximate 1% annual net attrition rate. (Duff Rebuttal at 17.)

Witness Duff next disputed witness Hinton's contention that the capacity value of the legacy summer DSM resources has changed because of changes in the Company's system lambda. As witness Duff explained, changes in the Company's system lambdas could just as easily be explained by the milder 2017-19 summers when compared to the summer of 2016, where summer DSM programs were activated a significant number of times. Witness Duff stated that his cursory examination of historical temperatures indicated that the summer of 2016 was much hotter than normal. Moreover, the full value of a summer DSM resource occurs during extreme weather days where the ability to dispatch a summer DSM program provides peak load reduction that is less expensive to customers than starting up and running a more expensive peaking generation. (Duff Rebuttal at 19.)

Witness Duff also stated that the Public Staff's recommended approach was not necessary to better encourage the Company to promote winter-focused DSM and EE

programs. He did not understand how an approach that devalued the Company's existing, approved summer resource, which is relied upon in system planning, in any way encouraged more winter capacity savings. The recognition of full capacity value for an existing Summer legacy resource does not influence the emphasis the Company places on promoting new participation and savings in a winter resource. In support, witness Duff cited the Company's recently filed request for approval of a winter-focused modification to its Residential Load Control in Docket No. E-2, Sub 927. (Duff Rebuttal at 19-20.)

Finally, witness Duff contested Public Staff witness Hinton's contention that applying the seasonal allocation factor to legacy DSM programs should not matter because the programs still project to be cost-effective afterward. He cautioned that with witness Hinton's recommendation, the avoided costs associated with the legacy resource must come from avoided transmission and distribution ("T&D") value. T&D rates are required by the Commission to be studied and updated prior to 2022. Given this uncertainty, witness Duff believed that the Commission should decline to adopt witness Hinton's recommendation because it might result in the programs being no longer cost-effective if there is a decline in T&D values.

The Company and the Public Staff agree that the seasonal allocation weightings approved by the Commission in the most recent avoided cost proceeding in Docket No. E-100, Sub 158 should be applied to new and incremental DSM programs; therefore, the issue before the Commission is whether it should approve the Public Staff's recommendation to extend the newly-approved seasonal allocation weightings to pre-existing legacy DSM capacity. The record before the Commission, however, does not support approval of the Public Staff's recommendation.

The Commission agrees that the Company's distinction between legacy DSM (the capacity resource that has been built from historic and planned DSM programs or the amount of DSM capacity in the Company's 2018 IRP forecast as a load serving resource) and incremental or new DSM capacity (the capacity resources that are built from new participation in DSM programs that were not factored into the Company's IRP as a load serving resource) is appropriate for purposes of this proceeding. The Commission further concludes that DEP's legacy DSM programs should not be treated as new or incremental. DEP's legacy DSM programs are viewed as a dispatchable resource that is available for the entire 15-year IRP planning horizon and the DSM programs in the DSM/EE IRP block are "expected to continue for the foreseeable future." (Duff Rebuttal at 18.) As an IRP resource, both existing demand response and existing solar QF resources are oriented toward summer peak demand reduction, helping to meet customer peak demand in the summer. The capacity value from these resources is at least in part why incremental resource decisions are now geared toward winter peak demand needs. This does not mean that the existing summer-oriented resources have less value, but recognizes that *incremental* additions to those resources, whether they are solar or DSM, would have diminished incremental value.

As noted by DEP witness Duff, the Commission previously reviewed an almost identical issue in the DEC DSM/EE rider proceeding. In that proceeding, DEC argued in its brief and proposed order that the Public Staff's recommendation to extend the seasonal allocation weightings beyond new and incremental DSM capacity to its existing, approved legacy DSM simply ignored the value of that existing, approved legacy DSM. DEC noted that the Public Staff's recommendation relied in part upon the fact that DEC's DSM

measures had only a one-year measure life, meaning that all DSM capacity was "incremental" and that the Mechanism did not provide for application of seasonal allocation weightings in DSM/EE cost recovery proceedings. The Public Staff has not continued with those arguments in this proceeding, but it still argues that applying the seasonal allocations to all existing DSM would motivate the Company to promote winter capacity focused DSM and EE programs.

The Commission recognizes that the Company voluntarily undertook applying the seasonal allocations for new incremental programs and participation in this proceeding to encourage the development and specific promotion of EE and DSM programs that provide winter capacity savings. There is no evidence to support, however, the Public Staff's claim that additionally applying a 0% seasonal allocation factor to *an existing Summer legacy* resource somehow better encourages the Company's development or promotion of new participation in winter focused programs. In fact, the Company's recent filing for approval of its winter-focused modification to its Residential Service Load Control in Docket No. E-2, Sub 927, belies the Public Staff's claim. In sum, the Commission does not see any nexus between applying 0% seasonal allocation factor to an existing, approved summer DSM resource and motivating the Company to pursue more winter-focused DSM programs. Nor does the Commission believe it must adopt the Public Staff's position that the seasonal allocational weightings must be applied to *both* new and incremental DSM and EE participation and resources and legacy summer resources to better encourage the Company to promote winter-focused DSM and EE, when the Company is already doing so.

The Commission is also not persuaded that DEP's legacy summer DSM programs should have the 0% seasonal allocation weighting because DEP has had fewer activations of them in the past four years. As witness Duff testified, that decrease in activations could be explained by the milder 2017-19 summers when compared to the summer of 2016, where summer DSM programs were activated a significant number of times. Witness Duff's cursory examination of historical temperatures indicated that the summer of 2016 was much hotter than normal. No party contested witness Duff's testimony in this regard. Moreover, the full value of a summer DSM resource occurs during extreme weather days where the ability to dispatch a summer DSM program provides peak load reduction that is less expensive to customers than starting up and running a more expensive peaking generation. In short, the value of the summer capacity is having it available, and it should not be valued with a 0% seasonal allocation weighting.

The Commission is additionally concerned that the Public Staff's approach to legacy DSM programs makes them less cost-effective. Although the Public Staff's approach does not result in the Company's legacy DSM programs being not cost-effective for Vintage 2021, the approach does have potential adverse long-term impacts on this important legacy summer resource. With 0% of the avoided capacity value being recognized under the Public Staff's approach, most of the avoided costs associated with this legacy resource come from avoided T&D value. If T&D costs decrease, it would further imperil the cost-effectiveness of these programs. Given that uncertainty, the Public Staff's approach jeopardizes the cost-effectiveness of these programs, and thereby potentially jeopardizes their continuation.

Finally, the Commission concludes that legacy DSM programs are a desirable resource that is not only encouraged but mandated by the State. Senate Bill 3 was passed in August 2007 "to promote the development of renewable energy and energy efficiency through the implementation of a Renewable Energy and Energy Efficiency Portfolio Standard (REPS)." N.C. Gen. Stat. § 62-2(10). The stated goals of the legislation are to diversify the resources used to reliably meet the energy needs of consumers in the State, provide greater energy security through the use of indigenous energy resources available within the State, encourage private investment in renewable energy and EE, and provide improved air quality and other benefits to energy consumers and citizens of the State. Id. To this end, Senate Bill 3 provides that electric utilities "shall implement demand-side management and energy efficiency measures and use supply-side resources to establish the least cost mix of demand reduction and generation measures that meet the electricity needs of its customers." *See* N.C. Gen. Stat. § 62-133.9. This legislation provides that the utilities shall be compensated for their DSM/EE efforts and allows incentives to be awarded, including rewards based upon shared savings and avoided costs achieved by DSM/EE measures. *See* N.C. Gen. Stat. § 62-133.9. Therefore, it is inconsistent with North Carolina policy to reduce the Company's incentive based on the Public Staff's method. The Commission approves the Company's seasonal allocation methodology.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS 13-20

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

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, as reflected in Listebarger Exhibit 2, page 6, 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, as reflected on Listebarger Exhibit 2, page 3.

Witness Listebarger testified that, 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. 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. (Listebarger at 7.)

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. (Listebarger at 8.) The $169,661,531 revenue requirement includes, (1) $22,456,410 for anticipated rate period program expenses; (2) amortizations and carrying costs associated with deferred prior period costs totaling $74,404,105, (3) recovery of DSDR depreciation and capital costs totaling $16,840,330, (4) net lot revenues for the rate period totaling $34,768,785 for vintage years 2018 through 2021, and (5) PPI totaling $21,191,901 associated with vintage years 2012 through 2021. (Listebarger at 8-9.)

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	$101,854,910
General Service EE	60,865,888
General Service DSM	6,600,295
Lighting	340,439
Total	$169, 661,531

DSM/EE EMF:	
Residential	$1,988,123
General Service EE	3,131,509
General Service DSM	(931,458)
Lighting	(24,075)
Total	$4,164,100

(Listebarger Exhibit 2, p. 1 of 7, p.2 of 7, p. 4 of 7 and p.5 of 7)

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. (Listebarger at 15-16.) Based on her exhibits, 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:

Rate Class	kWh Sales
Residential	15,893,328,062
General Service EE	9,132,663,985

General Service DSM	9,064,020,676
Lighting	356,925,937

(Listebarger Exhibit 2, p.1-2 of 7.)

Witness Listebarger testified that the proposed DSM/EE rates recover costs forwarded to be incurred from January 1, 2021 through December 31, 2021. The DSM/EE EMF is a true-up mechanism recognizing costs and recoveries for the test period of January 1, 2019 through December 31, 2019. She further testified that DEP proposed the following total DSM/EE billing factors, excluding NCRF: 0.654 cents per kWh for the Residential class; 0.700 cents per kWh for the EE component of the General Service classes; 0.063 cents per kWh for the DSM component of the General Service classes, and 0.088 cents per kWh for the Lighting class. Witness Listebarger next testified that, including the NCRF, the appropriate DSM/EE billing factors are 0.0655 cents per kWh for the Residential class; 0.701 cents per kWh for the EE component of the General Service classes; the DSM/EE billing factors for the DSM component of the General Service classes, and the Lighting classes does not change when the NCRF is included. (Listebarger at 19.)

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. (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.)

Excepting the items discussed below, 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.)

<u>Other Adjustments to Rate Calculations</u>

Witness Maness testified that Public Staff witnesses Williamson and Hinton have each filed testimony and exhibits in this proceeding that recommend certain changes to the calculations of avoided cost savings for estimated vintage 2021 DSM/EE participation. The first change involves the elimination of a reserve margin that the Company has added to avoided capacity benefits for vintage 2021 EE measures and the second involved the seasonal allocation weightings. (Maness at 13.) He also noted that witness Williamson had filed testimony addressing other factors in this proceeding, but they did not necessitate an adjustment to the Company's billing factor calculations. (Maness at 15.)

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. As discussed above, Public Staff witness Williamson filed testimony in this proceeding discussing several EM&V-related topics and issues related to the Company's filing. Aside from the items discussed above, none of these topics and issues necessitates an adjustment to the Company's billing factor calculations.

Based on the foregoing, the adjustments are approved by the Commission. The Commission concludes that DEP has complied with N.C. Gen. Stat. § 62-133.9, Commission Rule R8-69, and the Commission's orders in Docket Nos. E-2, Sub 931 and

Sub 1145, regarding calculating costs and utility incentives for the test and rate periods at issue in this proceeding.

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. 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. Therefore, the aggregate DSM/EE under-recovery for purposes of this proceeding is $4,161,100. (Listebarger at 7.).

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 $169,661,531, which is the appropriate amount to use to develop 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:

DSM/EE PROSPECTIVE COMPONENT:	
Residential	$101,854,910
General Service EE	$60,865,888
General Service DSM	$6,600,295
Lighting	$340,439
Total	$169,661,531

DSM/EE EMF:	
Residential	$1,988,123
General Service EE	$3,131,509
General Service DSM	$(931,458)
Lighting	$(24,075)
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. (Listebarger Exhibit 2, pages 1and 2 of 7.)

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

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 21-22

The evidence for these findings of fact can be found in the testimony of NC Justice Center, et al. witness Bradley-Wright, Public Staff witness Williamson, and DEP witness Evans.

Company witness Evans reported that during vintage 2019, DEP's DSM/EE programs delivered over 409 million kWh of energy savings and close to 351 MW of capacity savings, which produced a net present value of avoided cost savings of close to $215 million. (Evans Direct at 21.) Three residential programs did not achieve energy savings in excess of those forecasted for 2019 – Residential Energy Efficient Appliances and Devices Program; Residential Multi-Family Energy Efficiency Program; and the Residential New Construction Program. He noted that the primary drivers for the underperformance of these programs are changes in the estimated impacts and the mix of program measures. Also, three non-residential programs also failed to meet energy savings expectations – Non-Residential Smart $aver Performance Incentive; the Small Business Energy Saver; and EnergyWise for Business program. (Evans Direct at 22-23.)

Witness Evans also described the Collaborative's activities since the previous DSM/EE cost recovery proceeding. He noted that after the DSM/EE cost recovery rider proceedings in 2019, the Commission ordered that DEP and the Collaborative participants should give attention to the five directives stated by the Commission. These five directives are:

- DEP and the Collaborative should continue working to ensure that all interested parties have a reasonable and timely opportunity to contribute ideas for consideration, especially proposals for new programs or modifications to existing programs;
- The Collaborative should continue to emphasize developing EE programs to assist low-income customers in saving energy and EE programs that

target savings in new construction, and especially in multi-family housing and manufactured housing.

- The forecasted decline in DEP's DSM/EE savings in 2020 is a matter of concern. Consequently, the Collaborative should examine the reasons for the forecasted decline and explore options for preventing or correcting a decline in future DSM/EE savings.
- The Collaborative should study the development of a standard annual reporting protocol. In addition, the Commission concludes that it would be helpful for DEP to include in its annual DSM/EE application a table that shows DEP's test period DSM/EE cost and savings, and that shows the same information for the previous five years.
- With respect to the recommendation by the NC Justice Center, et al., DEP is pursuing and has discussed with the Collaborative an expansion of the Neighborhood Energy Saver to include weatherization measures. Furthermore, the Company intends to file proposed modifications to the program to be effective in early 2020. If the modifications filed by DEP in 2020 do not satisfy the weatherization changes sought by NC Justice Center, DEP should continue to discuss the adoption of an Income-Qualified Weatherization program comparable to DEC's.

(Evans Direct at 8-9.) Witness Evans reported that the Collaborative meets every other month in person, or, more recently, via video conferencing, and discusses on separate conference calls individual topics that cannot be explored adequately during the meetings. The Collaborative spends time exploring avenues for expanding low-income programs and

for increasing the participation of low-income customers in all available programs. Witness Evans also described how the Collaborative met every other month to explore opportunities for expanding program impacts and participation. In late 2019, members compiled a list of potential programs to research and propose to the Company during 2020, and the Company is investigating these suggestions. The Collaborative has struggled, according to witness Evans, however, to offer program suggestions that would make up for the reductions that the Company anticipates because the forecasted decline is driven by a combination of falling avoided costs, higher federal equipment standards, and increased market penetration of energy efficiency measures, all factors outside of the Collaborative's sphere of influence. (Evans Direct at 13.)

Witness Evans did confirm that the Collaborative studied the development of a standard annual reporting protocol and the Company included its application a table that shows DEP's test period DSM/EE costs and savings and the same information for the previous five years. This was attached as Evans Exhibit 12. (Evans Direct at 13.)

Witness Evans also testified that, due to the pandemic, the Neighborhood Energy Saver had been suspended. However, witness Evans was confident that many low-income customers will receive enhanced weatherization services through this program. The Collaborative continues to discuss adopting an income-qualified weatherization program in DEP. (Evans Direct at 14.)

Witness Evans also described how opt-outs by qualifying non-residential customers have impacted DEP's overall non-residential participation and the associated impacts. For Vintage 2019, DEP had 5,868 eligible customer accounts opt out of participating in DEP's non-residential portfolio of EE programs and 5,759 eligible

customers accounts opt out of participating in DEP's non-residential portfolio of DSM programs. This represented an increase for opt outs for both EE and DSM programs from 2018. The Company, however, is continuing its efforts to attract program participants from opt out customers. It does so by evaluating and revising its non-residential programs to accommodate new technologies, eliminating program gaps, removing barriers to participation, and making programs more attractive. (Evans Direct at 27.)

NC Justice Center et al. witness Bradley-Wright testified that DEP's efficiency savings were lower in 2019 than they had been in the previous two years. In 2019, DEP delivered 353.2 gigawatt-hours ("GWh") of efficiency savings at the meter, equal to 0.78% of the previous year's retail sales. Witness Bradley-Wright noted that DEP still had not reached the 1% annual savings target and continues to lag DEC, but he nevertheless commended DEP for delivering savings to its customers, particularly when avoided costs are declining and changes have occurred in DEP's efficiency baselines. (Bradley-Wright at 7.)

Witness Bradley-Wright noted that in 2019, approximately 56% of the non-residential load opted out of DEP's energy efficiency rider. Opt-outs lead to uncertainty about how much efficiency savings are being captured by customers that opt out. (Id. at 9.)

With respect to low-income efficiency savings, witness Bradley-Wright testified that DEP's Neighborhood Energy Saver program increased its savings modestly from 2018 to 2019. He noted that the Company also captured savings from its Pay for Performance low income pilot program. Continued growth of efficiency savings for low-income customers has been a consistent focus at the Collaborative and DEP has shown a

willingness to engage on this issue. However, the impact of programs that aim to specifically serve low-income customers at DEP lags behind DEC's programs. He recommended that DEP try to match the recent DEC performance. (Bradley-Wright at 10, 19-20.)

Witness Bradley-Wright further testified that DEP has not achieved the 1% target annual savings threshold, even though DEC has exceeded this target in 2017 and 2018 and nearly reached it in 2019. He acknowledged, however, that the COVID-19 pandemic creates additional uncertainty and warrants additional action. In witness Bradley-Wright's opinion, DEP had not fully provided an explanation for its decline in projected energy savings, as requested in DEP's previous rider proceeding. He indicated that Witness Evans discussed falling avoided cost, higher federal equipment standards and increased market penetration of energy efficiency measures as drivers of declining savings, but he recommended that the Company provide updated information and options for preventing or correcting this decline. Witness Bradley-Wright urged the Company to work on identifying these options in the Collaborative and to provide written reports on status. (Bradley-Wright at 13.)

Witness Bradley-Wright also recommended that the Commission should direct DEP to:

- Explain forecasted declines, when applicable, and show what steps are being taken to prevent them in future filings.
- Provide a detailed plan in subsequent DSM/EE Rider filings for how it could achieve the 1% annual savings in any year projections fall short.

- Work with the Collaborative to annually prepare a corresponding report aimed at assisting DEP to prevent or correct future savings declines and meet the 1% annual savings levels.

(Bradley-Wright at 17-18.)

Witness Bradley-Wright also discussed achieving greater efficiency savings for low-income customers. He contrasted DEC's success with DEP's, indicating that DEC achieved greater success for its low-income customers in 2019. DEC, he indicated, spends more on low-income programs than DEP. (Bradley-Wright at 19.) Witness Bradley-Wright urged DEP to expand its programs for low-income customers and noted that if the Commission approves the partial settlement agreement and stipulation in the pending DEP rate case, there will be additional low-income efficiency programs for DEP and members of the Collaborative to consider. (Bradley-Wright at 20.) With respect to low-income customer programs, Witness Bradley-Wright recommended that the Commission:

- Express support for DEP pursuing higher levels of efficiency savings for low-income customers
- Direct DEP to provide a plan in its next DSM/EE rider showing how it could ramp up low-income efficiency savings over the next three to five years.

(Bradley-Wright at 24.)

Witness Bradley-Wright referred to the COVID-19 pandemic and its implications for energy efficiency as well. He stated that DEP has not developed an overarching plan to adapt its energy efficiency approach to the COVID-19 era. Discussions about the relationship between COVID-19 and DEP's energy efficiency programs are in the early states at the Collaborative. Witness Bradley-Wright referred to the Michigan Public

Service Commission's response to the COVID-19 pandemic and its resulting direction to staff to identify: (i) potential impacts on meeting energy and demand savings targets and ways to mitigate such impacts and ensure program continuity and (ii) best practices for continuing to serve low- to moderate-income households, including those impacted directly by COVID-19. (Bradley-Wright at 27-28.)

Witness Bradley-Wright also updated the Commission on the Collaborative's work on the five directives. He agreed that the Collaborative had continued to meet bi-monthly, but he indicated that the Collaborative had more work to do on the five directives. Collaborative members have raised several new program concepts that were captured in the Portfolio Level Opportunities and Challenges Summary Report. He further reported that DEP continues to work with the Collaborative to provide useful topline, trend, and comparative data through its program performance reporting to the Collaborative. He recommended that DEP continue to work with the Collaborative to refine its data reporting. He also recommended that the Collaborative establish timelines and project schedules and provide written status reports on them.

DEP witness Evans responded to witness Bradley-Wright's concern regarding DEP's projection of savings below 1% of prior retail sales. He explained that the 1% target is an aspirational goal, and that other metrics exist to evaluate portfolio performance, such as demand reductions, ratio of costs to benefits, or differentiating between savings across customer segments. DEP remains committed to achieving all cost-effective energy savings up to and exceeding 1% when possible, but it is also focused on maximizing the performance of individual programs year over year and striving to achieve the most benefits for customers. (Evans Rebuttal at 11-12.)

Witness Evans disagreed that the Collaborative must prepare written reports and develop project schedules and timelines to be effective, although he welcomed any report a member submitted or prepared to the Company for the Collaborative's consideration. To be mindful of the members' time and other professional duties, however, he noted that the Company avoided asking Collaborative members to perform unnecessarily burdensome tasks. (Evans Rebuttal at 12.)

In response to witness Bradley-Wright's call for a specific DSM-EE COVID-19 strategy, witness Evans noted that Duke Energy Corporation has launched a corporate strategy to address the needs of customers in the aftermath of the pandemic; thus, DEP does not need to file a COVID-19 specific plan. He acknowledged that the Company had to suspend some programs temporarily, almost all programs have now resumed with additional safety protocols. Only two have not resumed, due to their increased risk to customers and contractors – Neighborhood Energy Saver and Multifamily Direct Install. The Company is working on resuming these programs, however, once risks can be mitigated. Finally, witness Evans testified that the Company has not adjusted its projections based on staffing and achievable energy savings potential in the market, neither of which has substantially changed as a result of the COVID-19 pandemic.

Based on the foregoing, the Commission concludes that:

- The current and forecasted decline in DEP's DSM/EE savings in 2021 is matter of concern. Consequently, the Collaborative should examine the reasons for the forecasted decline and explore options for preventing or correcting a decline in future DSM/EE savings;

- The Collaborative should continue to emphasize developing EE programs to assist low-income customers in saving energy and reducing their energy burdens;
- Due to the uncertainty and risks posed by the COVID-19 pandemic, the Commission is unwilling to direct DEP to file a plan to increase efficiency assistance; however, the Commission urges DEP to continue its efforts to benefit its customers in the form of reduced energy burdens and report on those efforts in its 2021 DSM/EE rider application;
- In lieu of a report from the Collaborative, the Company should continue reporting on Collaborative activities in its testimony filed in these proceedings. Other parties are encouraged to address Collaborative activities through future interventions.

IT IS, THEREFORE, ORDERED as follows:

1. That the appropriate DSM/EE EMF billing factors, excluding NCRF, for the Residential, General Service, and Lighting rate classes are: 0.013 cents per kWh for the Residential class; 0.0034 cents per kWh for the EE component of General Service classes; 0.010 cents per kWh for the DSM component of General Service classes; and 0.007 cents per kWh for the Lighting class. The factors do not change with the NCRF included.

2. That the appropriate forward-looking DSM/EE rates to be charged by DEP during the rate period for the Residential, General Service, and Lighting rate classes (excluding NCRF) are: 0.641 cents per kWh for the Residential class; 0.666 cents per kWh for the EE component of General Service classes; 0.073 cents per kWh for the DSM component of General Service classes; and 0.095 cents per kWh for the Lighting class.

3. That the appropriate total DSM/EE annual riders including the DSM/EE rate and the DSM/EE EMF rate (including NCRF) for the Residential, General Service, and Lighting rate classes are increments of 0.655 cents per kWh for the Residential class, 0.701 cents per kWh for the EE portion of the General Service classes, 0.063 cents per kWh for the DSM portion of the General Service classes, and 0.088 cents per kWh for the Lighting class.

4. That DEP shall file appropriate rate schedules and riders with the Commission to implement these adjustments as soon as practicable. Such rates are to be effective for service rendered on or after January 1, 2021.

5. That DEP shall work with the Public Staff to prepare a joint proposed Notice to Customers giving notice of rate changes ordered by the Commission herein, and DEP shall file such proposed notice for Commission approval as soon as practicable.

6. That the Public Staff shall continue to observe DSDR and the development of the Grid Improvement Plan and report on any overlap of the two, as necessary.

7. That DEP shall continue to leverage its Collaborative to discuss the EM&V issues and program design issues raised in the testimony of NC Justice Center, et al. witness Bradley-Wright as discussed herein, The results of these discussions shall be reported to the Commission in the Company's 2021 DSM/EE rider filing.

8. That continuing in 2021, the combined DEC/DEP Collaborative shall meet every other month.

ISSUED BY ORDER OF THE COMMISSION.

This the ___ day of __________, 2019.

NORTH CAROLINA UTILITIES COMMISSION

Chief Clerk