

**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

DOCKET NO. E-7, SUB 1192

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of

Application of Duke Energy Carolinas, LLC)	ORDER APPROVING DSM/EE
for Approval of Demand-Side Management)	RIDER AND REQUIRING FILING
and Energy Efficiency Cost Recovery Rider)	OF PROPOSED CUSTOMER
Pursuant to N.C. Gen. Stat. § 62-133.9 and)	NOTICE
Commission Rule R8-69)	

HEARD: On Tuesday, June 11, 2019, in Commission Hearing Room 2115, Dobbs Building, 430 North Salisbury Street, Raleigh, North Carolina

BEFORE: Commissioner ToNola D. Brown-Bland, Presiding; Chair Charlotte A. Mitchell; and Commissioners Jerry C. Dockham, James G. Patterson, Lyons Gray and Daniel G. Clodfelter¹

APPEARANCES:

For Duke Energy Carolinas, LLC:

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P.O. Box 1551, Raleigh, North Carolina 27602

For the Carolina Utility Customers Association, Inc.:

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Raleigh, North Carolina 27609

For the Carolina Industrial Group for Fair Utility Rates III:

Warren K. Hicks, Bailey & Dixon, LLP, 434 Fayetteville Street, Suite 2500
P.O. Box 1351, Raleigh, North Carolina 27602

For the North Carolina Sustainable Energy Association:

Benjamin Smith, Regulatory Counsel, 4800 Six Forks Road, Suite 300,
Raleigh, North Carolina 27609

For the North Carolina Justice Center and the Southern Alliance for Clean Energy:

Gudrun Thompson, Senior Attorney, Southern Environmental Law Center,
601 West Rosemary Street, Suite 220, Chapel Hill, North Carolina 27516

¹ Commissioner Jerry C. Dockham and Commissioner James G. Patterson retired from the Commission on June 30, 2019, and did not participate in the decision in this matter.

For the Using and Consuming Public:

John Little, Public Staff – North Carolina Utilities Commission, 4326 Mail Service Center, Raleigh, North Carolina 27699

BY THE COMMISSION: North Carolina General Statute Section 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-7, Sub 1192, on February 26, 2019, Duke Energy Carolinas, LLC (DEC or the Company) filed an application for approval of its DSM/EE rider (Rider EE² or Rider 11) for 2020³ (Application) and the direct testimony and exhibits of Carolyn T. Miller, Rates Manager for DEC, and Robert P. Evans, Senior Manager – Strategy and Collaboration for the Carolinas in the Company's Market Solutions Regulatory Strategy and Evaluation group.

On March 8, 2019, the Commission issued an order scheduling a hearing for June 4, 2019, establishing discovery guidelines, providing for intervention and testimony by other parties, and requiring public notice. On March 19, 2019, the Commission issued an order that rescheduled the hearing for June 11, 2019, reset the deadlines for intervention and testimony, and revised the public notice.

² DEC refers to its DSM/EE Rider as "Rider EE"; however, this rider includes charges intended to recover both DSM and EE revenue requirements.

³ The Rider EE proposed in this proceeding is the Company's eleventh Rider EE and includes components that relate to Vintages 2015, 2016, 2017, 2018, 2019 and 2020 of the cost and incentive recovery mechanism approved in Docket No. E-7, Sub 1032, as modified in Docket No. E-7, Sub 1130. For purposes of clarity, the aggregate rider is referred to in this Order as "Rider 11" or the proposed "Rider EE." Rider 11 is proposed to be effective for the rate period January 1, 2020 through December 31, 2020.

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 March 6, 2019, the Carolina Utility Customers Association, Inc. (CUCA) filed a petition to intervene, which was granted on March 7, 2019. On March 19, 2019, the North Carolina Sustainable Energy Association (NCSEA) filed a petition to intervene, which was granted on March 20, 2019. On May 9, 2019, the North Carolina Justice Center (NC Justice Center) and the Southern Alliance for Clean Energy (SACE) filed a joint petition to intervene, which was granted on May 15, 2019. The Carolina Industrial Group for Fair Utility Rates III (CIGFUR) filed a petition to intervene on May 14, 2019, which was granted on May 15, 2019.

On May 20, 2019, the NC Justice Center and SACE (collectively, SACE) 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, and David Williamson, Staff Engineer in the Electric Division.

On May 28, 2019, DEC filed the supplemental testimony of witness Miller. On May 30, 2019, DEC filed the rebuttal testimony of witness Evans.

On June 5, 2019, DEC, the Public Staff, and SACE filed a joint motion to excuse all witnesses from appearing at the June 11, 2019 expert witness hearing. On June 6, 2019, the Commission issued an order granting the motion.

The case came on for hearing as scheduled on June 11, 2019. No public witnesses appeared at the hearing.

On June 21, 2019, the Public Staff filed a letter with the Commission setting forth the results of the Public Staff's review of the costs of the portfolio of DEC's DSM/EE programs incurred during the 12-month period ended December 31, 2018.

On July 5, 2019, the Commission issued an order closing the record and establishing July 29, 2019 as the date by which briefs and proposed orders were due from the parties.

Pursuant to subsequent motions filed by various parties, the Commission, on August 27, 2019, extended the due date for briefs and proposed orders to September 9, 2019.

On September 9, 2019, DEC and the Public Staff filed a joint Proposed Order.

Also on September 9, 2019, North Carolina Justice Center and the Southern Alliance for Clean Energy (collectively, SACE) filed a Post-Hearing Brief.

On September 18, 2019, NCSEA filed a letter in lieu of formal comments.

On September 20, 2019, DEC filed an objection to NCSEA's letter. DEC asserted that because NCSEA is a party to the docket it should have filed its letter on or before the September 9, 2019, deadline for briefs and proposed orders.

On September 20, 2019, NCSEA filed a motion to withdraw its letter.

Other Pertinent Proceedings: Docket No. E-7, Subs 831, 938, 979, 1032, 1130, and 1164

On February 9, 2010, the Commission issued an Order Approving Agreement and Joint Stipulation of Settlement Subject to Certain Commission-Required Modifications and Decisions on Contested Issues in DEC's first DSM/EE rider proceeding, Docket No. E-7, Sub 831 (Sub 831 Order). In the Sub 831 Order, the Commission approved, with certain modifications, the Agreement and Joint Stipulation of Settlement between DEC, the Public Staff, SACE, Environmental Defense Fund (EDF), Natural Resources Defense Council, and the Southern Environmental Law Center (SELC) (Sub 831 Settlement), which described the modified save-a-watt mechanism (Sub 831 Mechanism), pursuant to which DEC calculated, for the period from June 1, 2009 until December 31, 2013, the revenue requirements underlying its DSM/EE riders based on percentages of avoided costs, plus compensation for NLR resulting from EE programs only. The Sub 831 Mechanism was approved as a pilot (Sub 831 Pilot) with a term of four years, ending on December 31, 2013.

On February 15, 2010, the Company filed an Application for Waiver of Commission Rule R8-69(a)(4) and R8-69(a)(5) in Docket No. E-7, Sub 938 (Sub 938 Waiver Application), requesting waiver of the definitions of "rate period" and "test period." Under the Sub 831 Mechanism, customer participation in the Company's DSM and EE programs and corresponding responsibility to pay Rider EE are determined on a vintage year basis. A vintage year is generally the 12-month period in which a specific DSM or EE measure is installed for an individual participant or group of participants.⁴ The Company applied the vintage year concept on a calendar-year basis to the modified save-a-watt portfolio of programs for ease of administration for the Company and customers. Pursuant to the Sub 938 Waiver Application, "test period" is defined as the most recently completed vintage year at the time of the Company's DSM/EE rider application filing date.

On April 6, 2010, the Commission entered an Order Granting Waiver, in Part, and Denying Waiver, in Part (Sub 938 Waiver Order), which Order approved the requested waiver of R8-69(d)(3) in part, but denied the Company's requested waiver of the definitions of "rate period" and "test period."

On May 6, 2010, DEC filed a Motion for Clarification or, in the Alternative, for Reconsideration, asking that the Commission reconsider its denial of the waiver of the definitions of "test period" and "rate period," and that the Commission clarify that the EMF

⁴ Vintage 1 is an exception in terms of length. Vintage 1 is a 19-month period beginning June 1, 2009 and ending December 31, 2010, because of the approval of DSM/EE programs prior to the approval of the cost recovery mechanism.

may incorporate adjustments for multiple test periods. In response, the Commission issued an Order on Motions for Reconsideration on June 3, 2010 (Sub 938 Second Waiver Order), granting DEC's Motion. The Sub 938 Second Waiver Order established that the rate period for Rider EE would align with the 12-month calendar year vintage concept utilized in the Commission-approved save-a-watt approach (in effect, the calendar year following the Commission's order in each annual DSM/EE cost recovery proceeding), and that the test period for Rider EE would be the most recently completed vintage year at the time of the Company's Rider EE cost recovery application filing date.⁵

On February 8, 2011, in Docket No. E-7, Sub 831, the Commission issued its Order Adopting "Decision Tree" to Determine "Found Revenues" and Requiring Reporting in DSM/EE Cost Recovery Filings in Docket No. E-7, Sub 831 (Sub 831 Found Revenues Order), which included, in Appendix A, a "Decision Tree" to identify, categorize, and net possible found revenues against the NLR created by the Company's EE programs. Found revenues may result from activities that directly or indirectly result in an increase in customer demand or energy consumption within the Company's service territory.

On November 8, 2011, in Docket No. E-7, Sub 979, the Commission issued its Order Approving DSM/EE Rider and Requiring Filing of Proposed Customer Notice (Sub 979 Order), in which it approved the Evaluation, Measurement, and Verification (EM&V) agreement (EM&V Agreement) reached by the Company, SACE, and the Public Staff. Pursuant to the EM&V Agreement, for all EE programs, except for the Non-Residential Smart Saver Custom Rebate Program and the Low-Income EE and Weatherization Assistance Program, actual EM&V results are applied to replace all initial impact estimates back to the beginning of the program offering. For the purposes of the vintage true-ups, these initial EM&V results will be considered actual results for a program until the next EM&V results are received. The new EM&V results will then be considered actual results going forward and will be applied prospectively for the purposes of trueing up vintages from the first day of the month immediately following the month in which the study participation sample for the EM&V was completed. These EM&V results will then continue to apply and be considered actual results until superseded by new EM&V results, if any. For all new programs and pilots, the Company will follow a consistent methodology, meaning that initial estimates of impacts will be used until DEC has valid EM&V results, which will then be applied back to the beginning of the offering and will be considered actual results until a second EM&V is performed.

On February 6, 2012, in the Sub 831 docket, the Company, SACE, and the Public Staff filed a proposal regarding revisions to the program flexibility requirements (Flexibility Guidelines). The proposal divided potential program changes into three categories based on the magnitude of the change, with the most significant changes requiring regulatory

⁵ Further, in the Sub 938 Second Waiver Order issued June 3, 2010, the Commission concluded that DEC should true up all costs during the save-a-watt pilot through the EMF rider provided in Commission Rule R8-69(b)(1). The modified save-a-watt approach approved in the Sub 831 Order required a final calculation after the completion of the four-year program, comparing the cumulative revenues collected related to all four vintage years to amounts due the Company, taking into consideration the applicable earnings cap.

approval by the Commission prior to implementation, less extensive changes requiring advance notice prior to making such program changes, and minor changes being reported on a quarterly basis to the Commission. The Commission approved the joint proposal in its July 16, 2012 Order Adopting Program Flexibility Guidelines.

On October 29, 2013, the Commission issued its Order Approving DSM/EE Programs and Stipulation of Settlement in Docket No. E-7, Sub 1032 (Sub 1032 Order), which approved a new cost recovery and incentive mechanism for DSM/EE programs (Sub 1032 Mechanism) and a portfolio of DSM and EE programs to be effective January 1, 2014, to replace the cost recovery mechanism and portfolio of DSM and EE programs approved in Docket No. E-7, Sub 831. In the Sub 1032 Order, the Commission approved an Agreement and Stipulation of Settlement, filed on August 19, 2013, and amended on September 23, 2013, by and between DEC, NCSEA, EDF, SACE, the South Carolina Coastal Conservation League (CCL), NRDC, the Sierra Club, and the Public Staff (Stipulating Parties), which incorporates the Sub 1032 Mechanism (Sub 1032 Stipulation).

Under the Sub 1032 Stipulation, as approved by the Commission, the portfolio of DSM and EE programs filed by the Company was approved with no specific duration (unlike the programs approved in Sub 831, which explicitly expired on December 31, 2013). Additionally, the Sub 1032 Stipulation also provided that the Company's annual DSM/EE rider would be determined according to the Sub 1032 Stipulation and the terms and conditions set forth in the Sub 1032 Mechanism, until otherwise ordered by the Commission. Under the Sub 1032 Stipulation, the Sub 1032 Mechanism was to be reviewed in four years. Pursuant to the Sub 1032 Stipulation, any proposals for revisions to the Sub 1032 Mechanism were to be filed by parties along with their testimony in the annual DSM/EE rider proceeding.

The overall purpose of the Sub 1032 Mechanism is to (1) allow DEC to recover all reasonable and prudent costs incurred for adopting and implementing new DSM and EE measures; (2) establish certain requirements, in addition to those of Commission Rule R8-68, for requests by DEC for approval, monitoring, and management of DSM and EE programs; (3) establish the terms and conditions for the recovery of NLR (net of found revenues) and a Portfolio Performance Incentive (PPI) to reward DEC for adopting and implementing new DSM and EE measures and programs; and (4) provide for an additional incentive to further encourage kilowatt-hour (kWh) savings achievements. The Sub 1032 Mechanism also includes the following provisions, among several others: (a) it shall continue until terminated pursuant to Commission order; (b) modifications to Commission-approved DSM/EE programs will be made using the Flexibility Guidelines; (c) treatment of opted-out and opted-in customers will continue to be guided by the Commission's Orders in Docket No. E-7, Sub 938, with the addition of an additional opt-in period during the first week in March of each year; (d) the EM&V Agreement shall continue to govern the application of EM&V results; and (e) the determination of found revenues will be made using the Decision Tree approved in the Sub 831 Found Revenues

Order. Like the Sub 831 Mechanism, the Sub 1032 Mechanism also employs a vintage year concept based on the calendar year.⁶

On August 23, 2017, in Docket No. E-7, Sub 1130 (“Sub 1130”), the Commission issued its Order Approving DSM/EE Rider, Revising DSM/EE Mechanism, and Requiring Filing of Proposed Customer Notice (Sub 1130 Order), in which it approved the agreement to revise certain provisions of the Sub 1032 Mechanism reached by the Company and the Public Staff.

Paragraph 69 of the Sub 1032 Mechanism, which describes how avoided costs are determined for purposes of calculating the PPI, was revised such that for Vintage 2019 and beyond, the program-specific avoided capacity benefits and avoided energy benefits will be derived from the underlying resource plan, production cost model, and cost inputs that generated the avoided capacity and avoided energy credits reflected in the most recent Commission-approved Biennial Determination of Avoided Cost Rates as of December 31 of the year immediately preceding the annual DSM/EE rider filing date. For the calculation of the underlying avoided energy credits to be used to derive the program-specific avoided energy benefits, the calculation will be based on the projected EE portfolio hourly shape, rather than the assumed 24x7 100-megawatt (MW) reduction typically used to represent a qualifying facility (QF).

Paragraph 19 of the Sub 1032 Mechanism was revised to specify that the avoided costs used for purposes of program approval filings would also be determined using the method outlined in revised Paragraph 69. The specific Biennial Determination of Avoided Cost Rates used for each program approval filing would be derived from the rates most recently approved by the Commission as of the date of the program approval filing.

Paragraph 23 of the Sub 1032 Mechanism was revised, and Paragraphs 23A-D were added, to specify which avoided costs should be used for determining the continuing cost-effectiveness of programs and actions to be taken based on the results of those tests. Pursuant to Paragraph 23, each year the Company files an analysis of the current cost-effectiveness of each of its DSM/EE programs as part of the DSM/EE rider filing. New Paragraph 23A requires the use of the same method for calculating the avoided costs outlined in the revisions to Paragraph 69 to determine the continued cost-effectiveness for each program. Like revised Paragraph 69, Paragraph 23A specifies that the avoided capacity and energy costs used to calculate cost-effectiveness will be derived from the avoided costs underlying the most recent Commission-approved Biennial Determination of Avoided Cost Rates as of December 31 of the year immediately preceding the annual DSM/EE rider filing date. New Paragraphs 23B through 23D address the steps that will be taken if specific DSM/EE programs continue to produce Total Resource Cost (TRC) test results less than 1.00 for an extended period. For any program that initially demonstrates a TRC of less than 1.00, the Company shall include in its annual DSM/EE rider filing a discussion of the actions being taken to maintain or

⁶ Each vintage under the Sub 1032 Mechanism is referred to by the calendar year of its respective rate period (e.g., Vintage 2019).

improve cost-effectiveness, or alternatively, its plans to terminate the program. If a program demonstrates a prospective TRC of less than 1.00 in a second DSM/EE rider proceeding, the Company shall include a discussion of what actions it has taken to improve cost-effectiveness. If a program demonstrates a prospective TRC of less than 1.00 in a third DSM/EE rider proceeding, the Company shall terminate the program effective at the end of the year following the DSM/EE rider order, unless otherwise ordered by the Commission.

The Sub 1032 Mechanism, as revised by the Sub 1130 Order, is set forth in Maness Exhibit II and referred to herein as the “Mechanism.”

On October 17, 2018, The Commission issued an Order Approving Notice to Customers of Change in Rates in Docket No. E-7, Sub 1164 (Sub 1164 Order). In the Sub 1164 Order, consistent with the requirements of N.C.G.S. § 62-133.9 and Commission Rule R8-68, the Commission approved the following DSM or EE programs or pilot programs to be offered to customers in 2019: Energy Assessments; EE Education; Energy Efficient Appliances and Devices; Residential Smart Saver EE; Multi-Family EE; MyHER; Income-Qualified EE and Weatherization; Power Manager; Non-Residential Smart Saver Energy Efficient Food Service Products; Non-Residential Smart Saver Energy Efficient HVAC Products; Non-Residential Smart Saver Energy Efficient IT Products; Non-Residential Smart Saver Energy Efficient Lighting Products; Non-Residential Smart Saver Energy Efficient Process Equipment Products; Non-Residential Smart Saver Energy Efficient Pumps and Drives Products; Non-Residential Smart Saver Custom; Non-Residential Smart Saver Custom Energy Assessments; PowerShare; PowerShare Call Option (canceled effective January 31, 2018); Small Business Energy Saver; Smart Energy in Offices (canceled effective June 30, 2018); EnergyWise for Business; and Non-Residential Smart Saver Performance Incentive. The Commission concluded that the Company’s portfolio of DSM and EE programs was overall cost-effective and eligible for inclusion in Rider 10. Pursuant to Paragraph 19 of the Sub 831 Mechanism, the Income-Qualified EE and Weatherization Program – Low-Income, the Commission determined that this program does not have to meet the TRC or Utility Cost Test (UCT) to be eligible for inclusion in the Company’s portfolio because of the exception for low-income and other non-cost-effective programs with similar societal benefits. The Non-Residential Smart Saver Custom Energy Assessments and EnergyWise for Business programs were found to be cost-effective under the Company’s calculation of avoided capacity costs. The Commission further found that the Smart Saver Custom Energy Assessments and EnergyWise programs were cost-effective.

The Commission expressed concern about the Company’s Residential HVAC EE – Air Conditioning Program (HVAC EE). While the Commission agreed with witnesses Evans, Neme, and Williamson that a residential HVAC program is an important program for an electric utility to offer as part of its DSM/EE portfolio, it also recognized the Public Staff’s concern that ratepayers not pay for programs that are not cost-effective. To that end, the Commission directed the Company (1) to propose modifications to this program no later than October 31, 2018, with the goal of restoring the TRC score to 1.0 or greater,

and (2) to include a discussion of the impact those modifications and other actions it has taken to improve cost-effectiveness in next year's DSM/EE rider proceeding. On October 31, 2018, DEC filed its proposed modifications to the HVAC EE program which were approved by the Commission on January 7, 2019.

For the Non-Residential Smart \$aver Performance Incentive Program, the Commission concluded that it did not require additional scrutiny because of the short time it had been in place and the predicted improvement in cost-effectiveness results. Nevertheless, if the program did not project cost-effectiveness for Vintage 2020, the Commission directed the Company to provide a discussion of the actions being taken to maintain or improve cost-effectiveness, or alternatively, its plans to terminate the program.

The Commission accepted the EM&V reports filed as Evans Exhibits A, D, E, F, G, H, I, J, K, and L and considered them complete for purposes of calculating program impacts. The report for the Non-Residential Smart \$aver Custom program was to be revised as recommended by Public Staff Witness Williamson and filed in the 2019 rider proceeding. Acceptance of the EM&V report for MyHER program was postponed until the 2019 rider proceeding so that the Public Staff could complete its review of the savings estimates.

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Based upon consideration of DEC's Application, the pleadings, the testimony and exhibits received into evidence at the hearing, the parties' briefs, and the record as a whole, the Commission now makes the following:

FINDINGS OF FACT

1. DEC is a public utility with a public service obligation to provide electric utility service to customers in its service area in North Carolina and is subject to the jurisdiction of the Commission.

2. The Commission has jurisdiction over this Application pursuant to the Public Utilities Act. Based on the specific recovery of costs and incentives proposed by DEC in this proceeding, the Commission finds that it has the authority to consider and approve the relief the Company is seeking in this docket.

3. For purposes of this proceeding, DEC has requested approval of costs and incentives related to the following DSM/EE programs to be included in Rider 11: Energy Assessments Program; EE Education Program; Energy Efficient Appliances and Devices; Residential Smart \$aver EE Program; Multi-Family EE Program; My Home Energy Report; Income-Qualified EE and Weatherization Program; Power Manager Load Control Service Program; Non-Residential Smart \$aver Energy Efficient Food Service Products Program; Non-Residential Smart \$aver Energy Efficient HVAC Products Program; Non-Residential Smart \$aver Energy Efficient IT Products Program; Non-Residential

Smart \$aver Energy Efficient Lighting Products Program; Non-Residential Smart \$aver Energy Efficient Process Equipment Products Program; Non-Residential Smart \$aver Energy Efficient Pumps and Drives Products Program; Non-Residential Smart \$aver Custom Incentive and Energy Assessment Program; PowerShare; PowerShare Call Option; Small Business Energy Saver; Smart Energy in Offices; EnergyWise for Business; and Non-Residential Smart \$aver Performance Incentive.

4. Pursuant to Paragraph 19 of the Mechanism, the Income-Qualified EE and Weatherization Program is not required to pass the TRC or UCT tests to be eligible for inclusion in the Company's portfolio. Accordingly, the Commission finds and concludes that no further action by the Company is required with respect to this program.

5. Modifications to the Residential Smart \$aver EE Program have resulted in improved cost-effectiveness scores under the UCT, the TRC, the Rate Impact Measure (RIM) Test and the Participant Test. Accordingly, the Commission finds and concludes that no action by the Company is required at this time with respect to this program.

6. The Food Service and Information Technology measures of the Nonresidential Smart \$aver Program were not currently cost effective under the TRC test; however, these are only two measures of a larger program, and no party recommended that the Company take action. Accordingly, the Commission finds and concludes that no further action by the Company is required with respect to those measures at this time.

7. For purposes of inclusion in Rider 11, the Company's portfolio of DSM and EE programs is cost-effective.

8. The EM&V reports filed as Evans Exhibits A, D, E, F, G, H, I, J, K, and L are acceptable for purposes of this proceeding and should be considered complete for purposes of calculating program impacts.

9. Pursuant to the Commission's Sub 938 Second Waiver Order and the Sub 1032 Order, the rate period for the purposes of this proceeding is January 1, 2020 through December 31, 2020.

10. Rider 11 includes EMF components for Vintage 2018 DSM and EE programs. Consistent with the Sub 938 Second Waiver Order and the Sub 1032 Order, the test period for these EMF components is the period from January 1, 2018 through December 31, 2018 (Vintage 2018).

11. DEC's proposed rates for Rider 11 are comprised of both prospective and EMF components. The prospective components include factors designed to collect estimated program costs and PPI for the Company's Vintage 2020 DSM and EE programs, as well as estimated NLR for the Company's Vintage 2017-2020 EE programs. The EMF components include the whole or partial true-up of Vintage 2018 program costs, NLR, and PPI, as well as whole or partial true-ups of NLR and PPI for Vintage Year 2017, and NLR for Vintages 2015 and 2016. DEC, as reflected in the testimony and exhibits of

Company witnesses Miller and Evans, has appropriately calculated the components of Rider 11 to reflect the Commission's findings and conclusions in this Order, as well as the Commission's findings and conclusions as set forth in the Sub 1032 Order, as revised by the Sub 1130 Order.

12. For purposes of this DSM/EE proceeding only, DEC's inclusion of a reduction of \$10 million to Year 2020 lost revenues collected from Vintage 2017, Vintage 2018, Vintage 2019, and Vintage 2020 as a placeholder to mitigate potential overcollection with respect to the Company's DSM/EE rider is reasonable and appropriate.

13. The reasonable and prudent Rider 11 billing factor for residential customers⁷ is 0.4835 cents per kWh, which, as is the case for all the billing factors stated in these findings of fact, includes the regulatory fee.

14. The reasonable and prudent Rider 11 Vintage 2020 EE prospective billing factor for non-residential customers who do not opt out of Vintage 2020 of the Company's EE programs is 0.3082 cents per kWh.

15. The reasonable and prudent Rider 11 Vintage 2020 DSM prospective billing factor for non-residential customers who do not opt out of Vintage 2020 of the Company's DSM programs is 0.1101 cents per kWh.

16. The reasonable and prudent Rider 11 Vintage 2019 prospective EE billing factor for non-residential customers who participated in Vintage 2019 of the Company's EE programs (or who did not so participate, but neither (a) explicitly opted out of Vintage 2019 during the annual enrollment period for that vintage, nor (b) opted out of Vintage 2020) is 0.0509 cents per kWh.

17. The reasonable and prudent Rider 11 Vintage 2018 prospective EE billing factor for non-residential customers who participated in Vintage 2018 of the Company's EE programs (or who did not so participate, but neither (a) explicitly opted out of Vintage 2018 during the annual enrollment period for that vintage, nor (b) opted out of Vintage 2020) is 0.0549 cents per kWh.

18. The reasonable and prudent Rider 11 Vintage 2017 prospective EE billing factor for non-residential customers who participated in Vintage 2017 of the Company's EE programs (or who did not so participate, but neither (a) explicitly opted out of Vintage 2017 during the annual enrollment period for that vintage, nor (b) opted out of Vintage 2020) is 0.0312 cents per kWh.

19. The reasonable and prudent Rider 11 Vintage 2018 EE EMF billing factor for non-residential customers who participated in Vintage 2018 of the Company's EE

⁷ The residential billing factor applicable to all residential customers is the sum of the residential prospective and residential true-up factors for the applicable vintage years.

programs (or who did not so participate, but neither (a) explicitly opted out of Vintage 2018 during the annual enrollment period for that vintage, nor (b) opted out of Vintage 2020) is 0.0278 cents per kWh.

20. The reasonable and prudent Rider 11 Vintage 2018 DSM EMF billing factor for non-residential customers who participated in Vintage 2018 of the Company's DSM programs (or who did not so participate, but neither (a) explicitly opted out of Vintage 2018 during the annual enrollment period for that vintage, nor (b) opted out of Vintage 2020) is 0.0077 cents per kWh.

21. The reasonable and prudent Rider 11 Vintage 2017 EE EMF billing factor for non-residential customers who participated in Vintage 2017 of the Company's EE programs (or who did not so participate, but neither (a) explicitly opted out of Vintage 2017 during the annual enrollment period for that vintage, nor (b) opted out of Vintage 2020) is 0.0645 cents per kWh.

22. The reasonable and prudent Rider 11 Vintage 2017 DSM EMF billing factor for non-residential customers who participated in Vintage 2017 of the Company's DSM programs (or who did not so participate, but neither (a) explicitly opted out of Vintage 2017 during the annual enrollment period for that vintage, nor (b) opted out of Vintage 2020) is 0.0000 cents per kWh.

23. The reasonable and prudent Rider 11 Vintage 2016 EE EMF billing factor for non-residential customers who participated in Vintage 2016 of the Company's EE programs (or who did not so participate, but neither (a) explicitly opted out of Vintage 2016 during the annual enrollment period for that vintage, nor (b) opted out of Vintage 2020) is 0.0512 cents per kWh.

24. The reasonable and prudent Rider 11 Vintage 2016 DSM EMF billing factor for non-residential customers who participated in Vintage 2016 of the Company's DSM programs (or who did not so participate, but neither (a) explicitly opted out of Vintage 2016 during the annual enrollment period for that vintage, nor (b) opted out of Vintage 2020) is 0.0001 cents per kWh.

25. The reasonable and prudent Rider 11 Vintage 2015 EE EMF billing factor for non-residential customers who participated in Vintage 2015 of the Company's EE programs (or who did not so participate, but neither (a) explicitly opted out of Vintage 2015 during the annual enrollment period for that vintage, nor (b) opted out of Vintage 2020) is 0.0064 cents per kWh.

26. The reasonable and prudent Rider 11 Vintage 2015 DSM EMF billing factor for non-residential customers who participated in Vintage 2015 of the Company's DSM programs (or who did not so participate, but neither (a) explicitly opted out of Vintage 2015 during the annual enrollment period for that vintage, nor (b) opted out of Vintage 2020) is (0.0001) cents per kWh.

27. DEC should continue to leverage its collaborative stakeholder meetings (Collaborative) to work with stakeholders to garner meaningful input regarding potential portfolio enhancement and program design.

28. The Company should continue the frequency of the Collaborative meetings so that the combined DEC/Duke Energy Progress, LLC (DEP) Collaborative meets every two months.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 1-2

The evidence and legal bases in support of these findings and conclusions can be found in the Application, the pleadings, the testimony, and the exhibits in this docket, as well as in the statutes, case law, and rules governing the authority and jurisdiction of this Commission. These findings are informational, procedural, and jurisdictional in nature.

North Carolina General Statute Section 62-133.9 grants the Commission the authority to approve an annual rider, outside of a general rate case, for recovery of reasonable and prudent costs incurred in the adoption and implementation of new DSM and EE measures, as well as appropriate rewards for adopting and implementing those measures. Similarly, Commission Rule R8-68 provides, among other things, that reasonable and prudent costs of new DSM or EE programs approved by the Commission shall be recovered through the annual rider described in N.C. Gen. Stat. § 62-133.9 and Commission Rule R8-69. The Commission may also consider in the annual rider proceeding whether to approve any utility incentive (reward) pursuant to N.C. Gen. Stat. § 62-133.9(d) (2) a through c.

Commission Rule R8-69 outlines the procedure whereby a utility applies for and the Commission establishes an annual DSM/EE rider. Commission Rule R8-69(a)(2) defines DSM/EE rider as “a charge or rate established by the Commission annually pursuant to N.C. Gen. Stat. § 62-133.9(d) to allow the electric public utility to recover all reasonable and prudent costs incurred in adopting and implementing new demand-side management and energy efficiency measures after August 20, 2007, as well as, if appropriate, utility incentives, including net lost revenues.” Commission Rule R8-69(c) allows a utility to apply for recovery of incentives for which the Commission will determine the appropriate ratemaking treatment.

North Carolina General Statute Section 62-133.9, along with Commission Rules R8-68 and R8-69, provides that the Commission shall approve an annual rider allowing an electric public utility, upon application, to recover the reasonable and prudent incurred costs of approved DSM and EE programs. The Commission-approved rider may also allow an electric public utility to recover appropriate utility incentives, potentially including “[a]ppropriate rewards based on capitalization of a percentage of avoided costs achieved by demand-side management and energy efficiency measures.” Consistent with this provision, as well as the Commission-approved Mechanism, the Company filed an application for approval of such annual rider (Rider 11). The cost recovery and utility incentives the Company seeks through Rider 11 are based on the Company recovering

DSM/EE program costs, NLR (net of found revenues), and a PPI incentive related to the DSM and EE programs approved in the Sub 1032 Order and those programs approved following the Sub 1032 Order. Recovery of these costs and utility incentives is also consistent with N.C. Gen. Stat. § 62-133.9, Rule R8-68, and Rule R8-69. Therefore, the Commission concludes that it has the authority to consider and approve the relief the Company is seeking in this docket.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 3

The evidence for this finding and conclusion can be found in DEC's Application, the testimony and exhibits of Company witnesses Evans and Miller, the testimony of Public Staff witness Williamson, and various Commission orders.

DEC witnesses Miller and Evans' testimony and exhibits show that the Company's request for approval of Rider 11 is associated with the Sub 1032 portfolio of programs, as well as the programs approved by the Commission after the Sub 1032 Order. The direct testimony and exhibits of DEC witness Evans listed the applicable DSM/EE programs as follows: Energy Assessments Program; EE Education Program; Energy Efficient Appliances and Devices; Residential Smart \$aver EE Program; Multi-Family EE Program; My Home Energy Report; Income-Qualified EE and Weatherization Program; Power Manager Load Control Service Program; Non-Residential Smart \$aver Energy Efficient Food Service Products Program; Non-Residential Smart \$aver Energy Efficient HVAC Products Program; Non-Residential Smart \$aver Energy Efficient IT Products Program; Non-Residential Smart \$aver Energy Efficient Lighting Products Program; Non-Residential Smart \$aver Energy Efficient Process Equipment Products Program; Non-Residential Smart \$aver Energy Efficient Pumps and Drives Products Program; Non-Residential Smart \$aver Custom Incentive Program; Non-Residential Smart \$aver Custom Energy Assessments Program; PowerShare Non-Residential and Load Curtailment Program; PowerShare Call Option Program⁸; Small Business Energy Saver; Smart Energy in Offices Program⁹; EnergyWise for Business Program; and Non-Residential Smart \$aver Performance Incentive Program. (Tr. at 56-58.)

In his affidavit, 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. (Id. at 150-52.)

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.

⁸ This program was canceled effective January 31, 2018, pursuant to the Sub 1130 Order.

⁹ This program was canceled effective June 30, 2018, pursuant to the Commission's February 7, 2018 order in Docket No. E-7, Sub 961.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 4-7

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

DEC 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 2020 period, the results of which are incorporated in Evans Exhibit No. 7. (Tr. at 45.) DEC's calculations indicate that, except for the Income-Qualified EE and Weatherization Program (which was not cost-effective at the time it was approved by the Commission), elements of the Non-Residential Smart \$aver Performance Incentive Program, and the Residential Smart \$aver EE Program, the aggregate portfolio continues to be cost-effective. (Id. at 59.)

Public Staff witness Williamson stated in his testimony that the Public Staff reviewed DEC's calculations of cost-effectiveness under each of the four standard cost-effectiveness tests: UCT, TRC, Participant test, and RIM test. (Id. at 161.) 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 162-63.)

Witness Williamson testified that while many programs continue to be cost-effective, the TRC scores as filed by the Company for all programs have decreased since the 2017 DSM/EE rider proceeding, mainly due to the changes in avoided costs. (Id.) He stated that the decreasing cost-effectiveness is also partially attributable to anticipated unit savings being lower than expected as determined through EM&V of the programs. (Id.) Also, as programs mature, baseline standards increase, or avoided cost rates decrease, and it becomes more difficult for a program to produce cost-effective savings. (Id. at 163.)

Witness Williamson further testified about the performance of DEC's overall portfolio of programs and specific programs with cost-effectiveness concerns. He noted that the portfolio of programs seemed generally to be performing satisfactorily. Witness Williamson recalled, however, that the Public Staff had previously noted for the Commission several trends related to transformation of the EE lighting market in North Carolina resulting from the growing accessibility of non-specialty light emitting diode (LED) lighting. Based on those trends, he predicted that LED lighting will likely become the baseline standard for general service bulb technologies by January 2020, thereby decreasing the savings from any EE program that includes general service bulb technologies. (Tr. at 153-55.)

Witness Williamson further testified about how changes in the implementation of lighting standards may impact DEC's EE programs going forward. He recounted that on January 19, 2017, the United States Department of Energy (DOE) published final rules

adopting a revised definition for general service lamp (GSL) and general service incandescent lamp (GSIL); however, on February 11, 2019, the DOE issued a notice of proposed rulemaking and request for comment that potentially could withdraw the currently approved language on GSL and GSIL. At that point, witness Williamson explained, a future rulemaking could occur, but until such time, the current rules remain in place. (*Id.* at 153-54.) Witness Williamson additionally noted that North Carolina's lighting market was transforming. Since the Company began distributing lighting measures to its customers through DSM/EE programs, the acceptance of more efficient lighting measures has been increasing. Initially, when DEC first launched its Retail LED program, it intended to increase awareness and adoption of energy efficient lighting through mitigating the higher prices of LED and increasing customer awareness. The market has since been migrating even further toward the LED market. Highlighting the findings of DEC's third party evaluator showing that most LED program sales would have occurred regardless of the program discounts, witness Williamson testified that these findings demonstrate North Carolina's market for standard LED bulbs no longer needs discounted or free non-specialty LED bulbs as part of utility EE program lighting portfolios going forward. He further noted that the Company had "greatly reduced" the number of non-specialty LED bulbs offered for its lighting programs since the last rider proceeding. Most of the bulbs the Company offered across its residential programs were specialty LED bulbs. Witness Williamson acknowledged that the both specialty and non-specialty LED bulbs were cost-effective measures; nevertheless, based on the market transformation, he concluded that an incentive for non-specialty LED bulbs will no longer be needed after Vintage 2020. (Tr. at 156-58.)

Witness Williamson also testified that other programs were struggling to be or to remain cost-effective. He identified the Residential Smart \$aver EE, Residential Low Income, Non-Residential Smart \$aver Efficient Food Service Products, and Non-Residential Smart \$aver Efficient IT Products program as not cost effective under the TRC test.

SACE witness Bradley-Wright testified that DEC's DSM/EE portfolio is cost-effective, demonstrating that DEC's customers are realizing real value from the Company's programs. (*Id.* at 103.) Based on DEC's estimated UCT score, the net benefits ratio grew considerably in 2018 to 3.98 from 3.45 in the previous year.

Overall, the Commission concludes that DEC's portfolio of DSM and EE programs is cost-effective and eligible for inclusion in Rider 11. The Commission makes specific findings and conclusions as to the individual programs that DEC and/or the Public Staff have identified as not being cost-effective below.

Residential Low-Income Program

Witness Williamson testified that the Public Staff has inquired about the trends of the Company's low-income program, and is still discussing the Company's updated methodology for determining cost-effectiveness. Witness Williamson did not, however, recommend any changes to the Residential Low-Income program in this proceeding.

Pursuant to Paragraph 19 of the Mechanism (which provides an exception for low-income programs and other non-cost-effective programs with similar societal benefits), the Residential Low-Income Program is not required to pass the TRC or UCT tests to be eligible for inclusion in the Company's portfolio. Accordingly, the Commission finds and concludes that no further action by the Company is required with respect to this program.

Residential Smart \$aver EE

In his direct testimony, DEC witness Evans described how the Company has acted to improve the cost-effectiveness scores of the Residential Smart \$aver program, consistent with the Sub 1164 Order. As directed, the Company filed proposed modifications to its Residential Smart \$aver program on October 31, 2018. The Commission approved the proposed modifications by order issued January 7, 2019 in Docket Nos. E-7, Sub 1032 and E-7, Sub 1164. These modifications reflected that the Company is: (1) recognizing the lower incremental costs of higher efficiency HVAC equipment using participant cost auditing tools allowing it to review costs across various contractors, brands, and efficiency levels; (2) improving Trade Ally engagement by making participation less costly and streamlining requirements; (3) reducing program administration costs; and (4) implementing a three-year phase-in to a referral-only channel. Witness Evans provided the cost-effectiveness results from the Company's previous DSM/EE cost recovery proceeding (Sub 1164) and the October 2018 filing as follows: an improvement from 0.94 to 1.42 under the UCT; an improvement of 0.59 to 1.01 under the TRC Test; an improvement of 0.45 to 0.66 under the RIM test and an improvement of 1.52 to 1.77 under the Participant Test. Witness Evans further noted that in the October 31, 2018 filing, the Company had projected a 0.91 TRC score for 2020 as part of the five-year period it used for its projected overall TRC score. The Company's updated estimate for 2020 is 0.95, which would imply that the 1.01 TRC score had been understated. (Tr. at 48-49.)

Public Staff witness Williamson testified that, although the Residential Smart \$aver EE program was recently granted approval for modifications to increase its cost-effectiveness, it had not become cost-effective. He noted, however, cost-effectiveness had improved. He did not recommend any action by the Commission, and he acknowledged that HVAC programs (such as this one) are a staple EE program. (Tr. at 159.)

Based on the foregoing, the Commission determines that no changes are required to the Company's Residential Smart Saver EE program.

Non-Residential Smart \$aver

With respect to the cost-effectiveness of the Nonresidential Smart \$aver Performance Incentive Program, witness Evans testified that it is expected to have a TRC cost-effectiveness score exceeding 1.0; therefore, the program is deemed cost-effective.

Projections of cost-effectiveness results show general improvements in cost-effectiveness from the results reported in Sub 1164, as reflected in the following table:

Cost-Effectiveness Tests	Updated Results:	Previous Results:
UCT	3.29	2.70
TRC	1.06	0.81
RIM	0.33	0.69
Participant Test	1.79	1.50

Public Staff witness Williamson also testified that the Non-Residential Smart \$aver Efficient Food Service Products and Efficient IT Products, which are two of the seven measures under the Non-residential Smart \$aver program (Tr. at 151.), were not cost-effective under the TRC test due to participation levels and avoided costs. (Tr. at 159.) Witness Williamson did not recommend that the Commission take any action.

Based on the foregoing, the Commission finds and concludes that the Company is not required to take any action with respect to these two measures of the Non-residential Smart \$aver Program at this time.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 8

The evidence in support of these findings and conclusions can be found in the testimony and exhibits of DEC witness Evans and the testimony of Public Staff witness Williamson.

DEC witness Evans testified regarding the EM&V process, activities, and results presented in this proceeding. He explained that the EMF component of Rider 11 incorporates actual customer participation and evaluated load impacts determined through EM&V and applied pursuant to the EM&V Agreement. In addition, actual participation and evaluated load impacts are used prospectively to update estimated NLR. (Tr. at 41.) In this proceeding, the Company submitted as exhibits to witness Evans' testimony detailed, completed EM&V reports or updates for the following programs: PowerShare Program 2017 (Evans Exhibit A); Non-Residential Smart \$aver Energy Efficient Products and Assessment – Prescriptive 2015-2017 (Evans Exhibit B); Residential Energy Efficiency Appliances and Devices - Retail Lighting: 2016-2017 (Evans Exhibit C); Power Manager Load Control Service 2017 (Evans Exhibit D); Residential Smart \$aver EE-HVAC: 2016-2017 (Evans Exhibit E); Income-Qualified EE and Weatherization Assistance: 2015-2016, 2014-2016 (Evans Exhibit F); Small Business Energy Saver: 2016-2017 (Evans Exhibit G); Nonresidential Smart Saver Energy Efficient Products and Assessment – Custom 2014-2015 (Revised) (Evans Exhibit H); Residential Energy Efficient Appliances and Devices – Online Savings Store;

2015-2017 (Evans Exhibit I); Duke Energy Carolinas Residential Energy Assessments Program: 2016-2017 (Evans Exhibit J); EnergyWise for Business: 2017 (Evans Exhibit K); and Nonresidential Smart \$aver Energy Efficient Products and Assessment – Custom; 2016-2017 (Evans Exhibit L). (Tr. at 66.)

In his testimony, Public Staff witness Williamson recommended that the EM&V reports filed in this proceeding, labeled as Evans Exhibits A through L, be considered complete. Witness Williamson reviewed prior Commission orders to determine if DEC complied with their provisions regarding EM&V. He noted that in Sub 1164, the Commission approved the Public Staff's recommendations to adjust the net-to-gross ratio (NTGR) scoring scale so that it is symmetrical, giving equal weight to survey responses that favor the Company with those that do not. The Public Staff also recommended refiling this report to verify that the change had been made and updates had been issued. Witness Williamson acknowledged that this recommendation did not impact this proceeding, but noted that DEC had indicated it will incorporate this recommendation into future EM&V of this program. (Tr. at 66.)

With respect to the EM&V reports kept open for revision after last year's DSM/EE Rider proceeding, witness Williamson testified the Company complied with the Public Staff's recommendation from the Sub 1164 proceeding requiring the EM&V report for the Non-Residential Smart \$aver Customer program be revised to incorporate the Public Staff's previous recommendations. Accordingly, witness Williamson recommended that the Non-Residential Smart \$aver Custom Report submitted as Evans Exhibit H in this proceeding be considered complete for purposes of calculating program impacts. Witness Williamson further testified that the Public Staff had also recommended in the Sub 1164 proceeding that the My Home Energy (MyHER) Report program be conditionally accepted until the Public Staff completed its review. The Public Staff has now completed that review and recommends the report be considered complete. Witness Williamson also confirmed that the Company's calculations incorporated the verified savings of the various EM&V reports. (Tr. at 164-67.)

No party contested the EM&V information submitted by the Company. The Commission therefore finds that the EM&V reports filed as Evans Exhibits A, D, E, F, G, H, I, J, K, and L are acceptable for purposes of this proceeding and should be considered complete for purposes of calculating program impacts.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 9-10

The evidence in support of these findings and conclusions can be found in the Sub 938 Second Waiver Order, the Sub 1032 Order, the testimony of Company witnesses Miller and Evans, and the testimony of Public Staff witness Maness. The rate period and the scope of the EMF components of Rider 11 are consistent with the Commission's ruling in the Sub 938 Second Waiver Order and the Sub 1032 Order and are uncontested by any party.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 11-26

The evidence in support of these findings and conclusions can be found in the Sub 1032 Order, the Sub 1130 Order, the testimony of Company witnesses Evans and Miller, and the testimony of Public Staff witnesses Maness and Williamson.

On February 26, 2019, DEC filed its Application seeking approval of Rider 11, which includes the formula for calculation of Rider EE, as well as the proposed billing factors to be effective for the 2020 rate period. Company witness Miller testified that the methods by which DEC has calculated its proposed Rider EE are the Sub 1032 Stipulation and the Mechanism approved in the Sub 1032 Order, as revised by the Sub 1130 Order. (Tr. at 19.)

Witness Miller provided an overview of the Mechanism, which is designed to allow the Company to collect revenue equal to its incurred program costs¹⁰ for a rate period, plus a PPI based on shared savings achieved by the Company's DSM and EE programs, and to recover NLR for EE programs only. (Id. at 19-23.) Witness Miller explained that the PPI is calculated by multiplying the net dollar savings achieved by the system portfolio of DSM and EE programs by a factor of 11.5%. (Id. at 24.) The system amount of PPI is then allocated to North Carolina retail customer classes to derive customer rates. (Id. at 25.) Company witness Evans explained that the calculation of the PPI is based on avoided cost savings, net of program costs, achieved through the implementation of the Company's DSM and EE programs. (Id. at 74-75.)

The Company may recover NLR associated with a particular vintage for a maximum of 36 months or the life of the measure, or until the implementation of new rates in a general rate case to the extent that the new rates are set to recover NLR. Witness Miller testified that for the prospective components of Rider EE, NLR are estimated by multiplying the portion of the Company's tariff rates that represents the recovery of fixed costs by the estimated North Carolina retail kilowatt (kW) and kWh reductions applicable to EE programs by rate schedule, and reducing this amount by estimated found revenues. (Id. at 27.) The fixed cost portion of the tariff rates is calculated by deducting the recovery of fuel and variable operation and maintenance costs from the tariff rates. (Id. at 25.) The NLR totals for residential and non-residential customers are then reduced by North Carolina retail found revenues computed using the weighted average lost revenue rates for each customer class. (Id. at 25.) For the EMF components of Rider EE, NLR are calculated by multiplying the fixed cost portion of the tariff rates by the actual and verified North Carolina retail kW and kWh reductions applicable to EE programs by rate schedule, and reducing this amount by actual found revenues. (Id. at 74.)

Witness Miller also testified about the impact of the Commission's Order Accepting Stipulation, Deciding Contested Issues, and Requiring Revenue Reduction, issued on June 22, 2018 in Docket No. E-7, Sub 1146, the Company's last base rate case. (Sub

¹⁰ Rule R8-68(b)(1) defines "program costs" as all reasonable and prudent expenses expected to be incurred by the electric public utility, during a rate period, for adopting and implementing new DSM and EE measures previously approved pursuant to Rule R8-68.

1146 Order). In that order, the Commission directed the Company to maintain all of its federal excess deferred income taxes resulting from passage of the federal Tax Cuts and Jobs Act in a regulatory liability account pending flow back of that liability to DEC's ratepayers with interest. The Company was ordered to file its proposal to flow back the excess deferred taxes by June 22, 2021 or in its next general rate case, whichever is sooner. Witness Miller confirmed that DEC intended to file a general rate case in 2019. New rates from the Company's 2019 rate case would likely be implemented in 2020 and would likely reflect a resolution of the flow back of excess deferred taxes. For purposes of this DSM/EE proceeding only, the Company has included a reduction of \$10 million to Year 2020 lost revenues collected from Vintage 2017, Vintage 2018, Vintage 2019, and Vintage 2020, which will be true-up to the actual impact on the lost revenue rate in the next DSM/EE rider filing after an order is issued in DEC's upcoming rate case. Witness Miller stated that this \$10 million reduction is meant to be a placeholder to mitigate potential overcollection with respect to DEC's DSM/EE rider and does not reflect any particular position by DEC on the appropriate methodology or timeframe from the flowback of excess deferred taxes or other tax issues that may be raised in the Company's next general rate case. (Tr. at 26-27.)

No party objected to the reduction of \$10 million to Year 2020 lost revenues collected from Vintage 2017, Vintage 2018, Vintage 2019, and Vintage 2020, as described by witness Miller.

Witness Evans described how, in accordance with the Sub 831 Settlement, the Commission's Sub 831 Found Revenues Order, and the Sub 1032 Stipulation, DEC reduces NLR by net found revenues. (Id. at 70-71.) Additionally, he stated that the Company has continued the practice the Commission approved in its Order Approving DSM/EE Rider and Requiring Filing of Proposed Customer Notice issued on August 21, 2015 in Docket No. E-7, Sub 1073, for purposes of that proceeding, of reducing net found revenues by the monetary impact (negative found revenues) caused by reductions in consumption resulting from the Company's current initiative to replace Mercury Vapor lights with LED fixtures. (Id. at 71-72.)

According to witness Evans, in each of its annual rider filings, DEC performs an annual true-up process for the prior calendar year vintages. (Id. at 66.) The true-up reflects actual participation and verified EM&V results for the most recently completed vintage, applied in accordance with the EM&V Agreement. The Company expects that most EM&V will be available in the time frame needed to true-up each vintage in the following calendar year. (Id. at 67.) If any EM&V results for a vintage are not available in time for inclusion in DEC's annual rider filing, however, then the Company will make an appropriate adjustment in the next annual filing. (Id.)

Under the Sub 1032 Stipulation, as witness Miller explained, deferral accounting may be used for over- and under-recoveries of costs eligible for recovery through the annual DSM/EE rider. (Id. at 20.) The balance in the deferral accounts, net of deferred income taxes, may accrue a return at the net-of-tax rate of return approved in the Company's then most recent general rate case. (Id. at 20-21.) She testified that the

methodology used for the calculation of interest shall be the same as that typically utilized for the Company's Existing DSM Program Rider proceedings. Pursuant to Commission Rule R8-69(c)(3), the Company will not accrue a return on NLR or the PPI. (Id. at 20-21.)

Under the Sub 1032 Stipulation, and the Sub 938 First Waiver Order, qualifying non-residential customers may opt out of the DSM and/or EE portion of Rider EE during annual election periods. (Id. at 28.) Rider EE will be charged to all customers who have not elected to opt out during an enrollment period and who participate in any vintage year of programs, and these customers will be subject to all true-up provisions of the approved Rider EE for any vintage in which the customers participate. (Id. at 28.) Witness Miller explained that the Mechanism affords an additional opportunity for participation whereby qualifying customers may opt in to the Company's EE and/or DSM programs during the first five business days of March. (Id. at 28.) Customers who elect to begin participating in the Company's DSM and/or EE programs during the special "opt-in period" during March of each year will be retroactively billed the applicable Rider EE amounts back to January 1 of the vintage year, such that they will pay the appropriate Rider EE amounts for the full rate period. (Id. at 28-29.)

Witness Miller explained that the billing factors are computed separately for DSM and EE measures by dividing the revenue requirements for each customer class, residential and non-residential, by the forecasted sales for the rate period for the customer class. (Id. at 22-23.) For non-residential rates, the forecasted sales exclude the estimated sales to customers who have elected to opt out of paying Rider EE. The non-residential billing factors are separately computed for each vintage. (Id. at 23.)

Witness Miller testified that program costs and incentives for EE programs targeted at retail residential customers across North Carolina and South Carolina are allocated to the North Carolina retail jurisdiction based on the ratio of North Carolina retail kWh sales (grossed up for line losses) to total retail kWh sales (grossed up for line losses), and then recovered only from North Carolina retail residential customers. (Id.) Revenue requirements related to EE programs targeted at retail non-residential customers across North Carolina and South Carolina are allocated to the North Carolina retail jurisdiction based on the ratio of North Carolina retail kWh sales (grossed up for line losses) to total retail kWh sales (grossed up for line losses), and then recovered from only North Carolina retail non-residential customers. (Id.) The portion of revenue requirements related to NLR is computed based on the kW and kWh savings of North Carolina retail customers. (Id. at 24.)

For DSM programs, witness Miller noted, the aggregated revenue requirement for all retail DSM programs targeted at both residential and non-residential customers across North Carolina and South Carolina is allocated to the North Carolina retail jurisdiction based on the North Carolina retail contribution to total retail peak demand. Both residential and non-residential customer classes are allocated a share of total system DSM revenue requirements based on each group's contribution to total retail peak demand. (Id.)

The allocation factors used in DSM/EE EMF true-up calculations for each vintage are based on the Company's most recently filed Cost of Service studies at the time that the Rider EE filing incorporating the true-up is made. (Id.) If there are subsequent true-ups for a vintage, the allocation factors used will be the same as those used in the original DSM/EE EMF true-up calculations. (Id.)

Witness Miller explained that DEC calculates one integrated (prospective) DSM/EE rider and one integrated DSM/EE EMF rider for the residential class, to be effective each rate period. (Id. at 21.) The integrated residential DSM/EE EMF rider includes all true-ups for each applicable vintage year. (Id.) Given that qualifying non-residential customers can opt out of DSM and/or EE programs, DEC calculates separate DSM and EE billing factors for the non-residential class. Additionally, the non-residential DSM and EE EMF billing factors are determined separately for each applicable vintage year, so that the factors can be appropriately charged to non-residential customers based on their opt-in/out status and participation for each vintage year. (Id.)

Prospective Components of Rider 11

Rider 11 consists of four prospective components: (1) a prospective Vintage 2020 component designed to collect program costs and the PPI for DEC's 2020 vintage of DSM programs; (2) a prospective Vintage 2020 component to collect program costs, the PPI, and the first year of NLR for DEC's 2020 vintage of EE programs; (3) a prospective Vintage 2019 component designed to collect the second year of estimated NLR for DEC's 2019 vintage of EE programs; (4) a prospective Vintage 2018 component designed to collect the third year of estimated NLR for DEC's 2018 vintage of EE programs; and (5) a prospective Vintage 2017 component designed to collect the fourth year of estimated lost revenues for DEC's 2017 vintage of EE programs. (Id. at 22.)

Pursuant to the Sub 938 Second Waiver Order and the Sub 1032 Order, the rate period for the prospective components of Rider 11 is January 1, 2020 through December 31, 2020. (Id. at 29.)

The prospective revenue requirements for Vintage 2017 are determined separately for residential and non-residential customer classes and are based on the fourth year of estimated NLR for the Company's Vintage 2017 EE programs. (Id. at 29-30.) The amounts are based on estimated North Carolina retail kW and kWh reductions and the Company's rates approved in DEC's most recent general rate case, Docket No. E-7, Sub 1146, which became effective August 1, 2018, adjusted as described above to recover only the fixed cost component. (Id.) Although the test period in DEC's most recent general rate case was January 1, 2016 through December 31, 2016, the rates approved in that proceeding included updated revenues reflecting changes in the number of customers and, for the residential class, changes in weather-normalized usage per customer through December 31, 2017. Therefore, witness Miller testified, to incorporate those revenue adjustments from the recent rate case, the Company has extended the rate case test period to December 31, 2017 as the customer growth adjustment used in

the rate case also included updated actual kWh sales through that time period. For non-residential customers, the Company will continue to utilize the rate case period January 1, 2016 through December 31, 2016 as no adjustments were made to incorporate actual kWh sales past that date. (Id.)

DEC witness Miller further testified about modifications to the calculation of how much lost revenue is included in the kWh sales for the test period. She recommended using the same methodology as used to calculate how much lost revenue should be included in kWh sales for the test period in the Commission's November 29, 2018 Order Approving DSM/EE Rider and Requiring Customer Notice in Docket No. E-2, Sub 1174. Because the twelve-month case test period uses actual kWh sales, and participation in EE measures occurs throughout the year, in any given twelve-month period, a full year of lost revenues are not captured in test period kWh sales as all measures were not in place at the beginning of the test period. Therefore, quantifying the actual, incremental savings by month during that twelve-month rate case test period to calculate the amount of lost revenues that is truly being reflected in the new base rates that will be recovered from customers is appropriate. The difference between the annualized amount of energy savings and the actual amount of energy savings should be recovered through the Company's DSM/EE rider. (Tr. at 30-31.)

The prospective revenue requirements for Vintage 2018 are determined separately for residential and non-residential customer classes and are based on the third year of estimated NLR for the Company's Vintage 2018 EE programs. (Id. at 30.) The amounts are based on estimated North Carolina retail kW and kWh reductions and DEC's rates approved in Sub 1146, which became effective August 1, 2018, adjusted as described to only recover the fixed cost component. (Id. at 31.)

The prospective revenue requirements for Vintage 2019 are determined separately for residential and non-residential customer classes and are based on the second year of estimated NLR for its Vintage 2019 EE programs. The amounts are based on estimated North Carolina retail kW and kWh reductions and DEC's rates approved in Sub 1146, which became effective August 1, 2018, adjusted as described to only recover the fixed cost component.

The prospective revenue requirements for Vintage 2020 EE programs include estimates of program costs, the PPI, and the first year of NLR determined separately for residential and non-residential customer classes. (Id. at 32.) The program costs and shared savings incentive are computed at the system level and allocated to North Carolina retail operations. The NLR for EE programs are based on estimated North Carolina retail kW and kWh reductions and the rates approved in Sub 1146, which became effective August 1, 2018. (Id.)

On May 28, 2019, DEC witness Miller filed supplemental testimony and exhibits reflecting prospective billing factors for Rider 11 of 0.3891 cents per kWh for all North Carolina retail residential customers, 0.3082 cents per kWh for non-residential Vintage 2020 EE participants, 0.1101 cents per kWh for non-residential Vintage 2020 DSM

participants, 0.0509 cents per kWh for non-residential Vintage 2019 EE participants, 0.0549 cents per kWh for non-residential Vintage 2018 EE participants, and 0.0312 cents per kWh for non-residential Vintage 2017 EE participants. (Id. at 296.)

EMF Components of Rider 11

Rider 11 includes the following EMF components: (1) an EMF component which consists of a true-up of Vintage 2015 participation for DSM/EE programs based on additional EM&V results received; (2) a true-up of Vintage 2016 participation for DSM/EE programs based on additional EM&V results received; (3) a true-up of Vintage 2017 PPI and participation for DSM/EE programs based on additional EM&V results received; and (4) a true-up of Vintage 2018 program costs, PPI and participation for DSM/EE programs. (Id. at 22.)

Witness Miller testified that pursuant to the Sub 938 Second Waiver Order and the Sub 1032 Order, the “test period” for the Vintage 2018 EMF component is January 1, 2018 through December 31, 2018. (Id. at 33.) As the Sub 938 Second Waiver Order allows the EMF to cover multiple test periods, the test period for the Vintage 2017 EMF component is January 1, 2017 through December 31, 2017, the test period for the Vintage 2016 EMF component is January 1, 2016 through December 31, 2016, and the test period for the Vintage 2015 EMF component is January 1, 2015 through December 31, 2015. (Id.)

Witness Miller explained the updates to the Vintage 2018 estimate filed in 2017 that comprise the Vintage 2018 EMF component of Rider 11. Estimated participation for Vintage 2018 was updated for actual participation for the period January 2018 through December 2018. Regarding NLR, estimated participation for the Year 1 Vintage 2018 estimate assumed a January 1, 2018 sign-up date and used a half-year convention, while the NLR Year 1 Vintage 2018 true-up was updated for actual participation for the period January through December 2018 and actual 2018 lost revenue rates. (Id.) Found revenues for Year 1 of Vintage 2018 were true up according to Commission-approved guidelines. (Id. at 34.) To reflect the results of EM&V, Vintage 2018 estimated avoided cost savings were updated pursuant to the EM&V Agreement. Finally, while the Vintage 2018 estimate included only the programs approved prior to the filing of the estimated Vintage 2018 revenue requirement, the Vintage 2018 true-up was updated for new programs and pilots approved and implemented during Vintage 2018. For DSM programs, the Vintage 2018 true-up reflects the actual quantity of demand reduction capability for the Vintage 2018 period. (Id.)

Actual year one (2018) NLR for Vintage 2018 were calculated using actual kW and kWh savings by North Carolina retail participants by customer class in 2018, based on actual participation and load impacts applied according to the EM&V Agreement. (Id. at 35.) The rates applied to the kW and kWh savings are those in effect for 2018, (updated August 1, 2018 to include new rates approved in Sub 1146) reduced by fuel and variable operation costs. NLR were then offset by actual found revenues for Year 1 NLR of

Vintage 2018. () NLR were calculated by rate schedule within the residential and non-residential customer classes. (Id.)

Witness Miller also described the basis for the Vintage 2017 EMF component of Rider 11. She explained that avoided costs and NLR for Vintage 2017 EE programs were trued-up based on updated EM&V participation results and the impacts of DEC's recent rate case, Sub 1146. Avoided costs for Vintage 2017 DSM programs were trued-up to update participation results. She explained that the actual kW and kWh savings were as experienced during the period January 1, 2017 through December 31, 2017. The rates applied to the kW and kWh savings are the retail rates that were in effect during each period the lost revenues were earned, reduced by fuel and other variable costs. (Id.)

Witness Miller explained the basis for the Vintage 2016 EMF component of Rider 11. (Id. at 36.) She explained that all years were trued-up based on updated EM&V results. (*Id.*) She explained that the actual kW and kWh savings were as experienced during the period January 1, 2016 through December 31, 2016. The rates applied to the kW and kWh savings are the retail rates that were in effect during each period the lost revenues were earned, reduced by fuel and other variable costs. (Id.)

Witness Miller described the basis for the Vintage 2015 EMF component of Rider 11. (She explained that NLR for all years were trued-up based on updated EM&V results. (Id. at 81-82.) She explained that the actual kW and kWh savings were as experienced during the period January 1, 2015 through December 31, 2015. (Id. at 36.) The rates applied to the kW and kWh savings are the retail rates that were in effect during each period the lost revenues were earned, reduced by fuel and other variable costs. (Id.)

Public Staff Review of Company Rider 11 Calculations

As discussed above, Public Staff witness Williamson filed testimony in this proceeding discussing EM&V and cost-effectiveness issues related to future DSM/EE proceedings for the Company. None of these topics and issues necessitates an adjustment to the Company's billing factor calculations. (Tr. at 167.) Public Staff witness Maness testified that his investigation of DEC's filing in this proceeding focused on whether the Company's proposed DSM/EE billing factors (a) were calculated in accordance with the Sub 1032 Stipulation, the Sub 1130 Order, and the Mechanism; and (b) otherwise adhered to sound ratemaking concepts and principles. (Id. at 134-35.) Except for the items discussed below, Witness Maness testified that he believes that the Company has calculated the Rider 11 billing factors in a manner consistent with N.C. Gen. Stat. § 62-133.9, Commission Rule R8-69, the Sub 1032 Stipulation, the Sub 1130 Order, the Mechanism, and other relevant Commission orders. (Id. at 135-36.)

Witness Maness testified that as part of its investigation in this proceeding, the Public Staff performed a review of the DSM/EE program costs incurred by DEC during the 12-month period ended December 31, 2018. To accomplish this, the Public Staff selected and reviewed a sample of source documentation for test year costs included by

the Company for recovery through the DSM/EE riders. Review of this sample is intended to test whether the costs included by the Company in the DSM/EE riders are valid costs of approved DSM and EE programs. As of the date of the filing of the Public Staff's testimony, this program cost audit was still underway. Witness Maness noted in his testimony that if any issues or necessary adjustments are found during the completion of this process, the Public Staff would file supplemental information in this proceeding. (Id.)

Witness Maness further noted the following with respect to the Public Staff's investigation:

- Review of Vintage year 2016 Program Costs – the Public Staff's review of the selected sample items from the 2018 DSM/EE program costs resulted in three exceptions. Two of the exceptions, totaling \$280 on a system basis, consisted of the use of DEC procurement cards for non- DSM/EE purposes. The Public Staff did not consider this amount material. The third exception was an erroneous distribution of program costs related to the MyHER program between DEC and its affiliates. After the Public Staff raised this issue, the Company identified an overstatement of invoiced program costs totaling approximately \$468,000, on a system basis. The Public Staff understood that the Company would file supplemental testimony to correct these exceptions.
- Return on Deferred Program Costs and Interest on Over-recoveries – Witness Maness stated that, as in past proceedings, the Public Staff reserves the right to raise the issue of the appropriate interest rate on overrecoveries on utility incentives. (Id. at 138.)

Witness Maness concluded that three program cost adjustments should be made to the Rider 11 DSM/EE revenue requirement and flowed through to the DSM/EE billing factors: the adjustment to 2018 DSM/EE billing costs to remove the expenses related to the MyHER program erroneously included by the Company and the two small adjustments to the procurement card expenses. Other than these issues, the Public Staff found no errors or other issues necessitating an adjustment to Rider 11 billing factors. (Id. at 155-56.)

In her supplemental testimony and exhibits, Company witness Miller updated the lost revenue and PPI for Vintages 2017, 2018, and 2020 because of the Company's internal review process, which identified two EM&V updates. These updates resulted in a decrease of (\$74,096) to lost revenue and an increase in the PPI of \$92,837. The Company also revised the Vintage 2018 program costs due to the Public Staff's recommendations from its audit. This update resulted in a downward revision in the overall residential rate from 0.4848 to 0.4835 cents per kWh. There were no changes to the non-residential rates. (Tr. at 79-80.) These updates were reflected on Supplemental Miller Exhibits 1-3; Supplemental Miller Exhibit 7; and Supplemental Evans Exhibits 1-3.

In her May 28, 2019 Supplemental Testimony, witness Miller requested approval of the following annual billing adjustments, on a cents per kWh basis, with regulatory fee included:

Residential Billing Factors	¢/kWh
Residential Billing Factor for Rider 11 Prospective Components	0.3891
Residential Billing Factor for Rider 11 EMF Components	0.0944

Non-Residential Billing Factors for Rider 11 Prospective Components	¢/kWh
Vintage 2017 EE Participant	0.0312
Vintage 2018 EE Participant	0.0549
Vintage 2019 EE Participant	0.0509
Vintage 2020 EE Participant	0.3082
Vintage 2020 DSM Participant	0.1101

Non-Residential Billing Factors EMF Component	¢/kWh
Vintage 2018 EE Participant	0.0278
Vintage 2018 DSM Participant	0.0077
Vintage 2017 EE Participant	0.0645
Vintage 2017 DSM Participant	0.0000
Vintage 2016 EE Participant	0.0512
Vintage 2016 DSM Participant	0.0001
Vintage 2015 EE Participant	0.0064
Vintage 2105 DSM Participant	0.0001

On June 21, 2019, the Public Staff filed a letter stating that it had completed its review of DEC's data request responses, and that it found no material differences between the program costs as filed by DEC and the program costs reflected in the supporting documentation examined by the Public Staff. In addition, the Public Staff stated that its recommended demand-side management and energy efficiency program billing factors are those set forth in the Supplemental Testimony and Exhibits filed on May 28, 2019, by DEC witnesses Carolyn T. Miller and Robert P. Evans.

Conclusions on Calculations of Rider EE

Based on the foregoing, the Commission finds and concludes that the components of Rider 11 are in compliance with the Commission's findings and conclusions herein, as well as the Commission's findings and conclusions as set forth in the Sub 1032 Stipulation and the Mechanism approved in the Sub 1032 Order, as revised by the Sub 1130 Order.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 27-28

The evidence in support of these findings and conclusions can be found in the testimony of DEC witness Evans and SACE witness Bradley-Wright.

Company witness Evans testified that in response to the Commission's order in Sub 1164, the Collaborative has met three times: September 27, 2018, November 27, 2018, and January 31, 2019. The Collaborative discussed the issues that NC Justice Center witness Neme had raised in Sub 1164 as follows:

- Technical Resource Manual (TRM) – The Collaborative noted that a TRM increases the likelihood that EM&V is transparent, reliable, consistent across utilities, and updated as technology changes. To be of greatest value, however, the creation and adoption of a TRM, would include all utilities, cooperatives, and municipalities in North Carolina and South Carolina for those utilities that operate in both states. Because the Collaborative's influence is limited to DEC and DEP, the group decided that it was not the appropriate venue to pursue a state-wide or multi-state TRM at this time. The Collaborative would, however, advise on ensuring the Company's EM&V was transparent, consistent with industry standards and updated as needed. (Tr. at 51.)
- Residential Smart Saver EE Program Participation – Witness Evans testified that the high incremental costs of equipment, purchasing habits of customers, market realities facing trade allies, and the economic vulnerability of regulated programs present numerous obstacles to increasing participation in the Residential Smart Saver EE Program. Increasing this participation is important to members of the Collaborative and the Company. The membership is committed to developing strategies for overcoming these obstacles, but it agreed that this conversation is best

located within the context of the Collaborative's larger discussion of threats and opportunities that face EE investments at the portfolio level. The Collaborative will continue to review the Company's Residential Smart Saver EE Program through the semi-annual program reports and EM&V reviews. (Id. at 51-52.)

- Whole House Retrofits – Whole house retrofits face many of the same obstacles as the Residential Smart Saver EE Program. A large upfront capital investment and shortage of contractors willing to specialize in this field eclipse the EE opportunities. The Collaborative will consider these obstacles in the context of its larger discussion of threats and opportunities that face EE investments in long-lived measures. (Id. at 52.)
- Building on Midstream Channel Success – The Collaborative was optimistic for midstream expansion in future program years, and the Company is committed to investigating offering new measures to market as it is able. The Collaborative will continue to discuss the Company's process and make recommendations when appropriate. (Id.)
- MyHER Impact Persistence and Savings – MyHER and its EM&V are designed to account for an opt-out design in that customers remain in the program until they opt out. Consequently, issuances of persistence are not currently part of EM&V testing. The focus of the EM&V has been on accurately capturing savings with the continuous treatment model. The Company agrees, however, to investigate the feasibility and cost benefit analysis of incorporating persistence testing in upcoming EM&V studies. Because any testing will require years to complete, the Collaborative decided that this issue did not warrant further discussion until more information is available, and this program will be part of the larger discussions of threats and opportunities at the portfolio level. (Id. at 52-53.)
- Industrial and Large Commercial Opt-Outs – All members of the Collaborative, including the Company, recognize that commercial and industrial customers represent enormous EE potential. DEC program managers explained the Company's comprehensive approach to customer education and engagement in detail. The approach includes the services of Large Account Managers and EE engineers, use of customer analytics, and innovative programs that include project design assistance and incentives. The Collaborative agreed that the Company's strategies are in line with what the members would recommend, given the current opt-out guidelines. Further discussion of the opt-out policy is postponed until and if the opt-out guidelines are modified, although the performance of programs aimed to attract commercial and industrial programs will remain part of the semi-annual program reviews and periodic EM&V. (Id. at 53-54.)

- Collaborative Effectiveness – In response to intervenor comments in Sub 1164, DEC and DEP meetings are now combined and held every two months. Members of the Collaborative are asked to develop the agenda, lead portions of the discussions, and set priorities. The Company is committed to allowing ample time to review information prior to meetings and to following up periodically to ensure that members' concerns and recommendations are understood and addressed. The Collaborative members agree that the modifications have improved the group's effectiveness. Additionally, although the Commission did not require the Collaborative to address low-income programs specifically, the need for equitable accessibility to EE is a high priority for many members of the Collaborative and the Company. Thus, the Company is committed to discussing its income-qualified programs this year, to recommending improvements, and to examining ways to make existing residential program more accessible to low- and middle-income customers. (Id. at 54-55.)

Company witness Evans also testified that opt-outs by qualifying industrial and commercial customers have had a negative effect on the Company's overall non-residential impacts. (Id. at 72.) For Vintage 2018, 4,514 eligible customer accounts opted out of participating in DEC's non-residential portfolio of EE programs, and 5,075 eligible customer accounts opted out of participating in the Company's non-residential DSM programs. During 2018, however, 22 opt-out eligible customers opted into the EE portion of the Rider, and four opt-out eligible customers opted into the DSM portion of the Rider. Witness Evans explained that because the Company does not participate in its customers' economic benefit analyses or decision-making processes, providing a reason for the increase in opt-outs is difficult. The Company believes, however, that their non-residential customers are economically savvy and may be best equipped at determining the economic benefit of participating in the Company's DSM/EE programs. This knowledge, coupled with the increases to Rider EE's rates, may be leading to the increase in eligible customer opt-outs. (Id. at 72-73.)

Witness Evans stated that to reduce opt-outs, the Company continues to evaluate and revise its non-residential portfolio of programs to accommodate new technologies, eliminate product gaps, remove barriers to participation, and make its programs more attractive to opt-out eligible customers. It also continues to leverage its Large Account Management Team to make sure customers are informed about product offerings and their ability to opt into the Company's DSM and/or EE offerings during the March opt-in window. (Id. at 73.)

SACE witness Bradley-Wright testified that DEC continues to be a regional leader for EE in the Southeast, while delivering significant energy and cost savings to customers. For a second consecutive year, DEC has surpassed the one-percent annual savings target agreed to in a settlement with SACE and other parties in the Duke-Progress Merger, and the Company remains the only utility to have achieved this level of savings in the Southeast. In 2018, DEC delivered 811 giga-watts (GWh) of efficiency savings at

the meter, equal to 1.05% of the previous year's retail sales. This reflects a 7.8% decline in incremental savings from the previous year, for which DEC reported annual savings of 1.11% of the previous year's retail sales. Despite the decline, witness Bradley-Wright commended DEC's exceeding the 1% annual savings target, especially because it was made against the backdrop of declines in commercial and industrial customers participating in the DSM/EE rider. (Id. at 101.)

Witness Bradley-Wright also testified that from 2014-2018, DEC did not appear to have met the seven-percent cumulative savings target from the settlement with SACE and other parties in the Duke-Progress Merger. He further recommended that DEC report on annual and cumulative savings achievements as a leading component in its filing, rather than requiring intervenor data requests or independent calculations. (Id. at 101-02.) Witness Bradley-Wright also testified that had the commercial and industrial customers that opted out not done so, DEC would likely have met its savings target. (Id. at 105-06.)

With respect to low-income efficiency impacts, witness Bradley-Wright testified that they "dipped" in 2018 from 2017. Nevertheless, he praised DEC's efforts to increase savings for low-income customers and indicated that several issues previously raised related to serving low-income customers persist. He noted a need for programs for renters, multi-family homes, and manufactured homes. Witness Bradley-Wright concluded that discussion along these lines had begun in earnest at the Collaborative, but that there was considerable work ahead. (Id. at 106-07.)

Witness Bradley-Wright further discussed the relationship between the DSM/EE recovery proceeding and the Collaborative. He opined that the Collaborative's strength was in EM&V and program progress reporting. (Id. at 108.) Witness Bradley-Wright testified that despite the extensive energy, time, and resources by the Company and the participating stakeholders, the Collaborative had produced little to no tangible results on the following: on-bill financing, combined heat and power, development of a TRM, and strategies for addressing opt-outs; multi-family efficiency programs, maximizing cross-program marketing, non-energy benefits; manufactured housing; residential new construction. (Id. at 109.) Witness Bradley-Wright agreed that numerous process steps have been taken to improve the Collaborative, but remarked that one continuing challenge is that the Company has proposed several program changes for discussion only after the process for change was "nearly or fully baked," leaving little time for input from the Collaborative. (Id. at 113.) Additionally, witness Bradley-Wright testified that stakeholders were frustrated by a lack of results from the Collaborative, and he highlighted that the NC Justice Center, SACE, and other advocates have increased their commitments of time and resources in hopes of achieving more tangible results. (Id. at 121.) He requested that: (i) the Commission seek comment from the Collaborative participants on whether the Collaborative has sufficiently corrected course or if changes are needed that warrant Commission action; (ii) the Collaborative address the projected decline of annual savings, and (iii) a standard annual reporting protocol attached to his testimony as Exhibit FWB-5 be developed. Witness Bradley-Wright criticized the DEC DSM/EE Recovery Application as not organized conveniently for review and analysis to

allow the Commission or the public to identify topline trends and takeaways. In contrast, the reporting document attached to his testimony reports on topline trends, with planned versus actuals for budgets, demand saving, and energy savings, as well as cost-effectiveness tests, and annual percentage of savings compared to a baseline year. He also favorably referenced standard reporting tools developed by the Lawrence Berkeley National Laboratory. (Id. at 124-25.)

In his rebuttal testimony, DEC witness Evans responded to witness Bradley-Wright's testimony regarding the Collaborative. Witness Evans noted that witness Bradley-Wright had only recently participated in the Collaborative, first joining in September 2018. Witness Evans disputed witness Bradley-Wright's claim that the Collaborative has had limited potential to provide the Company feedback on proposed program modification and development, indicating that the Collaborative had been well-aware of the need for proposed modifications to the Smart Saver program prior to their filing. In addition, witness Evans testified that the Company had incorporated recommendations into modifications for the Pay for Performance program and had been willing to consider input from the Collaborative on that program. Finally, witness Evans noted that Collaborative members had a three-week window to offer suggestions on the proposed Neighborhood Energy Saver (NES) program expansion. In fact, the Company began to solicit feedback on that program in December 2018. (Tr. at 87-88.)

Witness Evans further disagreed with witness Bradley-Wright's contention that the Collaborative had not produced tangible results. He noted that with on-bill financing, the working group dedicated to that had determined it was not cost-effective to modify the Company's existing Customer Information/Billing System to accommodate on-bill financing at this time, but on-bill financing functionality would be included in the Company's next generation billing system, which should come to fruition in 2022. Witness Evans further noted that consistent with the outcome of the Collaborative's discussion on potential changes to incentivize combined heat and power (CHP), the Company had modified its program tariffs to promote both Topping and Bottom Cycling CHP. With respect to the development of a TRM, a taskforce had been put together to evaluate implementation of a TRM; however, the varied interests and perceived lack of benefits led to the taskforce being disbanded. The Collaborative has discussed the TRM several times but has not reached consensus; therefore, continuing to discuss it was not a productive use of the Collaborative's time and resources. Witness Evans testified that the Collaborative had discussed using non-energy benefits (NEBs) for determining program cost-effectiveness, but did not reach consensus on how to use them. Witness Evans concluded that these examples show that the Collaborative has produced tangible results and that although some proposals are not implemented after review, it does not mean the Collaborative has failed. Moreover, witness Evans testified that the Company had reached out to Collaborative members for ideas related to new programs, through a new program template, which it distributed to stakeholders as recently as February 21, 2019. (Id. at 89-90.)

Finally, witness Evans disagreed with witness Bradley-Wright's suggestion that the Commission seek comment from Collaborative participants to determine whether the

Collaborative has sufficiently corrected its course. Collaborative members can intervene in DSM/EE proceedings and provide input on any perceived inadequacies. This method is appropriate because it allows the Company to respond, as appropriate, on the record. Furthermore, witness Evans remarked on the voluminous annual filing, which totals more than 1,700 pages, that complies with the Commission's well-considered Rule R8-68 and contains all the pertinent information associated with the Company's programs and cost recovery. Witness Evans testified that because stakeholders are familiar with this format; altering it now would likely only lead to stakeholder confusion and unnecessary time to adopt a format that departs from the Commission's already comprehensive procedures. (Id. at 91.)

In its Post-Hearing Brief, SACE stated that it supports DEC's Application and applauds the savings achieved by DEC's portfolio of DSM and EE programs. However, SACE stated that it is concerned with DEC's forecasted 19.3% decline in energy savings for 2020, and DEC's overreliance on short-lived measures, particularly lighting and residential behavioral programs. In addition, SACE stated that it strongly urges the Commission and DEC to invest more resources to increase energy and bill savings by low-income customers. Further, SACE lamented the loss of significant energy savings due to opt-outs by industrial and large commercial customers.

With regard to the DEC/DEP Collaborative, SACE stated that there have been great strides in improving the work of the Collaborative, but that there are challenges and deficiencies that require continued attention. SACE discussed the points made by its witness Bradley-Wright, and the rebuttal to these points made by DEC witness Evans. SACE stated that it stands by Bradley-Wright's testimony about the Collaborative. SACE summarized the examples of stakeholder collaborative practices from other jurisdictions that were described by witness Bradley-Wright in his testimony, and recommended the following action by the Commission:

- (1) Direct DEC to further engage with the Collaborative when developing new programs and modifying existing programs.
- (2) Direct DEC to continue Collaborative discussions on low-income, multifamily, manufactured housing programs, and opt-outs.
- (3) Order the Collaborative to develop a plan to maintain and grow current DSM/EE savings levels.
- (4) Approve development of a standard annual reporting protocol for DEC's DSM/EE proceedings along the lines of the reporting requirement used in Arkansas.

The Commission reviewed the issues raised by SACE witness Neme in Sub 1164 and believes that the Collaborative has made progress in addressing those issues, as directed by the Commission in DEC's previous DSM/EE proceeding. Further, while the Commission finds the testimony and opinions of SACE witness Bradley-Wright on

additional recommended changes to the procedures of the Collaborative informative and helpful, the Commission concludes that the Collaborative is the appropriate forum for discussion and consideration of the issues he raises, as outlined herein. In particular, the Commission notes the forecasted decline in DEC's DSM/EE savings in 2020 and concludes that it would be helpful to have the Collaborative examine the reasons for the forecasted decline, and explore options for preventing or correcting a decline in future DSM/EE savings.

Moreover, as noted by SACE witness Bradley-Wright, the prospects of increasing EE savings by low-income ratepayers and in new housing applications are important areas for consideration by the Collaborative. Thus, the Commission concludes that the Collaborative should continue to place emphasis on developing EE programs to assist low-income customers in saving energy, and in developing EE programs that target savings in new construction, and especially in multi-family housing and manufactured housing.

In addition, the Commission finds that the idea of a standard format for grouping and showing the basic elements of each DSM/EE program should be examined to determine its benefits and usefulness. That type of organized presentation could assist the Commission, parties and ratepayers in quickly finding data of interest and comparing basic program elements, such as the cost per program and the percentage of the overall DSM/EE budget spent per program. As a result, the Commission concludes that the Collaborative should explore the development of a standard annual reporting protocol. To be clear, the Commission is neither mandating the adoption of such a standard protocol, nor endorsing a particular format, but would like to see the Collaborative consider various options for a standard annual reporting protocol, the benefits to be derived, and the practicality of implementation.

Similarly, the Commission concludes that it would be helpful for DEC to provide in its annual application a table that shows DEC's test period DSM/EE costs and savings, and that shows the same information for the previous five years. The Commission, therefore, directs DEC to include such a table in its future DSM/EE rider applications.

Finally, SACE witness Bradley-Wright stated concerns about the timeliness of DEC's proposals for new DSM/EE programs, and changes to existing programs, in relation to the Collaborative's opportunity to provide input on such proposals. (Tr. at 114-115.) In his rebuttal testimony, DEC witness Evans explained the challenges of synchronizing the timing of every DEC application for a new program, or a program change, with the timing of Collaborative meetings. In addition, witness Evans testified that DEC developed a DSM/EE program template for use by stakeholders to facilitate their contribution of specific recommendations for new programs and changes to existing programs. (*Id.* at 97-91.) The Commission fully appreciates the challenges of coordinating the timeliness of regulatory filings with opportunities for meaningful input by stakeholders. The Commission encourages DEC and the Collaborative participants to continue working on ensuring that all interested persons have a reasonable and timely opportunity to contribute ideas for consideration.

IT IS, THEREFORE, ORDERED as follows:

1. That the Commission hereby approves the calculation of Rider EE as filed by DEC and revised in the Supplemental Testimony and Exhibits of Carolyn T. Miller, and the resulting billing factors as set forth in Supplemental Miller Exhibit 1, to go into effect for the rate period January 1, 2020 through December 31, 2020, subject to appropriate true-ups in future cost recovery proceedings consistent with the Sub 1032 Order, the Sub 1130 Order, and other relevant orders of the Commission.

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

3. That the combined DEC/DEP Collaborative shall continue to meet every other month.

4. That DEC shall include in its future DSM/EE applications a table that shows DEC's test period DSM/EE costs and savings, and that same information for the previous five years.

5. That the Commission hereby grants NCSEA's motion to withdraw the letter filed by NCSEA on September 18, 2019, and the letter is, therefore, stricken from the record.

ISSUED BY ORDER OF THE COMMISSION.

This the 18th day of October, 2019.

NORTH CAROLINA UTILITIES COMMISSION

Handwritten signature of Kimberly A. Campbell in black ink.

Kimberly A. Campbell, Chief Clerk