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July 20, 2018

VIA ELECTRONIC FILING

M. Lynn Jarvis
North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, North Carolina 27699-4325

**Re: Application of Duke Energy Carolinas, LLC for Approval of Demand-Side
Management and Energy Efficiency Cost Recovery Rider Pursuant to N.C.
Gen. Stat. § 62-133.9 and NCUC Rule R8-69
Docket No. E-7, Sub 1164**

Dear Ms. Jarvis:

On behalf of Duke Energy Carolinas, LLC (“DEC” or the “Company”), please find enclosed for filing the Company’s Proposed Order.

The Proposed Order comprehensively addresses all issues raised in the above-referenced proceeding. DEC is also making a separate filing of its Post-Hearing Brief concerning the Public Staff’s proposal that the avoided capacity cost benefits for purposes of the Portfolio Performance Incentive and cost-effectiveness of the Company’s demand-side management and energy efficiency programs be calculated under the assumption that capacity avoided prior to year 2023 be assigned a zero dollar value.

Please do not hesitate to contact me should you have any questions. Thank you for your assistance in this matter.

Sincerely,

Electronically submitted
s/ Molly McIntosh Jagannathan
molly.jagannathan@troutmansanders.com

Enclosure

Copy: Parties of Record

**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

DOCKET NO. E-7, SUB 1164

In the Matter of

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

HEARD: On Tuesday, June 5, 2018, in Commission Hearing Room 2115, Dobbs Building, 430 North Salisbury Street, Raleigh, North Carolina

BEFORE: Commissioner ToNola D. Brown-Bland, Presiding; Chairman Edward S. Finley, Jr.; and Commissioners Jerry C. Dockham, James G. Patterson, and Lyons Gray

APPEARANCES:

For Duke Energy Carolinas, LLC:

Kendrick Fentress, Associate General Counsel
Duke Energy Corporation
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Troutman Sanders LLP
301 South College Street, Suite 3400, Charlotte, North Carolina 28202

For the Carolina Utility Customers Association, Inc.:

Robert F. Page
Crisp & Page, PLLC
4010 Barrett Drive, Suite 205, 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:

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

For the North Carolina Justice Center, Natural Resource Defense Council, and the Southern Alliance for Clean Energy:

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

For the Using and Consuming Public:

Lucy E. Edmondson, Public Staff – North Carolina Utilities Commission
4326 Mail Service Center, Raleigh, North Carolina 27699

BY THE COMMISSION: N.C. Gen. Stat. § 62-133.9(d) authorizes the North Carolina Utilities Commission (“Commission”) to approve an annual rider to the rates of electric public utilities, outside of a general rate case, for recovery of all reasonable and prudent costs incurred for adoption and implementation of new demand-side management (“DSM”) and energy efficiency (“EE”) measures. The Commission is also authorized to award incentives to electric companies for adopting and implementing new DSM/EE measures, including, but not limited to, appropriate rewards based on (1) the sharing of savings achieved by the DSM and EE measures and/or (2) the capitalization of a percentage of avoided costs achieved by the measures. Commission Rule R8-69(b) provides that every year the Commission will conduct a proceeding for each electric public utility to establish an annual DSM/EE rider to recover the reasonable and prudent costs incurred by the electric utility in adopting and implementing new DSM/EE measures previously approved by the Commission pursuant to Commission Rule R8-68. Further, Commission Rule R8-69(b) provides for the establishment of a DSM/EE experience

modification factor (“EMF”) rider to allow the electric public utility to collect the difference between reasonable and prudently incurred costs and the revenues that were actually 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 1164, on March 7, 2018, Duke Energy Carolinas, LLC (“DEC” or the “Company”) filed an application for approval of its DSM/EE rider (Rider EE¹ or Rider 10) for 2019² (“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 29, 2018, the Commission issued an order scheduling a hearing for June 5, 2018, establishing discovery guidelines, providing for intervention and testimony by other parties, and requiring public notice.

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 16, 2018, the North Carolina Sustainable Energy Association (“NCSEA”) filed a petition to intervene, which was granted on March 23, 2018. On April

¹ DEC refers to its DSM/EE Rider as “Rider EE”; however, this rider includes charges intended to recover both DSM and EE revenue requirements.

² The Rider EE proposed in this proceeding is the Company’s tenth Rider EE and includes components that relate to Vintages 2014, 2015, 2016, 2017, 2018, and 2019 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 10” or the proposed “Rider EE.” Rider 10 is proposed to be effective for the rate period January 1, 2019 through December 31, 2019.

10, 2018, the Carolina Utility Customers Association, Inc. (“CUCA”) filed a petition to intervene, which was granted on April 11, 2018. On May 1, 2018, the North Carolina Justice Center (“NC Justice Center”) and the Southern Alliance for Clean Energy (“SACE”) filed a petition to intervene, which was granted on May 2, 2018. The Carolina Industrial Group for Fair Utility Rates III (“CIGFUR”) filed a petition to intervene on May 17, 2018, which was granted on May 18, 2018. On May 21, 2018, the Natural Resources Defense Council (“NRDC”) filed a petition to intervene, which was granted on May 30, 2018.

On May 21, 2018, the Public Staff, NC Justice Center, and SACE filed a motion for an extension of time in which to file intervenor testimony to May 22, 2018, and to file rebuttal testimony to June 1, 2018. The motion was granted by the Commission on May 21, 2018.

On May 22, 2018, the NC Justice Center, NRDC, and SACE (collectively, “NC Justice Center, et al.”) filed the testimony and exhibits of Christopher Neme, Principal of Energy Futures Group, and the Public Staff filed the testimony and exhibits of Michael C. Maness, Director of the Accounting Division, David Williamson, Utilities Engineer in the Electric Division, and Eric Williams, Financial Analyst in the Economic Research Division.

On June 1, 2018, DEC filed the rebuttal testimony Timothy J. Duff and Richard G. Stevie, Ph.D. and the rebuttal testimony and exhibits of witnesses Miller and Evans.

On June 1, 2018, DEC filed a motion to excuse witness Miller from appearing at the June 5, 2018 expert witness hearing. Also on June 1, 2018, NC Justice Center, et al.

filed a motion to excuse witness Neme. On June 4, 2018, the Commission issued an order granting both motions.

The case came on for hearing as scheduled on June 5, 2018. No public witnesses appeared at the hearing.

On July 13, 2018, DEC filed a late-filed exhibit containing information relating to the My Home Energy Report Program that was requested by Commissioner Brown-Bland during the evidentiary hearing. (*See* Transcript of Testimony Heard June 5, 2018 (“Tr.”), p. 287.)

On July 19, 2018, the Public Staff filed a letter indicating that it had completed its review of 2017 DSM/EE program costs and had found no exceptions.

The parties were to submit briefs and/or proposed orders no later than July 20, 2018.

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

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”), NRDC, 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.³ For purposes of the modified save-a-watt portfolio of programs, the Company applied the vintage year concept on a calendar-year basis for administrative ease for the Company and its 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”). In this Order, the Commission 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

³ 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, as a result of the approval of DSM/EE programs prior to the approval of the cost recovery mechanism.

the definitions of “test period” and “rate period,” and that the Commission clarify that the EMF 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.⁴

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

⁴ 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.

(“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, with the exception of the Non-Residential Smart \$aver 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 truing 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 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.⁵

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

⁵ Each vintage under the Sub 1032 Mechanism is referred to by the calendar year of its respective rate period (e.g., Vintage 2019).

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 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.”

Docket No. E-7, Sub 1164

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 10: Energy Assessments Program; EE Education Program; Energy Efficient Appliances and Devices; Residential Smart Saver EE Program; Multi-Family EE Program; My Home Energy Report; Income-Qualified EE and Weatherization Program; Power Manager; Non-Residential Smart Saver Energy Efficient Food Service Products Program; Non-Residential Smart Saver Energy Efficient HVAC Products Program; Non-Residential Smart Saver Energy Efficient IT Products Program; Non-Residential Smart Saver Energy Efficient Lighting Products Program; Non-Residential Smart Saver Energy Efficient Process Equipment Products Program; Non-Residential Smart Saver Energy Efficient Pumps and Drives Products Program; Non-Residential Smart Saver Custom Program;

Non-Residential Smart \$aver Custom Energy Assessments 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 the Paragraph 19 of the Mechanism, the Income-Qualified EE and Weatherization Program is not required to pass the TRC or UCT tests in order 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. The Non-Residential Smart \$aver Custom Energy Assessments and EnergyWise for Business programs are cost-effective under DEC's calculation of avoided capacity costs. Since the Commission agrees with the Company's determination of avoided capacity costs for the reasons set forth in the Evidence and Conclusions for Finding of Fact No. 15, the Commission finds and concludes that these programs are cost-effective, and no further action is required by the Company.

6. The Residential Smart \$aver EE Program should not be suspended at this time. The Company should propose modifications to this program no later than October 31, 2018, with the goal of restoring the TRC score to 1.0 or greater. The Company should include a discussion of the impact of these modifications and other actions it has taken to improve cost-effectiveness in next year's DSM/EE rider proceeding.

7. Due to both the short amount of time it has been in place and the anticipated increase in cost-effectiveness, the Commission finds and concludes that the Non-Residential Smart \$aver Performance Incentive Program does not require additional scrutiny at this time. If the program does not project cost-effectiveness for Vintage 2020,

pursuant to Paragraph 23B of the Mechanism, the Company should provide a discussion of the actions being taken to maintain or improve cost-effectiveness, or alternatively, its plans to terminate the program in its next DSM/EE rider filing.

8. For purposes of inclusion in Rider 10, the Company's portfolio of DSM and EE programs is cost-effective.

9. The Public Staff indicated that as the Company moves closer to being able to provide daily information through the use of Advanced Metering Infrastructure ("AMI") and its customer information systems, there may be some redundancy in the information available through these new systems and the information provided through the Company's My Home Energy Report Program. No party presented any evidence that information that would be accessible through AMI and the new customer information system would be duplicative of the normative comparative usage data available through My Home Energy Report. In any case, the Company has presented evidence that it would be able to isolate any savings associated with enhanced access to customer data provided through AMI and customer information systems from the impacts attributable to the My Home Energy Report Program through its EM&V process. Accordingly, the Commission finds there is no need to take any action relating to the My Home Energy Report Program at this time.

10. 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.

11. The EM&V report for the Non-Residential Smart Saver Custom program (Evans Exhibit B) should be revised as discussed by Public Staff witness Williamson and refiled in the next rider.

12. The results of the EM&V report for the My Home Energy Report program (Evans Exhibit C) are accepted conditionally for purposes of this proceeding. The Public Staff may continue to review this report and offer further recommendations for the Company's consideration in the next DSM/EE rider proceeding.

13. 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, 2019 through December 31, 2019.

14. Rider 10 includes EMF components for Vintage 2017 DSM and EE programs. Consistent with the Sub 938 Second Waiver Order, the test period for these EMF components is the period from January 1, 2017 through December 31, 2017 (Vintage 2017).

15. The Public Staff recommended that the avoided capacity cost benefits for purposes of the PPI and cost-effectiveness of the Company's DSM/EE programs be calculated under the assumption that capacity avoided prior to year 2023 be assigned a zero dollar value. The Public Staff's recommendation would result in a decrease in the estimated Vintage 2019 PPI of \$8,994,251. The Commission finds and concludes that the Public Staff's recommendation and the resulting reduction to the Company's Vintage 2019 PPI should be rejected.

16. DEC's proposed rates for Rider 10 are comprised of both prospective and EMF components. The prospective components include factors designed to collect

program costs and the PPI for the Company's Vintage 2019 DSM and EE programs, as well as the first year of NLR for the Company's Vintage 2019 EE programs; the second year of NLR for Vintage 2018 EE programs; and the third year of NLR for Vintage 2017 EE programs. The EMF components include the true-up of Vintage 2017 program costs, NLR, and PPI, as well as true-ups of PPI and participation for Vintages 2014, 2015, and 2016. DEC, as reflected in the testimony and exhibits of Company witnesses Miller and Evans, has calculated the components of Rider 10 in a manner that appropriately reflects the Commission's findings and conclusions in this Order, as well as the Commission's findings and conclusions as set forth in the Sub 831 Order, the Sub 831 Found Revenues Order, the Sub 938 Waiver Order, the Sub 938 Second Waiver Order, the Sub 979 Order, the Sub 1032 Order, and the Sub 1130 Order.

17. The reasonable and prudent Rider 10 billing factor for residential customers⁶ is 0.5320 cents per kWh, which, as is the case for all the other billing factors stated in these findings of fact, includes the regulatory fee.

18. The reasonable and prudent Rider 10 Vintage 2019 EE prospective billing factor for non-residential customers who do not opt out of Vintage 2019 of the Company's EE programs is 0.3158 cents per kWh.

19. The reasonable and prudent Rider 10 Vintage 2019 DSM prospective billing factor for non-residential customers who do not opt out of Vintage 2019 of the Company's DSM programs is 0.0877 cents per kWh.

20. The reasonable and prudent Rider 10 Vintage 2018 prospective EE billing factor for non-residential customers who participated in Vintage 2018 of the Company's

⁶ 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.

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 2019) is 0.0695 cents per kWh.

21. The reasonable and prudent Rider 10 Vintage 2018 prospective DSM 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 2019) is 0.0030 cents per kWh.

22. The reasonable and prudent Rider 10 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 2019) is 0.0801 cents per kWh.

23. The reasonable and prudent Rider 10 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 2019) is 0.2924 cents per kWh.

24. The reasonable and prudent Rider 10 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 2019) is 0.0005 cents per kWh.

25. The reasonable and prudent Rider 10 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 2019) is (0.0126) cents per kWh.

26. The reasonable and prudent Rider 10 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 2019) is (0.0015) cents per kWh.

27. The reasonable and prudent Rider 10 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 2019) is 0.0024 cents per kWh.

28. The reasonable and prudent Rider 10 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 2019) is (0.0024) cents per kWh.

29. The reasonable and prudent Rider 10 Vintage 2014 EE EMF billing factor for non-residential customers who participated in Vintage 2014 of the Company's EE programs (or who did not so participate, but neither (a) explicitly opted out of Vintage 2014

during the annual enrollment period for that vintage, nor (b) opted out of Vintage 2019) is (0.0061) cents per kWh.

30. The reasonable and prudent Rider 10 Vintage 2014 DSM EMF billing factor for non-residential customers who participated in Vintage 2014 of the Company's DSM programs (or who did not so participate, but neither (a) explicitly opted out of Vintage 2014 during the annual enrollment period for that vintage, nor (b) opted out of Vintage 2019) is (0.0002) cents per kWh.

31. DEC should leverage its collaborative stakeholder meetings ("Collaborative") to discuss the EM&V issues and program design issues raised in the testimony of NC Justice Center, et al. witness Neme and report the results of those discussions in the Company's 2019 DSM/EE rider filing.

32. Beginning in 2019, the Company should increase 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.

N.C. Gen. Stat. § 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 G.S. 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.

N.C. Gen. Stat. § 62-133.9, along with Commission Rules R8-68 and R8-69, establish a procedure whereby an electric public utility files an application in a unique docket for the Commission’s approval of an annual rider for recovery of reasonable and prudent costs of approved DSM and EE programs as well as 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 10), and the cost recovery and utility incentives the Company seeks through Rider 10 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 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 10 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 Saver EE Program; Multi-Family EE Program; My Home Energy Report; Income-Qualified EE and Weatherization Program; Power Manager; Non-Residential Smart Saver Energy Efficient Food Service Products Program; Non-Residential Smart Saver Energy Efficient HVAC Products Program; Non-Residential Smart Saver Energy Efficient IT Products Program; Non-Residential Smart Saver Energy Efficient Lighting Products Program; Non-Residential Smart Saver Energy Efficient Process Equipment Products Program; Non-Residential Smart Saver Energy Efficient Pumps and Drives Products Program; Non-Residential

Smart Saver Custom Program; Non-Residential Smart Saver Custom Energy Assessments Program; PowerShare; PowerShare Call Option⁷; Small Business Energy Saver; Smart Energy in Offices⁸; EnergyWise for Business; and Non-Residential Smart Saver Performance Incentive. (Tr. at 32-33.)

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 170-71.)

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

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 4-8

The evidence for these findings and conclusions can be found in the testimony and exhibits of Company witness Evans, the testimony and exhibits of Public Staff witness Williamson, and the testimony of NC Justice, et al. witness Neme.

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 2019 period, the results of which are incorporated in Evans Exhibit No. 7. (Tr. at 35.) He noted that the avoided cost rates used in the 2019 portfolio projection were significantly lower than those employed in the Sub 1130 proceeding. (*Id.*

⁷ This program was canceled effective January 31, 2018 pursuant to the Sub 1130 Order.

⁸ This program was canceled effective June 30, 2018 pursuant to the Commission's February 7, 2018 order in Docket No. E-7, Sub 961.

at 53.) The reductions in avoided costs lowered cost-effectiveness of all of the Company's DSM and EE programs, as well as DEC's portfolio as a whole. (*Id.*) Nevertheless, DEC's calculations indicate that, with the exception of the Income-Qualified EE and Weatherization Program (which was not cost-effective at the time it was approved by the Commission), the Non-Residential Smart \$aver Performance Incentive Program, and the Residential Smart \$aver EE Program, the aggregate portfolio continues to be cost-effective. (*Id.*)

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: Utility Cost Test ("UCT"), TRC, Participant test, and Ratepayer Impact Measure ("RIM") test. (*Id.* at 180.) 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 182.)

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 182-83.)

As discussed in more detail later in this order, witness Williamson explained that the Public Staff does not agree with the avoided capacity rates used by the Company in its calculations of cost-effectiveness filed in this proceeding. (*Id.* at 183.) Under the Public Staff's interpretation, the avoided capacity rates would reflect zero avoided capacity values in years prior to the identified need for new capacity in the underlying IRP that serves as the basis for the avoided capacity rate calculations. (*Id.*)

Witness Williamson noted that under DEC's calculations of cost-effectiveness, the following programs are not cost-effective for Vintage 2019 under the TRC, UCT, or both: (1) Residential Smart Saver EE Program (TRC of 0.59 and UCT of 0.94); (2) Income-Qualified EE and Weatherization Program (TRC of 0.83 and UCT of 0.19); (3) EnergyWise for Business Program (TRC of 1.21 and UCT of 0.83); and (4) Non-Residential Smart Saver Performance Incentive Program (TRC of 0.81 and UCT of 2.70). (*Id.* at 183-84.) Under the Public Staff's methodology (i.e., applying zero capacity value for years prior to 2023), the Non-Residential Smart Saver Custom Energy Assessments Program would also not be cost-effective under the TRC test for Vintage 2019. (*See id.* at 184-88.)

NC Justice Center, et al. witness Neme testified that DEC's DSM/EE portfolio is very cost-effective, demonstrating that DSM/EE programs are a least cost resource for meeting consumers' electricity needs. (*Id.* at 93, 111.) Based on DEC's estimated UCT benefit-cost ratio, he stated that for every dollar that DEC spends on its programs, it is eliminating the need to spend \$2.46 on new power plants, the fuel to run those power plants, new power lines, and other investments otherwise needed to supply electricity to homes and businesses. (*Id.* at 93, 111-12.) DEC's analysis also suggests that the

programs are very cost-effective under the TRC test, with a benefit cost-ratio of approximately 2 to 1. (*Id.* at 112.) Witness Neme added that since 2014, DEC's programs have saved enough energy at the time of system peak to eliminate the need for the equivalent of more than four natural gas peaker power plants. (*Id.* at 93, 112.)

As a whole, the Commission concludes that DEC's portfolio of DSM and EE programs is cost-effective and eligible for inclusion in Rider 10. 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.

Income-Qualified EE and Weatherization Program

Witness Williamson testified that the Company's Income-Qualified EE and Weatherization Program (low-income) was hit with a major decrease in cost-effectiveness due largely to the update of the avoided cost sources. (*Id.* at 186.) However, he explained that, as a matter of policy, low-income programs are not required to meet the cost-effectiveness test thresholds that other programs must meet in order to be considered for continuation, because they are intended to provide EE measures to a sector of customers who would not otherwise participate in an EE program on their own. (*Id.*)

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 Income-Qualified EE and Weatherization Program is not required to pass the TRC or UCT tests in order 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.

EnergyWise for Business and Non-Residential Smart \$aver Custom Energy

Assessments

Witness Williamson testified that DEC's EnergyWise for Business Program is a DSM program that draws the majority of its avoided cost benefits from capacity and transmission and distribution ("T&D") reductions. (Tr. at 186.) He acknowledged that using the Company's application of avoided capacity costs, this program is cost-effective under the TRC test. (*Id.*) However, when using the Public Staff's methodology, this program is no longer cost-effective. (*Id.*) Thus, according to witness Williamson, pursuant to Paragraph 23B of the Mechanism, the Company should provide a discussion of the actions being taken to maintain or improve cost-effectiveness, or alternatively, its plans to terminate the program. (*Id.*) He recommended further that pursuant to Paragraph 23C of the Mechanism, if this program shows a prospective TRC of less than 1.00 in next year's DSM/EE rider proceeding, the Company should include a discussion of what actions it has taken to improve cost-effectiveness. (*Id.* at 186-87.)

Witness Williamson explained that the Non-Residential Smart \$aver Custom Energy Assessments and Non-Residential Smart \$aver Custom programs were filed separately in the last proceeding, but since then, the Company has decided to combine these two programs for purposes of program performance due to their similarities, including target participants. (*Id.* at 187-88.) Under the combined efforts, the cost-effectiveness of these two programs shows a TRC greater than 1.00; however, when applying the Public Staff's methodology, the combined program is no longer cost-effective. (*Id.* at 188.) As a result, witness Williamson recommended that, pursuant to Paragraph 23B of the Mechanism, the Company should provide a discussion of the

actions being taken to maintain or improve cost-effectiveness, or alternatively, its plans to terminate the program. (*Id.*) He recommended further that, pursuant to Paragraph 23C of the Mechanism, if the combined program shows a prospective TRC of less than 1.00 in next year's DSM/EE rider proceeding, the Company should include a discussion of the actions taken to improve cost-effectiveness. (*Id.*)

In his rebuttal testimony, witness Evans made it clear that the Company does not agree with the application of zero avoided capacity cost values proposed by the Public Staff for the determination of program cost-effectiveness. (*Id.* at 244.) He reiterated that while use of the Public Staff's proposed zero avoided capacity cost values would render the Non-Residential Smart Saver Custom Energy Assessments and EnergyWise for Business programs non-cost-effective, these programs are considered to be cost-effective under the avoided cost rates applied by the Company. (*Id.*) He concluded that because these programs are cost-effective under the Company's methodology, Paragraph 23B of the Mechanism does not apply. (*Id.* 244-45.)

The Non-Residential Smart Saver Custom Energy Assessments and EnergyWise for Business programs are cost-effective under the DEC's calculation of avoided capacity costs. Since the Commission agrees with the Company's determination of avoided capacity costs for the reasons set forth in the Evidence and Conclusions for Finding of Fact No. 15, it finds and concludes that these programs are cost-effective, and no further action is required by the Company.

Residential Smart Saver EE Program

The Company's Residential HVAC EE – Air Conditioning Program (“HVAC EE”) was originally approved as a new EE program in the Sub 1032 Order. (*See* Public

Staff Evans Cross Examination Ex. 3, p. 1.) It includes EE measures associated with duct insulation and sealing, attic insulation and air sealing, tune-up of existing HVAC systems, and replacement of existing central air conditioning and heat pump HVAC systems with more efficient units. (*Id.*) The program replaced the original Residential Smart \$aver program that was approved in the Sub 831 Order and included many of the same measures. (*Id.*)

On October 2, 2015, DEC filed an application seeking approval of modifications to the HVAC EE Program, including changes to the incentive structure and addition of a referral channel to guide interested customers to one or more DEC-approved HVAC contractors who have paid DEC a fee to be on the referral list. (*See id.* at 1-2.) In its comments, the Public Staff raised the concern that the program as a whole, and some of the individual measures, were not projecting cost-effectiveness under the TRC test. (*Id.* at 3.) The Company responded that the cost-effectiveness results are due to elevated participant costs due to the high upfront cost of efficient HVAC equipment; DEC predicted that, as the cost of HVAC equipment declined, the TRC result would improve. (*Id.* at 3-4.) The Public Staff and DEC reached an agreement that the Public Staff would support approval of the modifications, as amended by the Public Staff, with the exception that if the program does not have a projected TRC greater than 1.0 by March 1, 2017, then the program will terminate effective March 31, 2017. (*Id.* at 4.) The Company also agreed that if the projected TRC is lower than 1.0 as of March 1, 2017, or if the actual TRC for 2016 and the early part of 2017 is below 1.0, DEC would refund any Vintage 2016 and 2017 incentives associated with the program (i.e., PPI or net lost revenues) that

DEC had collected in rates. (*Id.*) The Commission approved the agreed-to program modifications with these conditions on February 9, 2016. (*Id.* at 4-5.)

In the Sub 1130 proceeding, the projected TRC score for the HVAC EE Program in Vintage 2018 was 0.99. (Tr. at 266.) Public Staff witness Jack L. Floyd testified that approximately 99% of the participation in the HVAC replacement measures of the program was through the non-referral channel. (*Id.* at 90.) He recommended that the Company either terminate the program or modify it to transition away from non-referral channel measures that are not cost-effective under the TRC and instead focus more on cost-effective referral measures. (*Id.*) The Company agreed with this recommendation. (*Id.*)

On July 20, 2017, the Company filed an application seeking approval of modifications to the HVAC EE Program and the Residential EE Appliances and Devices Program. (*See* Public Staff Evans Cross Examination Ex. 7, p. 1.) The proposed modifications included the removal of measures that are not cost-effective, restructuring the incentives for several of the measures that will remain, and generally aligning the program with a similar program offered by DEP. (*Id.*) DEC proposed to consolidate the surviving measures from both programs into the Residential Smart Saver EE Program. (*Id.*) The projected TRC for the Residential Smart Saver EE Program at the time of the filing was 1.08. (*Id.* at 3.) The Public Staff stated that the program overall appeared to be cost-effective, but also noted that measures offered through the non-referral channel are not cost-effective. (*Id.*) The Public Staff also acknowledged the Company's concerns related to the perception of discrimination and that the program would be considered a "pay for play" by HVAC contractors if the non-referral channel were

eliminated. (*Id.*) However, the Public Staff observed that as long as the Company continues to offer measures through the non-referral channel, the program will continue to be marginally cost-effective. (*Id.* at 4.) The Commission approved the proposed modifications on September 11, 2017. (*Id.* at 4-5.)

In his direct testimony in this proceeding, witness Evans testified that despite several modifications, the Residential Smart Saver EE Program continues to struggle to maintain cost-effectiveness. (*Tr.* at 24.) More specifically, he explained that during 2016 and 2017, the Company made a number of changes to the program to address the erosion in the program's cost-effectiveness caused by advancement in efficiency standards and the associated lower incremental savings associated with exceeding the new standards. (*Id.*) These program changes, which included redesign of the program to include a referral channel that reduced program costs, proved successful in returning the program to cost-effectiveness in 2017 and 2018. (*Id.* at 24-25.) Unfortunately, with the application of the new lower avoided costs in 2019, the program is again projecting to no longer be cost-effective. (*Id.* at 25.) According to witness Evans, the Company is actively working to evaluate additional programmatic changes, such as the Public Staff's recommendation to transition to referral channel measures, that would offset the decline in avoided costs and make the program cost-effective in 2019 and beyond. (*Id.*)

Witness Williamson testified that the Residential Smart Saver EE program has struggled to achieve cost-effectiveness for several years because of (1) higher efficiency standards mandated by the federal government, which have increased baselines against which savings impacts have been measured, and (2) the need for large participant incentives to overcome the upfront out-of-pocket costs to participants. (*Id.* at 189.) He

asserted that the two sets of program modifications approved by the Commission have only made marginal improvements to cost-effectiveness. (*Id.* at 191.) He explained that the main drivers decreasing cost-effectiveness continue to be the tighter efficiency standards and decreases in the avoided cost benefits. (*Id.*)

Witness Williamson noted that DEC has expressed a strong desire to continue offering a residential HVAC replacement program. (*Id.* at 189.) With HVAC being one of the largest energy-consuming appliances in the home, witness Williamson agreed that an EE program that encourages adoption of high efficiency HVAC equipment is a fundamental program for a utility's EE portfolio. (*Id.*) He also acknowledged that it is critical to maintain a good vendor network that provides customers with accurate, reliable information on HVAC energy consumption and other assistance. (*Id.*)

Witness Williamson stated that while this program has continually struggled to maintain cost-effectiveness, a residential HVAC program is a cornerstone program for any electric utility. (*Id.* at 191-92.) He testified that he thinks it is preferable that the Company suspend, rather than terminate, the program until it can determine what is necessary for this program to achieve and maintain cost-effectiveness. (*Id.* at 192.) His recommendation is that the program be suspended effective December 31, 2018. (*Id.*)

Witness Neme encouraged the Company to focus on promoting longer-lived major measures, such as those included in the Residential Smart Saver EE Program. (*See id.* at 94, 117-18.) He suggested that the Company make efforts to increase participation in rebate offers for high-efficiency heat pumps, central air conditioners, heat pump water heaters, pool pumps, attic insulation, air sealing, and duct sealing. (*Id.* at 117.) He stated

that there should be significant savings potential from these measures as they address the largest electricity end-uses in homes. (*Id.*)

In his rebuttal testimony, witness Evans responded to witness Williamson's recommendation that the Residential Smart Saver Program be suspended. He testified that the Company believes that suspending the only program that offers assistance for making the largest single energy user in the home, a customer's HVAC system, more energy efficient does not seem reasonable, especially when the decision to make an investment in HVAC equipment only comes around once every fifteen years. (*Id.* at 245.) Furthermore, witness Evans pointed out that the recommended suspension of the program does not take into consideration the Company's relationships with HVAC contractors. (*Id.*) He anticipates that the proposed suspension would likely erode trust and engagement, making it more like a termination than a suspension and also making it difficult to offer similar types of programs that would require trade ally support in the future. (*Id.*)

In the past, when the program's cost-effectiveness has struggled due to efficiency standard changes, the Company has demonstrated the ability to effectively modify the program to restore cost-effectiveness and should have the opportunity to attempt restore to the cost-effectiveness of the program that was eroded by reduction in avoided costs. (*Id.*) As Witness Evans testified, "We have been resilient with attempts to make changes to keep that program viable. We have had one thing after another and that's just the nature of things with the [decrease in] avoided cost... [and increase in] incremental prices associated with the enhanced energy efficient equipment, so it's been difficult,...but we continue to try." (*Id.* at 279.)

The Company is currently investigating several opportunities to increase the cost-effectiveness of the program, including the following:

1. While the Company does have some concerns with respect to the Public Staff's recommendation to move the program to an all referral structure, the Company is not opposed to adopting this proposal so long as the Commission deems it appropriate;
2. Performing updated studies of the incremental costs actually being paid by customers to adopt higher efficiency equipment, in order to ensure these costs are reflective of the current market; and
3. Updating the measure mix, measure designs, and requirements that may be able to be removed/altered, thus lowering product cost to customers and increasing the TRC score. (*Id.* at 245-46.)

Witness Evans concluded that the Company is confident that there is a solution available that will lead to a cost-effective program and that shutting down the current operations without an appropriate time frame for planning and adjustment is not the best answer for DEC's customers. (*Id.* at 246.)

In response to questioning from counsel for NC Justice Center, et al., witness Evans explained the importance of the Company's trade ally network to the success of a residential HVAC EE program. He noted that while trade allies provide advice to customers relating to energy efficient HVAC systems, non-trade allies tend to provide less emphasis on high efficiency equipment. (*Id.* at 252-53.) He testified that the Company's trade allies go through a certification process to ensure customer satisfaction and quality. (*Id.* at 253.) The Company also uses feedback from customers to "make

sure [DEC has] a high quality group of folks making those installations and again be assured that they are at least providing customers with information related to high efficiency options.” (*See id.*) Witness Evans emphasized that DEC wants to maintain trust with these contractors so that they will remain available to do HVAC EE upgrades in the future: “if you were to drop our Trade Ally Network and then try to reestablish it a year later, I think that would be very difficult.” (*Id.* at 253-54.)

Witness Evans also testified that the Company is in the process of beginning a new analysis of the incremental price of higher efficiency equipment in the marketplace. (*Id.* at 254.) The Company expects that as higher efficiency equipment becomes more available in the marketplace and there is additional competition, prices will go down. (*See id.*) As such, a more updated detailed cost-effectiveness analysis that takes into account these anticipated price decreases would likely result in an increase in the program’s TRC score. (*See id.*)

In response to cross-examination from counsel for the Public Staff, witness Evans acknowledged that in the Sub 1130 rider proceeding, witness Floyd recommended that the Company modify the program to transition from non-referral channel measures to be more heavily focused on referred measures. (*Id.* at 266-68.) He also acknowledged that, in the same proceeding, the Company agreed to modify the program design to improve the ratio of customers participating in referral measures. (*Id.* at 268.)

While the Company did file modifications to the program shortly after the Sub 1130 proceeding designed to improve cost-effectiveness, DEC did not completely eliminate the non-referral channel. (*See Public Staff Evans Cross Examination Ex. 7.*) Witness Evans explained that while the Company does not object to witness Floyd’s

recommendation and is focused on increasing participation in the referral channel, it has concerns with eliminating the non-referral channel altogether: “We are concentrating on referred measures with trade allies;” “however, we did not go to complete referral.” (Tr. at 267, 269.)

As DEC stated in response to a Public Staff data request:

While the Company does not disagree with the changes proposed by the Public Staff in the last case, Docket No. E-7, Sub 1130, regarding the elimination of the non-referral channel provided in the Residential Smart Saver EE program, the Company did have concerns regarding the broader trade ally network response to such a drastic programmatic change. As the Program’s cost-effectiveness is of an ongoing concern for both the Public Staff and the Company, the Company is not adverse [sic] to adopting the Public Staff’s recommendation to eliminate the non-referral channel. The Company would prefer that the Public Staff, in the context of the current proceeding, request that the Commission order the Company to make this Program change. If the Commission approves the Public Staff’s request, which the Company does not plan to object to, the Company will file the changes, in the form of a compliance tariff within 60 days of the Commission’s Order.

(Public Staff Evans Cross Examination Ex. 6.) Witness Evans clarified that the “concerns” about the impact on trade allies that the Company referred to in this data request response are the same as those stated in the Commission’s Order approving the 2017 program modifications:

DEC indicated to the Public Staff that the Company will continue to provide incentives for measures installed outside of the referral channel because of concerns that converting the [Residential Smart Saver EE Program] to a ‘referral only’ program would create a ‘pay for play’ environment. DEP [sic] believes the proposed modifications will increase participation in the referral-based delivery channel.

(Tr. at 282-83; *see also* Public Staff Evans Cross Examination Ex. 7, p. 3.)

The 2017 modifications have, in fact, improved the ratio of customers participating in referral measures, as promised by witness Duff and as stated above.

According to witness Williamson, new data provided by the Company in this proceeding suggest that participation is shifting from the non-referral to the referral channel, with approximately 70% of the current participation coming through the referral channel (versus only 1% of the participation coming through the referral channel as of last year's proceeding). (*See* Tr. at 190.)

In response to questions relating to who bears the risk with respect to the Residential Smart \$aver EE Program, witness Evans acknowledged that while ratepayers do receive benefits from the program, they do bear some risk if the program continues to struggle with cost-effectiveness. (*See id.* at 277.) However, he pointed out that this is a shared risk – if the program is not cost-effective, the Company's PPI is adversely impacted. (*See id.*) He testified that if the Company were looking at incentives in isolation, the motivation would perhaps be to remove it from the portfolio. (*Id.* at 276.) However, the Company has faith in the program in the long run and continues to believe it is a critical piece of its overall portfolio. (*See id.* at 25, 276-77.)

Witness Evans concluded his testimony relating to the Residential Smart \$aver Program by explaining why the Company thinks it is important to offer a residential HVAC program:

Again, it's the largest energy user in a domicile. It lasts 15 years. A customer can make a decision today to go baseline or to go to a higher efficiency unit. We're talking about long life benefits and this is the opportunity to do it now...it's very important because it impacts so many homes and we have an opportunity here to provide long lasting energy efficiency benefits, thus our desire to maintain the program.

(*Id.* at 284.)

The Commission agrees 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. All three witnesses testified that the HVAC is one of the largest – if not, the largest – energy-consuming appliances in the home. In addition, as stated by witnesses Neme and Evans, the long measure life of an HVAC unit makes it particularly important to maintain this program as part of the Company’s portfolio. A rebate for a high-efficiency HVAC unit could lead to savings for many years to come.

Both witnesses Evans and Williamson also recognize that DEC’s relationship with its trade ally network – i.e., the HVAC contractors that service participants in the Residential Smart Saver EE Program – is crucial to maintaining a viable HVAC program. The Commission agrees with witness Evans that a suspension of the program would put those relationships at risk, which could jeopardize the entire program. Accordingly, the Commission finds and concludes that the Residential Smart Saver EE Program should not be suspended at this time. That said, the Commission is mindful of the Public Staff’s concerns that ratepayers not pay for non-cost-effective programs. Based on the Company’s persistent efforts to maintain the viability of the program through program modifications, as well as the negative impact on the Company’s PPI if the program continues to struggle to maintain cost-effectiveness, the Commission believes that DEC is highly motivated to continue to find ways to improve cost-effectiveness.⁹ To that end, witness Evans outlined a number of ways in which the Company could modify the Residential Smart Saver EE Program to improve cost-effectiveness. Thus, the Commission directs the Company (1) to propose modifications to this program no later

⁹ Counsel for the Public Staff suggested that in order to show the faith that it has in the future of this program, the Company should agree to pick up a portion of the program costs and the net lost revenues to the extent that the program is not cost-effective. (Tr. at 280-81.) The Commission finds that because failing cost-effectiveness results in a hit to the Company’s PPI, DEC already has “skin in the game” and there is no need to apply additional financial pressure to motivate the Company to pursue program modifications to improve cost-effectiveness.

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.

Non-Residential Smart Saver Performance Incentive Program

Witness Evans testified that the forecasted 2019 TRC score for DEC's Non-Residential Smart Saver Performance Incentive Program is 0.81 and the UCT score is 2.70. (Tr. at 23.) He explained that while the TRC score may be viewed as less than optimal in isolation, it is important to note that this program is largely an extension of the custom portion of the Non-Residential Smart Saver Program. (*Id.*) In particular, the Performance Incentive Program encompasses energy saving measures related to new technologies, unknown building conditions and system constraints, as well as uncertain operating circumstances, occupancy, or production schedules. (*Id.* at 23-24.) Witness Evans testified that, as a result, energy savings are difficult to project with any level of accuracy. (*Id.* at 24.) In addition, the Company believes that if this program were no longer offered as part of the Company's EE portfolio, additional opt-out eligible customers may elect to opt out of the EE portion of Rider EE as a result. (*Id.*) Witness Evans also noted that, due to the nature of the program, the risk of overcompensating participants at the expense of other customers or, conversely, undercompensating participants for their EE improvements, is limited. (*Id.*) He concluded that the Company believes that this program is an essential element of its EE portfolio and that its cost-effectiveness results will improve. (*Id.*)

Witness Williamson testified that the Non-Residential Smart Saver Performance Incentive Program was approved in the fall of 2016 and launched in January 2017. (*Id.* at

187.) In the Sub 1130 proceeding, this program was not cost-effective but was still too new to assess its full potential. (*Id.*) This year, it is again not cost-effective, but because of its status last year, witness Williamson considers this program to fall under paragraph 23B of the Mechanism. (*Id.*) Thus, he recommended that in its rebuttal or supplemental testimony in this proceeding, the Company provide a discussion of the actions being taken to maintain or improve cost-effectiveness, or alternatively, its plans to terminate the program. (*Id.*) Further, if this program is again not cost-effective at the time of the next rider filing, he recommended that the Company should include a discussion in that proceeding of the actions taken to improve cost-effectiveness pursuant to Paragraph 23C of the Mechanism. (*Id.*)

In his rebuttal testimony, witness Evans explained that the Non-Residential Smart Saver Performance Incentive Program was intended to encompass large EE-related projects with uncertainty relative to their performance – for example, projects that employ new technologies. (*Id.* at 246.) Related program incentives are provided in installments based on actual savings. (*Id.*) In this manner, participants are properly incentivized for their EE-related investments and other customers are shielded from the impacts of overstated performance. (*Id.*) That said, very few projects are appropriate for participation in the program. (*Id.* at 247.) The 0.81 TRC test score reflected in Evans Exhibit 7 was based upon participation forecasts and costs used in the Company's 2016 program filing. (*Id.*) During 2017, only two projects were involved. (*Id.*) Currently, there are twelve projects underway in the Company's North Carolina service territory. (*Id.*) The Company's estimated TRC score for this program, based on these and other projects under review, will exceed 1.75. (*Id.*)

The Commission is persuaded that this program does not require additional scrutiny at this time, due to both the short time it has been in place and the anticipated improvement in cost-effectiveness results. Nevertheless, if the program does not project cost-effectiveness for Vintage 2020, pursuant to Paragraph 23B of the Mechanism, the Company shall provide a discussion of the actions being taken to maintain or improve cost-effectiveness, or alternatively, its plans to terminate the program in its next DSM/EE rider filing.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 9

The evidence for this finding and conclusion can be found in the testimony and exhibits of Company witness Evans and the testimony of Public Staff witness Williamson.

DEC's My Home Energy Report Program, or "MyHER," is a periodic comparative usage report that compares a customer's energy use to similar residences in the same geographical area based upon the age, size, and heating source of the home. (Evans Ex. 6, p. 59.) A customer's usage is compared to the average home in their area (top 50%), as well as the efficient home (top 25%). (*Id.*) As customers continue to receive reports, their engagement increases as they learn more about their specific energy use and how they compare to their peer group. (*Id.*) The report also provides customers with tools to reduce their usage in the form of targeted tips to help them become more efficient and close the gap between them and their peer residences. (*See id.* at 59-60.)

Public Staff witness Williamson suggested that as the Company moves closer to being able to provide daily information through the use of AMI and its customer information systems, there may be some redundancy in the information available through

these new systems and the information provided through the MyHER program. (Tr. at 176.) He advised that the EM&V for the MyHER program will need to clearly isolate any savings associated with enhanced access to customer data provided through AMI and customer information systems from the impacts solely attributable to the customized suggestions for the home provided by the MyHER program. (*Id.* at 176-77.)

Witness Williamson also noted that the MyHER EM&V report indicated that survey respondents reported that the most useful feature of the reports was the graphs illustrating the home's energy usage over time, and the least useful feature was the customized suggestions for the home. (*Id.* at 177.) He concluded that the energy usage information that customers find most useful will be, or should be, available through AMI and new billing functionalities. (*Id.*)

In his rebuttal testimony, Company witness Evans testified that given that the updated customer information system and billing system will not be in service for several years, he believes witness Williamson's observations regarding the Company's MyHER program are premature. (*Id.* at 241.) He also expressed a number of concerns relating to witness Williamson's observations. (*Id.* at 241-44.)

He stated that the implication of witness Williamson's testimony is that the "least useful feature," the customized suggestions for the home to become more efficient, would be the only remaining MyHER-related source of energy savings once AMI is implemented. (*Id.* at 242.) However, according to witness Evans, this ignores the significant energy savings generated by the engagement and motivating effect created by the normative usage comparisons between the customer, peer group, and efficient home, which would not likely be available outside of the MyHER reports. (*Id.*) He noted that

while he cannot predict what a DEC AMI-based paper billing will look like several years from now, he believes that it probably would contain only customer-specific data relating to the energy usage for an individual home. (*See id.* at 242-43; *see, e.g.*, Evans Rebuttal Ex. 1.) By contrast, the MyHER report allows a customer to compare his home's energy use with similar homes in the community based on age, square footage, and fuel type. (*See* Tr. at 243; *see, e.g.*, Evans Rebuttal Exhibit 2.)

Witness Evans testified that witness Williamson fails to acknowledge that it is the normative psychology behind the reports that drives customers to adopt the actionable tips and take on the energy efficient behavior underlying MyHER savings. (Tr. at 243.) According to witness Evans, with behavioral energy reports, consumers generally adjust their attitudes and behaviors to what they comprehend as overall normal attitudes and behaviors, since few want to be considered out of the norm or an outlier. (*Id.*) By seeing how their energy use stacks up against comparable homes, customers tend to adjust their behavior. (*Id.*) For many, it might even be subliminal actions they might not be aware they are taking. (*Id.*)

Witness Evans concluded that while it is possible to isolate savings resulting from MyHER from any impacts resulting from subsequent measures or programs that arise through the use of AMI, there is no reason to assume that AMI data will take the place of MyHER, which delivers comparative usage information through an engaging medium with information that is relevant and actionable. (*Id.* at 243-44.)

During cross-examination of witness Evans, the Public Staff presented information relating to the capabilities of the new customer billing system the Company is implementing (Customer Connect) versus the Company's current billing system.

(Public Staff Evans Cross Examination Ex. 1.) While the exhibit indicated that Customer Connect would provide personalized recommendations for products and services, as well as online rate analysis and comparison tools, it does not demonstrate that these recommendations would encompass targeted EE tips nor that the comparison tools relate to comparing energy usage to peer homes. (*See id.*) In other words, it does not establish that these functionalities would be in any way duplicative of the information available through MyHER. The Public Staff also presented witness Evans with an exhibit showing that the Company plans to leverage AMI data to potentially develop and offer customers a Smart Meter Usage App, which would allow customers to track electrical usage on a minute-to-minute basis to develop a better understanding of energy consumption. (Confidential Public Staff Evans Cross Examination Ex. 2, p. 4.¹⁰) The Smart Meter Usage App should be viewed as an enhancement to the MyHER program – just as the current version of MyHER utilizes and leverages data from the existing meter and customer information system, the potential for a Smart Meter Usage App enhancement that could effectively leverage data from the new AMI and customer information system to even further engage and empower customer efficiency would be a wise use of these new assets. As witness Evans testified, nothing in either exhibit changed his mind that MyHER provides distinct benefits from AMI and the customer information system: “I do not see any overlap that I can discern at this point in time.” (Tr. at 286.)

Nevertheless, hypothetically, to the extent there is any overlap, through its EM&V process the Company would be able to parse out what is attributable to AMI/Customer Connect versus the savings resulting from the MyHER program. As witness Evans

¹⁰ The Company has only included public information from this exhibit in this Proposed Order.

testified, the Company has good measures for determining the benefits of the normative usage comparisons available through MyHER. (*See* Tr. at 287.)

In response to a question from Commissioner Brown-Bland (*see id.*), the Company provided a late-filed exhibit explaining the evaluation methods that quantify the motivating effect of normative comparison (*see* DEC's Late-Filed Ex. Regarding My Home Energy Report). As shown in DEC's EM&V report for the program – the MyHER Program Evaluation (Evans Exhibit C) – DEC customers are randomly assigned to either receive DEC MyHER reports (and become part of the treatment group) or to not receive MyHER reports (and become part of the control group). (*Id.* (citing Evans Ex. C, p. 1).) Since the treatment group is identical to the control group *except* for the fact that they receive MyHER reports, any difference observed from the evaluation analysis between the energy consumption of the treatment group and that of the control group is due to exposure to the MyHER program. (*Id.* (citing Evans Ex. C, p. 7).) In essence, the motivation to be as or more efficient than others is measured by the difference in energy consumption between the treatment group and the control group. (*Id.*) As demonstrated in the MyHER Program Evaluation, the treatment group consumed 234 less kWh in annual savings per home than the control group, indicating that customers did indeed strive to be energy efficient as a result of receiving the normative comparison. (*Id.* (citing Evans Ex. C, p. 20).)

Through the independent, third-party evaluator's analysis, the Company is also able to quantitatively see these benefits in the uplift, that is, the increased participation of the treatment group to participate in other DEC EE offerings at a greater rate than those in the control group. (*Id.* (citing Evans Ex. C, p. 24).) Since the Company's EE

programs are designed to save energy, any savings attributable to increased participation in other DEC programs must be deducted from the MyHER impact estimates to avoid any savings being counted by both the MyHER program and the program where savings were originally claimed. (*Id.*) As reflected in Table 3-8 of the DEC MyHER Program Evaluation, a little more than 4 kWh per participant was deducted from the MyHER savings of 234 kWh to avoid any double-counting, resulting in the final evaluated MyHER impact of 230 kWh per participant. (*Id.* (citing Evans Ex. C, p. 20).)

The Commission finds and concludes there is no reason to take any action relating to the MyHER program at this time. While witness Williamson made general observations regarding the *potential* redundancies that could result from the implementation of AMI and Customer Connect with respect to MyHER, no cogent evidence of any such redundancies – actual or potential – has been presented in this proceeding. For example, there was no showing that the Customer Connect functionalities and potential for a future Smart Meter Usage App enhancement leveraging data enabled through the deployment of AMI are even in existence yet, nor has there been any showing that there would be, in fact, any double counting of impacts associated with either AMI or Customer Connect and the MyHER program. Without more, the Commission is not persuaded that the normative usage comparison data that drives MyHER’s EE impacts is or will be available through any other channels. In any event, the Company has shown that its EM&V process is capable of distinguishing between the benefits of AMI and Customer Connect and those derived from MyHER or the potential Smart Meter Usage App enhancement. In summary, since there is no actual allegation or evidence that the Company has included or plans to include benefits from AMI and/or

Customer Connect in its MyHER impacts – nor any showing that the Company’s EM&V would not be able to discern between the two, if necessary – there is no need to address the issue further in this proceeding.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 10-12

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. (*See* Tr. at 40-45.) He explained that the EMF component of Rider 10 incorporates actual customer participation and evaluated load impacts determined through EM&V and applied pursuant to the EM&V Agreement. (*See id.*) In addition, actual participation and evaluated load impacts are used prospectively to update estimated NLR. (*Id.* 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 2016 (Evans Exhibit A); Non-Residential Smart Saver Energy Efficient Products and Assessment – Custom 2014-2015 (Evans Exhibit B); My Home Energy Report 2015-2016 (Evans Exhibit C); Power Manager Load Control Service 2016 (Evans Exhibit D); Small Business Energy Saver 2014-2016 (Evans Exhibit E); Non-Residential Smart Saver Energy Efficient Products and Assessment – Assessment 2014-2016 (Evans Exhibit F); EnergyWise for Business 2016 (Evans Exhibit G); Multi-Family EE 2014-2016 (Evans Exhibit H); Non-Residential Smart Saver Energy Efficient Products and Assessment – Prescriptive 2013-2015 (Evans Exhibit I); Residential Energy Efficient Appliances and Devices – Save Energy and Water Kit 2016

(Evans Exhibit J); Energy Efficient Appliances and Devices – Free LED 2016-2017 (Evans Exhibit K); and Smart Energy in Offices 2014-2016 (Evans Exhibit L).

In his testimony, witness Williamson stated that DEC had adopted the EM&V-related recommendations Public Staff witness Floyd made in the Sub 1130 proceeding, to the extent these recommendations are applicable to the EM&V reports filed in this proceeding. (*Id.* at 194.) He noted that it was his understanding that DEC's EM&V evaluator intended to incorporate these recommendations in future EM&V reports. (*Id.*) Witness Williamson testified that in Sub 1130, witness Floyd also recommended that the EM&V reports for the Multi-Family EE program, the Non-Residential Smart Saver Prescriptive Incentive program, and the Small Business Energy Saver program be revised before accepting them as complete. (*Id.* at 200.) These reports have been revised and submitted in this proceeding as Evans Exhibits H, I, and E, respectively. (*Id.*) Witness Williamson stated that the Public Staff's review indicates that the Company appropriately incorporated the Public Staff's previous recommendations into these EM&V reports. (*Id.*) Therefore, he recommended that they be considered complete for purposes of calculating program impacts in this proceeding. (*Id.*)

With respect to program vintages for which EM&V reports were filed in this proceeding, Public Staff witness Williamson testified that he has two recommendations:

(1) DEC should submit a revised report for the Non-Residential Smart Saver Custom program in the next DSM/EE rider proceeding in which the net-to-gross scoring scale is adjusted so that it is symmetrical, giving equal weight to survey responses that favor the Company as well as those that do not favor the Company; and

(2) While the Public Staff has confidence in the methodology applied to complete the evaluation of the My Home Energy Report program and believes the overall savings appear to be reasonable, the Public Staff would like to conduct additional review of the data used in the evaluation. (*Id.* at 195-200.)

Witness Williamson concluded that, with the exception of the Non-Residential Smart \$aver Custom EM&V Report (Evans Exhibit B) and the My Home Energy Report EM&V Report (Evans Exhibit C), the EM&V of the vintages of the measures covered by the remaining reports filed in this proceeding should be considered complete. (*Id.* at 199-200.) He also determined that DEC appropriately incorporated the findings from EM&V studies and annual participation into its rider calculations consistent with the relevant Commission orders and the Mechanism. (*Id.* at 201.)

With the exception of those EM&V-related recommendations made by Public Staff witness Williamson for revisions to Evans Exhibit B and the continued review of Evans Exhibit C (neither of which was disputed by DEC), 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; that the EM&V report for Non-Residential Smart \$aver Custom (Evans Exhibit B) should be revised as discussed by Public Staff witness Williamson and refiled in the next rider; that the results of the EM&V report for the My Home Energy Report program (Evans Exhibit C) are accepted conditionally for purposes of this proceeding, and that the Public Staff may continue to review this report and offer further recommendations in the next DSM/EE rider proceeding.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 13-14

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 10 are consistent with the Commission's ruling in the Sub 938 Second Waiver Order and the Sub 1032 Order and are uncontroverted by any party.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 15

The evidence in support of this finding and conclusion can be found in the Sub 1032 Order, the Sub 1130 Order, the Sub 148 Order, the testimony of Company witnesses Duff and Stevie, and the testimony of Public Staff witnesses Maness, Williams, and Williamson.

Background

Paragraphs 68 and 69 of the cost recovery mechanism approved by the Commission in Sub 1032 state as follows:

68. For the PPI for Vintage Year 2014, the per kW avoided capacity costs used to calculate avoided cost savings shall be those reflected in the filing by Duke Energy Carolinas in Docket No. E-100, Sub 136. The per kWh avoided energy costs shall be those reflected in or underlying the most recently filed integrated resource plan (IRP)...

69. For the PPI for Vintage Years 2015, 2016, and 2017, the presumptive per kW avoided capacity costs and per kWh avoided energy costs used to calculate avoided cost savings shall be those determined pursuant to paragraph 68 above. However, if at the time of initial estimation of the PPI for each of those years, either (a) the Company's per kWh avoided energy costs calculated for the purposes of the Company's annual IRP or resource plan update filings have increased or decreased by 20% or more or (b) the Company's per kW avoided capacity costs reflected in the rates approved in the biennial avoided cost

proceedings have increased or decreased by 15% or more, the avoided costs (both energy and capacity) will be updated for purposes of the DSM/EE rider proceeding.

The parties sometimes referred to the method for updating avoided costs under Paragraph 69 of the Sub 1032 Mechanism as the “trigger” or “ratchet” method, in that avoided costs would remain the same unless and until the specified thresholds were met – either a change in avoided energy costs of at least 20% or a change in avoided capacity costs of at least 15% – which would then trigger an update of both avoided energy and avoided capacity costs. In addition, under Paragraph 69 of the Sub 1032 Mechanism, avoided energy costs and avoided capacity costs were derived from two different sources: the annual IRP or resource plan update filings for avoided energy and the biennial avoided cost proceedings for avoided capacity.

In last year’s DSM/EE proceeding in Sub 1130, the Public Staff and DEC discovered that they had differing interpretations as to the appropriate avoided costs to be used in calculating Rider 9 pursuant to Paragraph 69 of the Sub 1032 Mechanism. The Public Staff believed that the “ratchet” that would cause avoided capacity and energy costs to be updated for purposes of the DSM/EE rider proceeding had been triggered for purposes of the PPI to be calculated for Vintage 2018. The Company maintained that the ratchet had not been triggered. Had avoided cost rates been updated in a manner consistent with the Public Staff’s interpretation of Paragraph 69, the Vintage 2018 PPI would have been reduced by approximately \$9.5 million.

The Company and the Public Staff eventually reached a comprehensive agreement (the “Sub 1130 Agreement” or “Agreement”) resolving their differences which consisted of (1) a monetary adjustment which reduced the Vintage 2018 PPI by \$6,750,000 million; and (2) certain revisions to the Sub 1032 Mechanism, including the

method by which avoided costs would be updated for purposes of the PPI and DSM/EE program cost-effectiveness. The Commission approved the Sub 1130 Agreement and the resulting revisions to the Sub 1032 Mechanism in its *Order Approving DSM/EE Rider, Revising DSM/EE Mechanism, and Requiring Filing of Proposed Customer Notice* issued in Sub 1130 on August 23, 2017 (“Sub 1130 Order”).

The revised Paragraph 69 reads as follows:

69. For the PPI for Vintage Years 2019 and afterwards, the program-specific per kW avoided capacity benefits and per kWh avoided energy benefits used for the initial estimate of the PPI and any PPI true-up will be derived from the underlying resource plan, production cost model, and cost inputs that generated the avoided capacity and avoided energy credits reflected in the most recent Commission-approved Biennial Determination of Avoided Cost Rates for Electric Utility Purchases from Qualifying Facilities as of December 31 of the year immediately preceding the date of the annual DSM/EE rider filing. However, for the calculation the underlying avoided energy credits to be used to derive the program-specific avoided energy benefits, the calculation will be based on the projected EE portfolio hourly shape, rather than the assumed 24x7 100 MW reduction typically used to represent a qualifying facility.

Paragraphs 19 and 23 (which govern the calculation of cost-effectiveness for program approval filings and continuing cost-effectiveness for existing programs, respectively) were also revised to reflect the same method for determining avoided costs.¹¹

In the most recent Biennial Determination of Avoided Cost Rates for Electric Utility Purchases from Qualifying Facilities (“Avoided Cost Proceeding”) in Docket No. E-100, Sub 148 (“Sub 148”), the Commission was faced with whether certain changes to

¹¹ The Public Staff refers to the method for calculating avoided cost rates pursuant to the revised Paragraphs 19, 23, and 69 as the “PURPA method.”

the previously-approved methods used to calculate avoided cost rates and to the current framework for implementing Section 210 of the Public Utility Regulatory Policies Act of 1978 (“PURPA”) were warranted given the amount and pace of the development of qualifying facilities (“QFs”), and in particular solar-powered QFs, in North Carolina. *See Order Establishing Standard Rates and Contract Terms for Qualifying Facilities*, Docket No. E-100, Sub 148, October 11, 2017 (“Sub 148 Order”). The issue arose as to whether utilities should have to pay QFs for capacity in years in which they do not have a capacity need. Witnesses in the proceeding described significant growth in solar production in the State resulting in over-supply, operational challenges, and artificially high costs passed on to North Carolina residents, businesses, and industries. *Id.* at 9-14. DEC and Duke Energy Progress, LLC (“DEP”) proposed, and a number of parties, including the Public Staff, agreed, that a utility should include zeros in the calculation of capacity rates for the years in which the utility does not have a capacity need. *Id.* at 39-41, 46.

While the case was pending, N.C. Gen. Stat. § 62-156(b)(3) was amended by the General Assembly to provide, with respect to power sales by small power producers to public utilities:

A future capacity need shall only be avoided in a year where the utility’s most recent biennial integrated resource plan filed with the Commission pursuant to G.S. 62-110.1(c) has identified a projected capacity need to serve system load and the identified need can be met by the type of small power producer resource based upon its availability and reliability of power, other than swine or poultry waste for which a need is established consistent with G.S. 62-133.8(e) and (f).

Accordingly, the Commission concluded that with regard to QFs that are small power producers, § 62-156(b)(3) requires that when calculating avoided capacity rates using the peaker method, it is appropriate to require a payment for capacity in years of a

utility's IRP forecast period only when a capacity need is demonstrated during that period. Sub 148 Order, p. 48. The Commission found that providing a levelized capacity payment over the term of the standard offer contract is a reasonable means of implementing this capacity payment. *Id.* The Commission also determined that this avoided capacity payment methodology is appropriate with regard to the standard offer to purchase available to QFs that are not small power producers. *Id.* The Commission based this change in methodology upon the "changed economic and regulatory circumstances facing QFs and utilities" – namely, the increasing amount of solar-powered QF development activity and its impact on utilities' systems and rates. *See id.* at 15-19, 48.

The underlying IRP for purposes of the Sub 148 proceeding – DEC's 2016 IRP – does not show a capacity need until 2023. *See id.* at 40. As such, the Commission's ruling in Sub 148 results in avoided capacity rates that use a zero value for capacity for the years 2019 to 2022. However, that ruling does not apply to QFs that established a legally enforceable obligation ("LEO") prior to the date the Company made its avoided cost filing in Sub 148. *See, e.g., Order Establishing Standard Rates and Contract Terms for Qualifying Facilities*, Docket No. E-100, Sub 136, issued Feb. 21, 2014, at 33 ("[a] QF has a right to long-term avoided cost contracts or other LEOs with rates determined at the time the obligation is incurred, even if the avoided costs at the time of delivery ultimately differ from those calculated at the time the obligation is originally incurred."). As a result, QFs establishing a LEO after November 15, 2016 ("new QFs") receive a

capacity value that is zero in years 2019 through 2022;¹² QFs that established LEOs prior to November 15, 2016 (“legacy QFs”) receive a capacity value that is not zero in years 2019 through 2022. *See e.g., Order Setting Avoided Cost Parameters*, Docket No. E-100, Sub 140, December 31, 2014 (Commission declines to approve utilities’ request to not include the cost of capacity in years where the utility does not show a need for capacity when calculating avoided cost rates at that time).

In this proceeding, the parties agree that the applicable Avoided Cost Proceeding for Rider 10 is Sub 148. The key issue in dispute between the Company and the Public Staff is whether because the Company does not show a capacity need until 2023, the Company is required by the Sub 1130 Agreement and the Sub 148 Order to use zero as the input when calculating its avoided capacity values for DSM/EE for years 2019 through 2022.

Summary of Testimony

Public Staff witness Williams testified that the Public Staff interprets the Sub 1130 Order and the Sub 148 Order to mean that the Company’s avoided capacity rates for DSM/EE should reflect zero avoided capacity value in years prior to the identified need for new capacity in the Company’s IRP. (*See Tr. at 216-17.*)

He explained that as a result of the Commission ruling in the Sub 148 Order, “new” QFs seeking to sell their energy and capacity to DEC will not be paid capacity payments until new capacity is needed in 2023, as identified in the Company’s 2016 IRP.

¹² New QFs under the standard offer tariff will receive capacity payments in years prior to the utilities’ first capacity need because the new QFs will receive a levelized capacity rate reflecting a lower annual payment to account for those initial years in which there are no avoidable capacity costs. Sub 148 Order, pp. 40, 48.

(*Id.* at 215.) He pointed out that the Commission noted in Sub 148 that “in addition to providing the basis for electric power purchases from QFs by a utility, the Commission-determined avoided costs are utilized in, among other applications, the determination of the cost-effectiveness of DSM/EE programs and the calculation of the performance incentives for such programs...” (*Id.* (citing Sub 148 Order, p. 69).) He also asserted that witness Hinton’s testimony in Sub 1130 explicitly linked the PURPA-based avoided capacity and energy costs to the savings and financial incentives of the Company’s DSM/EE programs. (*Id.* at 218, 220-21.) As a result, he concluded that “in order to be consistent with the Sub 148 Order and the Revised Mechanism, “determinations of ongoing cost-effectiveness and utility incentives of both new DSM/EE programs and new vintages of existing DSM/EE programs starting in vintage 2019 should be based on avoided capacity rates that reflect zero avoided capacity value in years prior to the identified need for new capacity in the Company’s IRP (2023).” (*Id.* at 216-17.)

Witness Williams testified that the Public Staff believes that the Company was not consistent with Sub 148 and the Mechanism in how it applied avoided capacity value with respect to its DSM/EE programs.¹³ (*Id.* at 217.) He stated that, in assessing the ongoing cost-effectiveness of its DSM/EE programs and the appropriate level of utility incentives, the Company used avoided cost rates that reflected a “full capacity value,” based on the peaker method, beginning in year one. (*Id.*)

¹³ Witness Williams concluded that the avoided energy and T&D costs that DEC used to evaluate ongoing cost-effectiveness of its DSM/EE programs are reasonable and are based on the approved Sub 148 proceeding and the agreed methodology of the Mechanism, as revised in Sub 1130. (Tr. at 228, 232.) The Company’s calculation of avoided energy and avoided T&D were not disputed by any party.

Witness Williams noted that in response to data requests, the Company contended DSM/EE is distinct from QFs in that without DSM/EE in the IRP, there would be a more immediate need for new capacity. (*See id.* at 219-20; *see also*, Stevie/Duff Stipulated Ex. 1.) As such, witness Williams stated, the Company's position is that the DSM/EE within the IRP has capacity value and should receive "full avoided capacity benefits" in all years. (*See id.*) Witness Williams disagreed. (Tr. at 220.) First, he stated that in the context of the IRP, on a MW to MW basis, the contribution to peak provided by DSM/EE is functionally equivalent to the contribution to peak provided by QF contracts. (*Id.* at 234.) Therefore, he concluded that DSM/EE capacity is not distinct from QF capacity in this context and should not be treated differently. (*Id.*)

Second, in response to the Company's argument that DSM/EE value is derived from its usefulness in delaying new capacity need until 2023, witness Williams argued that only the DSM/EE actually needed to delay new capacity need would have any value.¹⁴ (*Id.* at 235.) According to witness Williams' calculations, from 2019 through 2022, only 40%, 49%, 63%, and 74% of the DSM/EE capacity is needed to maintain a 17% reserve margin. (*Id.* at 224-26.) He stated that DSM programs alone can meet this need through 2021 and can meet 95% of the need in 2022. (*Id.* at 227.) As such, he maintained that any new EE program or EE vintage would contribute effectively no capacity value and should, thus, be ineligible to receive capacity payments that are greater than zero. (*Id.*)

¹⁴ Witness Williams characterized the DSM/EE programs included in the DSM/EE IRP block as "fluid," because they are based on projections of participation and savings associated with approved programs, as well as the Company's market potential study. (Tr. at 223.) However, he acknowledged that the DSM programs in the DSM/EE IRP block are stable and expected to continue for the foreseeable future. (*Id.* at 227.)

Public Staff witness Maness testified that he concurs with witness Williams' recommendation that the avoided capacity cost benefits for purposes of the PPI and cost-effectiveness of the Company's DSM/EE programs be calculated under the assumption that capacity avoided prior to year 2023 be assigned a zero dollar value. (*See id.* at 149.) Since the Company did not apply this method to calculate the estimated PPI for Vintage 2019, witness Maness recommended that the estimated Vintage 2019 PPI proposed by DEC in this case be adjusted to reflect this assumption. (*Id.* at 150.) He testified that the Public Staff asked the Company to provide a calculation of estimated avoided cost benefits related to Vintage Year 2019 under the assumption that avoided capacity kW occurring prior to year 2023 is assigned a zero dollar value. (*Id.*) According to the Company's calculation, making this assumption reduces the estimated Vintage 2019 system-level PPI from \$25,050,064 to \$16,055,813, a decrease of \$8,994,251. (*Id.*) Witness Maness incorporated this reduction into the billing factors set forth on Maness Exhibit 1. (*Id.*) He also recommended that the \$8,994,251 reduction in the system PPI be included in all future true-ups of the Vintage 2019 DSM/EE revenue requirement and billing factors. (*Id.* at 150-51.)

Public Staff witness Williamson discussed the impact to the cost-effectiveness of the Company's DSM/EE portfolio that would result from applying zero capacity value for years prior to 2023, in accordance with the Public Staff's recommendation. (*Id.* at 184.) Williamson Exhibit 2 shows the decrease in cost-effectiveness scores for each program when no capacity value is given for years that DEC's 2016 IRP does not show a capacity need. (*Id.*) As mentioned above, in addition to the programs that were not cost-effective under the TRC test according to the Company's calculations, DEC's Non-

Residential Smart \$aver Custom/Assessments Program and EnergyWise for Business Program would no longer be cost-effective under the Public Staff's methodology. (*Id.* at 186-88.)

In their rebuttal testimony, DEC witnesses Duff and Stevie explained that the Company strongly disagrees with the Public Staff's recommendation that the avoided capacity cost benefits for purposes of the PPI and cost-effectiveness of the Company's DSM/EE programs be calculated under the assumption that capacity avoided prior to year 2023 be assigned a zero dollar value. (*Id.* at 306.)

Witness Duff described the Sub 1130 Agreement and explained why the Company believes that the Agreement does not support the Public Staff's position. (*Id.* at 307-15.) According to witness Duff, one of the primary purposes for the Sub 1130 revisions to the mechanism was to eliminate the previous "trigger" approach for updating avoided costs, so that avoided energy and capacity costs are updated essentially every two years instead of waiting for certain thresholds to be met. (*Id.* at 308-09.) The second primary purpose of the agreement is that it changed the source and methodology for calculating avoided energy costs which previously had been based on the IRP, so that like avoided capacity costs, they would now be derived from the biennial avoided cost proceeding. (*Id.* at 309.) He noted that the revisions to the mechanism approved by the Commission in Sub 1130 do not change the data source or methodology by which the Company was to calculate avoided capacity costs. (*Id.* at 310.)

Witness Duff described how, consistent with the revisions to DEC's DSM/EE cost recovery mechanism that the Commission approved in the Sub 1130 Order, the Company derived both the avoided energy and avoided capacity using the rates approved

in the Company's most recent biennial avoided cost proceeding, which in this case is Sub 148. (*Id.* at 310-11.) In particular, he noted that the Company utilized the avoided capacity value calculated using the Peaker Method consistent with the Company's understanding of the Sub 1130 Agreement, which, in the Company's view, did not modify the approach used in past DSM/EE proceedings. (*Id.*)

He explained how the Company's application of avoided capacity values for its DSM/EE programs is also consistent with his testimony in last year's DSM/EE proceeding (which, he stated, witness Williams mischaracterized and took out of context), as well as that of Public Staff witness Hinton. (*Id.* at 312-14.) In fact, the Company agrees with Mr. Hinton's testimony that the rates paid QFs are generally linked to the avoided cost rates utilized for DSM/EE; however, that does not mean the rates are the same. (*Id.* at 313-14.)

Witness Duff also testified about how the Company's application of values for avoided capacity for DSM/EE is also consistent with calculations the Company provided the Public Staff when the parties reached the Sub 1130 agreement, which showed what the change in Vintage 2019 PPI would be under the proposed revisions to the mechanism if the avoided costs rates pending before the Commission in E-100, Sub 148 were approved. (Tr. at 314-15.) This analysis clearly reflected avoided capacity values in the years 2019 through 2022, rather than the zero value advocated by witness Williams. (*Id.* at 315.)

Witness Duff also disagreed with the Public Staff's argument that the Sub 148 Order dictates that the Company must use zero values instead of capacity values for existing DSM/EE programs. (*Id.* at 315-16.) He explained how witness Williams quoted

the Sub 148 Order out of context, and that the language witness William's referenced does not support the Public Staff's position. (*Id.*) He also noted that witness Williams appears to imply that EE is the first capacity resource that should be cut out of the Company's resource plan, which would be inconsistent with the policy articulated by the North Carolina legislature in Senate Bill 3 to promote energy efficiency in this state. (*Id.* at 316-17.)

Witness Stevie explained why DEC believes the Public Staff's approach is inappropriate and underestimates the value of the Company's DSM/EE programs. (*Id.* at 306.) He noted that the Public Staff's recommendation would result in the removal of 1,119 MW of DSM impacts and 220 MW of EE impacts of summer capability in 2019, based upon the referenced DEC IRP. (*Id.* at 318.) In his testimony, he described several reasons why this is not a reasonable approach. (*Id.*) First, with respect to the DSM portion, he testified that the Public Staff has ignored the legacy aspect of the DSM programs. (*Id.*) He stated that the DSM programs are not incremental programs, but rather are established programs that are treated as a dispatchable resource in the IRP. (*Id.* at 318-19, 323.)

As for the usefulness of the Company's DSM programs, Dr. Stevie noted that witness Williams' own testimony points out that by the year 2022, 95% of the DSM programs would be needed to defer the need for capacity to the year 2023. (*Id.* at 319.) According to witness Stevie, if the Company's legacy DSM programs were closed tomorrow, there would be an immediate need for new capacity. (*Id.*; *see also*, Stevie/Duff Stipulated Ex. 1 (DEC's Response to Public Staff Data Request 3-2) ("The avoided capacity benefit attributed to the DSM/EE portfolio is in the public interest

because if the DSM/EE portfolio had not been included in the underlying resource plan, that resource plan would have shown an immediate resource need, thereby requiring the construction of additional capacity.”.) Witness Stevie then asked, “How can a resource such as the legacy DSM programs, that are in part responsible for the deferral of the need for new capacity, not receive a capacity valuation?” (*Id.* at 319.)

Witness Stevie testified that the Company believes it is appropriate to recognize the similarity between the continuing capacity value for these legacy DSM programs and QFs that had established legally enforceable LEOs or had signed power purchase agreements with the Company prior to November 15, 2016. (*Id.*) He stated that it is his understanding that these legacy QFs are now receiving long-term fixed rates (up to 15 years) that included capacity values in every year based on the Commission’s policies and avoided cost orders in effect prior to House Bill 589’s enactment. (*Id.* at 320.) He noted that no party has recommended a retroactive revision of existing purchase power agreements to modify the capacity payments to reflect the Commission’s Sub 148 Order. (*Id.*) Dr. Stevie asked, hypothetically: “If a power plant were designated used and useful and placed into service, but subsequently there is an unanticipated recession that caused a reduction in the projected loads, would it be reasonable to penalize the Company for a past decision that was deemed reasonable at the time?” (*Id.* at 319.) He concluded that this is similar to what the Public Staff is recommending for DSM/EE and is not reasonable. (*Id.*)

Dr. Stevie observed that, with respect to the Company’s EE programs, the Company’s MyHER program is effectively in the same position as the legacy DSM programs. (*Id.* at 321.) The MW capability provided by the MyHER EE program was

created in the past, prior to the establishment of the new avoided cost rates. (*Id.*) All that is required is the expenditure of funds to maintain the impacts, just like the Company must do to maintain the availability of the impacts from the legacy DSM programs. (*Id.*) Accordingly, he determined that the MyHER program impacts are also not incremental or new after November 2016; they are embedded in the resource plan, and like legacy QFs with LEOs existing prior to November 15, 2016, should receive a capacity value in the 2019 to 2022 timeframe. (*Id.* at 321-22.)

Finally, Dr. Stevie explained that it makes sense to recognize the capacity value of the Company's other EE programs during the 2019 to 2022 period in order to be consistent with the underlying resource plan and because it would not be realistic or advisable to suspend these programs until a capacity need arises (which, from a financial perspective, is effectively what the Public Staff's position is telling the Company it should do). (*See id.* at 322-23.)

Discussion and Conclusions

"The heart of a contract is the intention of the parties, which is ascertained by the subject matter of the contract, the language used, the purpose sought, and the situation of the parties at the time." *Se. Caissons, LLC v. Choate Constr. Co.*, 784 S.E.2d 650, 655 (N.C. Ct. App. 2016) (citing *Pike v. Wachovia Bank & Trust Co.*, 274 N.C. 1, 11 (1968) (citations omitted)). To ascertain intent, a court properly "consider[s] the language, subject matter and purpose of the contract, as well as the situation of the parties at the time, and may even read into a contract such implied provisions as may be necessary to effect the parties' intent." *Fed. Realty Inv. Trust v. Belk-Tyler*, 56 N.C. App. 363, 367 (1982); *see also Offiss, Inc. v. First Union Nat. Bank*, 150 N.C. App. 356, 363 (2002)

(courts must consider “the expressed intent of the parties”); *N. Star Mgmt. of Am., LLC v. Sedlacek*, 235 N.C. App. 588, 592, 762 S.E.2d 357, 361 (2014) (courts must “ascertain the intention of the parties at the moment of its execution”).

Based on the record in this proceeding, as well as the record in Sub 1130, the Commission finds and concludes that the Company’s calculation of Rider 10 is consistent with the language and intent of the Sub 1130 Agreement. As witness Duff testified, the Sub 1130 Agreement was intended to eliminate the trigger method, so that avoided costs would be updated more frequently, and to change the source of avoided energy costs, so that avoided energy and avoided capacity rates for DSM/EE would be derived from the same proceeding. (Tr. at 308-09, 311.) The revisions to Paragraphs 19, 23, and 69 resulting from the Sub 1130 Agreement did not alter the source or manner in which the avoided capacity costs are to be derived for the purpose of calculating cost-effectiveness and incentives associated with DSM/EE programs. (*See id.* at 310-11; *see also* Stevie/Duff Stipulated Ex. 8 (DEC’s Response to Public Staff Data Request 22-2).) Accordingly, this year, the Company derived its proposed annual avoided capacity rate for DSM/EE as it always has – by dividing the annual capacity cost from the applicable Avoided Cost Proceeding (in this case, Sub 148) by the megawatt rating. (*See* Tr. at 310-11; *see also* Stevie/Duff Stipulated Ex. 7 (DEC’s Confidential Response to Public Staff Data Request 21-3¹⁵).) For DSM/EE programs already providing a capacity value underlying the resource plan used in Sub 148, the Company assumed that these resources would create a value equivalent to the cost of building a new peaker – a method that has been used in all past DSM/EE filings. (*See* Tr. at 310-11; *see also* Stevie/Duff Stipulated

¹⁵ The Company has only included public information from this response in this Proposed Order.

Ex. 8 (DEC's Response to Public Staff Data Request 22-1).) This starting point value of building a peaker was provided in Sub 148 in 2016 dollars and that value was then escalated at the 2.5% rate, also approved in Sub 148. (*See* Stevie/Duff Stipulated Ex. 8 (DEC's Response to Public Staff Data Request 22-1).)

Importantly, the avoided capacity rate used for DSM/EE and the avoided capacity rate paid to a QF are not identical. This was true under the Sub 1032 Mechanism, as well as under the revisions approved in Sub 1130. For example, the Sub 1032 Mechanism states that the per kW avoided capacity costs reflected in Avoided Cost Proceeding are "used to calculate avoided cost savings" for purposes of the PPI. The revised paragraphs of the Mechanism approved in Sub 1130 provide that the program-specific per kW avoided capacity benefits shall be "derived from the underlying resource plan, production cost model, and cost inputs that generated the avoided capacity and avoided energy credits reflected in the most recent Commission-approved Biennial Determination of Avoided Cost Rates for Electric Utility Purchases from Qualifying Facilities." Stated another way, the avoided capacity cost reflected in the Avoided Cost Proceeding has always been an input to the calculation of avoided capacity benefits for purposes of DSM/EE but was never intended to be the same value. If the parties had intended for the avoided capacity rate the Company pays QFs to be equivalent to the avoided capacity rate calculated for DSM/EE, they would have said so – they did not. This much is clear from the plain language of the Mechanism.

Understanding that the avoided capacity rate reflected in the Avoided Cost Proceeding is merely an input to the DSM/EE avoided capacity calculation, we must look at the parties' intent to see whether they envisioned – at the time they entered into the

Sub 1130 Agreement – for that input to be zero. The Commission may properly consider the parties’ intent at the time of signing to interpret the Sub 1130 Agreement’s express terms. *See Chapel Hill Spa Health Club, Inc. v. Goodman*, 90 N.C. App. 198, 203 (1988). For example, the North Carolina Court of Appeals found that price-discount discussions made at the time of signing a membership agreement were “in fact the basis for defendant’s decision to join” and thus properly considered in determining the membership agreement’s pricing. *Id.* Because both parties presented evidence of the membership agreement and the oral discussions, the appellate court determined that both were properly considered part of the “integrated transaction.” *Id.* Here, both DEC and the Public Staff have presented evidence from the parties’ discussions that shows the intent was to use capacity values that are not zero when determining the Company’s avoided capacity cost of DSM/EE. These discussions were in fact the basis for the Company’s decision to enter into the Sub 1130 Agreement and thus are properly considered by the Commission in determining the meaning of the Agreement.

As referenced in the Affidavit of Public Staff witness Maness in Sub 1130, the Company provided the Public Staff with calculations showing that the projected PPI for 2018 would be reduced by approximately \$9.5 million if the Public Staff’s interpretation of the prior version of Paragraph 69 (i.e., that the triggers had been hit) had been applied to the calculation of the Vintage 2018 PPI. (Sub 1130 Tr. at 177.) The Company’s position was that there should be no reduction to the Vintage 2018 PPI because the triggers had not been hit. (*Id.*) The monetary adjustment (reduction to the Vintage 2018 PPI) agreed to by the Public Staff and the Company in the Sub 1130 Agreement was

\$6,750,000. (*Id.* at 178.) When asked by counsel for NCSEA where this number came from, witness Maness testified that:

in general, from the Public Staff's perspective, if paragraph 69 was taken to definitely apply to Vintage Year 2018, we felt that the proper interpretation would have be [sic] the approximately \$9.5 million. There is a little bit of ambiguity in that paragraph 69 doesn't specifically mention Vintage 2018. *Also, in the course of our discussions with the Company, we began discussing switching to the, what we've termed the "PURPA method" and that would have resulted in a reduction of the PPI that would have been – I don't have the exact number but may be a little bit more than half of the difference between the Company's position and the reduction by the \$9.5 million.* In our internal discussions and deliberations within the Public Staff, we felt the \$6.75 million appropriately balanced all of the issues in the case between the PURPA method, the Public Staff's interpretation, and the Company's interpretation of paragraph 69, and we were satisfied that that was a reasonable conclusion and would be beneficial to the customers.

(*Id.* at 267-68 (emphasis added).)

In his Sub 1130 testimony, witness Maness specifically references a calculation of the resulting impact on PPI as calculated under the "PURPA method" – i.e., a determination of what the Vintage 2019 PPI would be if the Sub 1130 Agreement were approved by the Commission. *See id.* More importantly, he references the number resulting from this calculation being a key component of the compromise to reduce the Company's PPI by \$6,750,000. *See id.*

This is corroborated by Company witness Duff. In his rebuttal testimony in this case, he explains that, as part of the exact same analysis the Company performed for the Public Staff that produced the \$9.5 million figure, the Company also provided a projection of what the change in Vintage 2019 PPI would be under the revisions to Paragraph 69 if the proposed avoided cost rates pending before the Commission in Sub

148 were approved. (Tr. at 314.) Specifically, the Company provided a projected stream of avoided capacity costs that reflected capacity values beginning in year one (2019). (*Id.* at 314-15.) The analysis provided clearly reflected avoided capacity values in the years 2019 through 2022, rather than the zero value now advocated by the Public Staff. (*Id.* at 315.)

Testimony from both the Company and the Public Staff demonstrates that the Public Staff knew at the time that it entered into the Sub 1130 Agreement that the Company did not intend to apply zero values for capacity for the Vintage 2019 PPI, and that the monetary adjustment the parties agreed to as part of the Sub 1130 Agreement was based on analysis that did not include zero values for capacity. This could mean one of two things: (1) that the Public Staff shared the Company's intent that zeros should not be applied for capacity for DSM/EE, or (2) that the Public Staff knew it was the Company's intent that zeros should not be applied for capacity, disagreed, but failed to challenge the assumption upon which this analysis was based.¹⁶

As the Company stated in response to a Public Staff data request, "Since this analysis was relied upon in the development of the agreed-upon reduction to the 2018 PPI in Docket E-7, Sub 1130 (as acknowledged in Witness Maness testimony at the Sub 1130 hearing) and the Public Staff never expressed disagreement with the analysis, the Company believes that its intent was clear and was surprised that the Public Staff would take the position that zeros should be used for avoided capacity when this analysis did not

¹⁶ The Public Staff's position was a \$9.5 million reduction, the Company's position was a \$0 reduction, and as witness Maness testified, the figure the Company calculated using the method described in revised Paragraph 69 was somewhere in between. Had the Company used zeros for capacity in applying the revised Paragraph 69, the number would have been substantially lower, and thus the reduction to the Vintage 2018 PPI that the Company would have been willing to agree to as a compromise would have been correspondingly smaller.

utilize zeros for avoided capacity for the Vintage 2019 PPI.”¹⁷ (Stevie/Duff Stipulated Ex. 8 (DEC’s Response to Public Staff Data Request 22-4).)

Furthermore, evidence that the Public Staff shared – or at least was aware of – the Company’s intent, is the Public Staff’s recommendation of approval of the addition of the “Bring Your Own Thermostat” (“BYOT”) measure to the Company’s Power Manager Program. The Company filed this program modification on December 28, 2017, after both the Sub 1130 Order and the Sub 148 Order had been issued and House Bill 589 had gone into effect. (*See* DEC’s Proposed Modifications to the Power Manager Load Control Service - Rider PM, Docket No. E-7, Sub 1032, December 28, 2017 (“BYOT Application”).) Revised Paragraph 19 provides that for program approval filings, like the BYOT Application, the Company shall use the same method as prescribed by revised Paragraph 69, with the avoided capacity and energy benefits derived from the most recent Commission-approved Avoided Cost Proceeding as of the date of the filing for approval. Accordingly, the Company applied this method utilizing avoided cost rates derived from the avoided capacity credits reflected in the Sub 148 Avoided Cost Proceeding to determine the cost-effectiveness of Power Manager with the addition of BYOT. (*See* BYOT Application.) Significantly, the Company included capacity values that were *not*

¹⁷ The Public Staff included a caveat to the Sub 1130 Agreement that the Public Staff would be able to propose further revisions to the Mechanism should the methodologies adopted in an Avoided Cost Proceeding change in a manner that conflicts with their use in the DSM/EE context. (Sub 1130 Tr. at 180-81.) The Public Staff was particularly concerned with impact that adoption of the “two-year refresh” proposal by the Company would have on the method for calculating avoided energy costs pursuant to the Sub 1130 Agreement. (*See id.*) As discussed below, the two-year refresh proposal was rejected by the Commission in the Sub 148 Order, so this caveat did not come into play in this proceeding. Nevertheless, it serves as further evidence that the Company was confident that the Public Staff shared its intent, as the Company did not see any need to caveat the Agreement in like manner (though, as explained further below, the adoption of a zero capacity value clearly would conflict with the use of avoided costs from the Sub 148 proceeding in the DSM/EE context).

zero in its filing. (*See id.*, Attachment A, lines 40-43; Attachment B, line 3.) In fact, since Power Manager is a DSM measure, there are no avoided energy benefits – only avoided capacity and avoided T&D – as shown on Attachments A (*see* lines 40-49) and B (*see* line 3).

It is clear that the Public Staff examined the cost-effectiveness evaluations the Company provided in the BYOT Application. As the Commission stated in its February 7, 2018 *Order Approving Program Modifications*, the Company’s “application includes estimates of the Program’s impacts, costs, and benefits used to calculate the cost-effectiveness of the Program. DEC’s calculations indicate that the Program will remain cost-effective under the Total Resource Cost, the Utility Cost, and the Rate Impact Measure tests.” The Public Staff recommended that the Commission approve the BYOT modification to the Power Manager program, stating that “the Program has the potential to continue to encourage energy efficiency, appears to continue to be cost effective, will be included in future DEC IRPs, and is in the public interest.” (*Id.*)

The Company has clear and consistent evidence of its intent and the Public Staff’s knowledge of its intent. By contrast, the only witness in this proceeding testifying about the Public Staff’s intent – witness Williams – was not a participant in and has no firsthand knowledge of the Sub 1130 discussions, as he was not employed by the Public Staff during that time. (*See* Tr. at 230; *see also*, Public Staff’s Response to DEC Data Request 1-13.) While witness Williams cites witness Hinton’s testimony in Sub 1130 as evidence that the Public Staff’s position is consistent with the letter and intent of the Sub

1130 Agreement,¹⁸ Mr. Hinton merely testified that the use of PURPA-based avoided costs (which, as mentioned above, the Company has always used for avoided capacity) links the Company's DSM/EE savings and financial incentives with the avoided cost rates it pays QFs. (*Id.* at 218, 220-21; *see also*, Sub 1130 Tr. at 250-51.) However, this does not necessarily support the Public Staff's position. Because the avoided costs for DSM/EE programs are derived from the underlying resource plan, production cost model, and cost inputs that generated the avoided capacity and avoided energy credits reflected in the Avoided Cost Proceeding, they are, in fact, linked to (but not the same as) the avoided cost rates the Company pays QFs. This was the case under the Sub 1032 Mechanism and is the case under the Sub 1130 revisions.

The Public Staff then infers that because avoided costs for DSM/EE are linked to those paid to QFs, the avoided cost rates for capacity that are used in the calculation of ongoing cost-effectiveness and utility incentives for DSM/EE programs should be consistent with the avoided cost rates for capacity for new QFs. (Tr. at 216-17.) However, as discussed below, existing DSM/EE programs are much more analogous to legacy QFs, which receive a capacity value that is not zero in 2019 through 2022. It is therefore appropriate for the Company to use the forecasted avoided capacity costs that recognize the value of the legacy DSM/EE resources in each year underlying the Company's resource plan.

¹⁸ Witness Williams also cites witness Duff's Sub 1130 testimony as being consistent with the Public Staff's position – it is not. As witness Duff pointed out in his rebuttal testimony in this proceeding, his testimony in Sub 1130 clearly referred to the fact that the proposed revisions align avoided energy costs *for DSM/EE* with avoided capacity costs *for DSM/EE*. (Sub 1130 Tr. at 65-66.) The inconsistent assumptions to which he referred were that the avoided energy cost for DSM/EE previously had been derived from the IRP proceeding, whereas the avoided capacity cost for DSM/EE had been derived from the Avoided Cost Proceeding. *See id.* The Company also pointed this out in response to a data request. (Stevie/Duff Stipulated Ex. 3 (DEC's Response to Public Staff Data Request 16-1).)

Witness Williams asserts that because, as long as the Sub 148 Order is in effect, new QFs seeking to sell their energy and capacity to DEC will not be paid capacity payments until new capacity is needed, “incentives of both new DSM/EE programs and new vintages of existing DSM/EE programs starting in vintage 2019 should be based on avoided capacity rates that reflect zero avoided capacity value in years prior to the identified need for new capacity in the Company’s IRP.” (Tr. at 216-17.) In other words, the Public Staff’s position is based on the assumption that all of the Company’s DSM/EE programs are “new” and incremental to the IRP. The Company has shown that this assumption is not accurate.

First, witness Williams inappropriately defines “new” to include “new vintages of existing DSM/EE programs,” which necessarily includes every one of the Company’s DSM/EE programs regardless of when they were established and whether they were included in the IRP. (*See* Tr. at 217.) Based upon this position, the Public Staff removes the avoided capacity value for *all* of the DSM/EE kW impacts in the years 2019 to 2020. (*See id.* at 318.) As shown in the 2016 DEC IRP, in 2019 this represents the removal of the capacity value for 1,119 MW of DSM impacts and 220 MW of EE impacts of summer capability from the Company’s existing portfolio of approved DSM/EE programs. (*Id.*)

In defining “new” in such a manner, the Public Staff ignores the legacy aspect of the Company’s DSM programs. To the contrary, as DEC witness Stevie stated, these are established programs that are treated as a dispatchable resource in the Company’s IRP. (*Id.* at 319, 323.) Even the Public Staff’s witnesses acknowledge that the DSM programs included in the IRP block are stable and expected to continue for the foreseeable future.

(*See id.* at 227.) Indeed, witness Williams’ own analysis demonstrated that the existing DSM resources provide real value in terms of capacity during the 2019 to 2022 timeframe. (*Id.* at 224-26, 319.) In his testimony, he states that by year 2022, 95% of the DSM programs would be needed to defer the need for capacity to the year 2023. (*Id.* at 225.) He also acknowledges that the DSM programs are necessary in 2019 and 2020 to avoid building new capacity. (*Id.* at 225-26.) As witness Stevie testified, if the Company’s legacy DSM programs were closed tomorrow, there would be an immediate need for new capacity. (*Id.* at 319.) The Commission agrees with witness Stevie that DSM programs are not incremental or “new” programs in the sense that witness Williams uses the term. (*Id.* at 318.)

The Commission also agrees it is appropriate to recognize the similarity between the continuing capacity value for these legacy DSM programs and QFs that had established LEOs or had signed power purchase agreements with the Company prior to November 15, 2016. These legacy QFs are now receiving long-term fixed rates that included capacity values in every year based on the Commission’s policies and avoided cost orders in effect prior to House Bill 589’s enactment. (Tr. at 320.) Likewise, the Company should be compensated for its legacy DSM programs based upon the avoided cost framework in existence at the time of Commission approval. Accordingly, the Company’s legacy DSM programs, which are, in fact, providing capacity value in the near-term to avoid future capacity needs, deserve to be assigned an avoided capacity value similar to the legacy QFs.

The Company has also shown that the MyHER program impacts are also not incremental or new after November 2016. (*Id.* at 321-22.) They are embedded in the

resource plan, and like legacy QFs with LEOs existing prior to November 15, 2016, should receive a capacity value in the 2019 to 2022 time period. (*Id.* at 322.)

The Company acknowledges that its other EE programs, aside from MyHER, are in some respects different than the DSM programs, in that most represent incremental new impacts in the resource plan. (*Id.* at 321.) However, the Company's inputs to the IRP for the cost of the DSM and EE programs include not just the implementation cost, but also the estimate of the utility's PPI, which contains a capacity value for the years 2019 through 2022. (*Id.* at 323.) As a result, to be consistent with the underlying resource plan, including the cost inputs, it is appropriate to include the avoided capacity value of these EE programs, as well, for the years 2019 to 2022. (*Id.*)

Further, there is a summer capacity need of 425 MW (379 MW for the winter) from the EE programs in the year 2023.¹⁹ (*Id.* at 322.) As witness Stevie pointed out, "anyone who has been around the implementation of EE programs for any length of time will recognize that one does not create 425 MW of EE overnight. It takes time. It takes time to build customer awareness. It takes time for equipment to wear out and be replaced or for customers to recognize that it is time to change out equipment." (*Id.*) In other words, DEC cannot flip a switch and turn an EE program on or off. While the Public Staff would not likely advocate for the Company to shut down its existing EE programs during "gap years" until a capacity need arrives, from a financial perspective, it is effectively telling them to do just that.

In sum, it is clear that the legacy DSM programs and the MyHER program deserve a capacity value that is not zero for the years 2019 to 2022 and beyond. The

¹⁹ These figures do not include the MW impacts of the MyHER program.

legacy DSM programs are not incremental and are treated as a dispatchable resource in the IRP. In addition, even the Public Staff's own analysis concluded that the legacy DSM programs provide a capacity value during the 2019 to 2022 time period. With respect to the MyHER EE program, because its load impacts are also not incremental and existed prior to the treated establishment of the new avoided cost rates, they also deserve a capacity value that is not zero. Finally, in order to be consistent with the underlying resource plan and the public policy discussed further below, the Commission should also include the avoided capacity value for all of the Company's remaining EE programs for the years 2019 to 2022.

Finally, the Commission finds that adopting the Company's position with respect to this issue is consistent with the public policy of the State of North Carolina. Witness Williams' testimony implies that DSM/EE is the first capacity resource that should be cut out of the Company's resource plan in the event DEC's IRP does not show a need for capacity. (*See* Tr. at 224-27.) Similarly, by urging the Commission to adopt zero avoided capacity values for DSM/EE, the Public Staff seeks to remove the financial incentive for the Company to pursue certain programs in years 2019 to 2022, and effectively sends the Company the message that it is not worth it to encourage customers to find ways to reduce their kW impact.

In addition, as witness Williamson acknowledges, as avoided cost rates decrease, it becomes difficult for a DSM/EE program to produce cost-effective savings. (Tr. at 183.) Indeed, for Vintage 2019, application of the Public Staff's position would result in two of the Company's existing programs crossing the threshold from cost-effective to not cost-effective. (*Id.* at 186-88.) This trend is sure to continue if zero capacity values

continue to be applied through 2022. The Company has shown that given the ramp up time required to engage customers and build participation in DSM/EE programs, if current programs are canceled due to failing cost-effectiveness (in this case, due solely to the application of zero capacity values), it would be difficult to resurrect them once cost-effectiveness is restored.

In evaluating how to treat the Company's existing portfolio of DSM/EE Programs, it is also important to recognize that DSM and EE programs are a desirable resource that is not only encouraged but mandated by the State. Senate Bill 3 was passed in August 2007 "to promote the development of renewable energy and energy efficiency through the implementation of a Renewable Energy and Energy Efficiency Portfolio Standard (REPS)." N.C. Gen. Stat. § 62-2(10). The stated goals of the legislation are to diversify the resources used to reliably meet the energy needs of consumers in the State, provide greater energy security through the use of indigenous energy resources available within the State, encourage private investment in renewable energy and EE, and provide improved air quality and other benefits to energy consumers and citizens of the State. *Id.* To this end, Senate Bill 3 provides that electric utilities "shall implement demand-side management and energy efficiency measures and use supply-side resources to establish the least cost mix of demand reduction and generation measures that meet the electricity needs of its customers." *See* N.C. Gen. Stat. § 62-133.9. Through the enactment of REPS, Senate Bill 3 also requires each electric public utility in the State to meet increasing percentages of its energy needs each year through EE measures. *See* N.C. Gen. Stat. § 62-133.8. Finally, this legislation provides that the utilities shall be compensated for their DSM/EE efforts and allows incentives to be awarded, including

rewards based upon shared savings and avoided costs achieved by DSM/EE measures. *See* N.C. Gen. Stat. § 62-133.9.

Apart from Senate Bill 3, the Public Utilities Act more broadly promotes the establishment of “just and reasonable rates...consistent with long-term management and conservation of energy resources by avoiding wasteful, uneconomic and inefficient uses of energy” and encourages “harmony between public utilities, their users and the environment.” *See* N.C. Gen. Stat. § 62-2(4) and (5). In addition, the Act provides that it is the public policy of the State of North Carolina to:

To assure that resources necessary to meet future growth through the provision of adequate, reliable utility service include use of the entire spectrum of demand-side options, including but not limited to conservation, load management and efficiency programs, as additional sources of energy supply and/or energy demand reductions. To that end, to require energy planning and fixing of rates in a manner to result in the least cost mix of generation and demand-reduction measures which is achievable, including consideration of appropriate rewards to utilities for efficiency and conservation which decrease utility bills[.]

N.C. Gen. Stat. § 62-2(3a). Through Senate Bill 3 and the stated policy of the Public Utilities Act, it is apparent the legislature not only appreciates the importance of energy efficiency, but also recognizes that if a utility is not appropriately compensated and incentivized for its DSM/EE efforts (which, from a financial perspective, equate to a utility spending money to encourage its customers to buy less of its product), it is difficult to put these efforts on equal footing with supply-side resources, for which the Company receives a return. As the Company indicated in its response to a Public Staff data request:

When the Company implements DSM/EE programs, it is delaying the need to build new power plants. Delaying or eliminating the need to build new capacity impacts the

expected future earnings for the Company. To remove the financial disincentive associated with the pursuit of DSM/EE, it makes sense to provide the utility with a financial reward similar to that associated with the earnings on a power plant. In other words, in order to further the policy purpose of encouraging utilities to pursue energy efficiency, financial incentives are designed to make the utility essentially indifferent from a financial standpoint with respect to implementing DSM/EE programs versus building a new plant. If the incentive is reduced, that violates that regulatory compact.

(Stevie/Duff Stipulated Ex. No. 7 (DEC's Response to Public Staff Data Request 21-2).)

Of course, the policies discussed above do not give the Company free reign to implement – and recover incentives for – any DSM and EE programs it chooses to offer without regard to cost to customers. In accordance with the statutory framework outlined above, through its IRP process, the Company has developed a least cost mix of resources which includes a defined block of cost-effective DSM/EE measures. Unlike natural gas units, solar facilities, or other supply-side options, DSM/EE MW impacts depend on forecasts of customer adoption for each individual DSM/EE measure and program.

(Stevie/Duff Stipulated Ex. 2 (DEC's Response to Public Staff Data Request 14-3).)

Long-term adoption rate estimates are shown at technical potential, economic potential, and achievable potential levels as represented in periodically updated “Market Potential Studies.” (*Id.*) Shorter term projections of MW impacts come from forecasted adoption rates from existing Commission-approved DSM/EE programs based on the experience of program managers and evaluation, measurement, and verification (EM&V). (*Id.*) It is this combination of short-term projections for existing programs and longer term achievable potential that, when combined, produce the MW and MWh reduction in the retail load forecast due to utility-sponsored DSM/EE. (*Id.*) DSM/EE programs also have separate cost-effectiveness metrics, including the Total Resource Cost (TRC) test, the

Utility Cost Test (UCT), the Participant Test, and the Ratepayer Impact Measure (RIM) test. (*See id.*; *see also*, Tr. at 180.) Only approved cost-effective programs reduce the retail load that goes into the IRP. (Stevie/Duff Stipulated Ex. 2 (DEC’s Response to Public Staff Data Request 14-3).) Public Staff witness Williams has characterized the block of DSM/EE measures the Company has included in its IRP as “fluid” (*see* Tr. at 223), but the Company has shown that these are real programs that create real savings. These savings, in turn, offset the Company’s need to build new generation, and the Company should be appropriately incentivized to implement these programs.

As the Commission and the General Assembly have found, customers should not have to pay for third parties to supply generation capacity that the Company does not need – that is the crux of N.C. Gen. Stat. § 62-156 and the Sub 148 Order. However, it is far different to encourage customers to use less energy and capacity to decrease their bills. And as dictated by the State of North Carolina, this should be encouraged and reflected in the Company’s rates through “consideration of appropriate rewards to utilities for efficiency and conservation which decrease utility bills.”

Witness Williams cites N.C. Gen. Stat. § 62-156 to support his argument that the Company should receive zero capacity values for DSM/EE. However, this statute by its terms is limited to small power producers. If the General Assembly had intended for DSM/EE to be included in this provision of HB 589, it certainly could have done so, but did not.

Similarly, if the Commission had intended for DSM/EE to receive zeros, it would have said so in the Sub 148 Order. However, nowhere in the Commission’s discussion of either the changed circumstances warranting the change in avoided cost methodology

(Finding of Fact No. 1) nor its discussion of the adoption of the approach that new QFs should not receive payments for capacity in years in which there is no capacity need (Finding of Fact Nos. 5 and 6), does the Commission mention DSM/EE. *See* Sub 148 Order, pp. 9-19, 39-50. The only mention of DSM/EE in the Sub 148 Order (Finding of Fact No. 10) is in a manner that is irrelevant to the issue at hand.²⁰ *Id.* at 69. While witness Williams contends that the Sub 148 Order, in effect, commands that DSM/EE should receive zero capacity value, nothing in the Commission's order dictates this result.

The main driver for the Commission's decision to adopt the proposal that customers should not have to pay for capacity the Company does not need was the growth in solar. In finding that the economic and regulatory circumstances facing QFs and utilities have changed since the previous Avoided Cost Proceeding, the Commission cited substantial evidence relating to the sheer volume of solar QF development, as well as testimony that the significant growth of facilities from which utilities are obligated to

²⁰ In particular, the Commission noted

that in addition to providing the basis for electric power purchases from QFs by a utility, the Commission-determined avoided costs are utilized in, among other applications, the determination of the cost effectiveness of DSM/EE programs and the calculation of the performance incentives for such programs, the determination of the incremental costs of compliance with REPS for cost recovery purposes; and in some ratemaking, such as determination of stand-by rates. In these contexts, it is appropriate for the rates to be reflective of the utilities' actual forecasted rates over a longer term, not based on a short-term forecast that is fixed for the duration of a longer term."

Sub 148 Order, p. 69.

The portion of the Sub 148 Order that contains this paragraph is specifically dealing with Finding of Fact No. 10, which does not deal with avoided capacity rates, but rather with the Commission's denial of DEC and DEP's request to reset energy rates utilized in a standard contract every two years. *See id.* at 61-70. That the Commission mentions DSM/EE in the section of its order dealing with the "two-year refresh," makes sense because several months prior, the Public Staff had noted its concern about the impact of the two-year refresh of avoided energy rates on DSM/EE to the Commission, and even incorporated its concern as a caveat to the Sub 1130 Agreement. (Sub 1130 Tr. at 180-81.) While the language referenced indicates the Commission believes that because the avoided energy rates are utilized in calculations associated with cost-effectiveness and performance incentives related to DSM/EE programs, they should not be updated every two years, it does not support the Public Staff's contention related the application of avoided capacity rates.

purchase energy and capacity has increased the risk of potential overpayment by ratepayers. *See* Sub 148 Order, pp. 9-19. For example, the Commission relied upon testimony from Company witness Yates that North Carolina’s marketplace for solar is “distorted,” which results in artificially high costs being passed on to North Carolina ratepayers. *Id.* at 16. The Commission further found that the increasing amount of solar-powered QFs interconnected to DEC’s electric systems is “inhibiting the Companies’ ability to fulfill its public service mission and statutory obligation to provide safe and reliable energy to its customers at reasonable rates.” *Id.* The Commission also cited testimony from witness Hinton that the pace of QF solar development is now exceeding the growth experienced by the utilities. *Id.* at 13. Witness Hinton also explained that this higher penetration of solar QF resources is posing operational and technical challenges for the utilities in meeting their obligation to provide safe, reliable, and economic service. *Id.* The Commission agreed that the implications of the pace and level of QF development continuing unabated poses serious risk of overpayment by utility ratepayers and operational soundness of utility electric systems, and, ultimately, calls in to question the State’s continued compliance with PURPA’s requirements. *Id.* at 15.

With respect to the Company and DEP’s proposal regarding the use of zero capacity value for QF payments in years in which the IRP does not show a capacity need, witness Hinton testified that contrary to the position taken by the Public Staff in prior proceedings, “he believed that *in light of current circumstances related to the amount of solar generation online and pending in the interconnection queue*, it is appropriate for the utilities to adjust their avoided cost rates to provide a capacity payment to new QFs only when additional capacity is needed on the system.” *Id.* at 46 (emphasis added). The

Commission again agreed with witness Hinton, finding that including a capacity credit only in those years in which the IRP has established a capacity deficiency sends a better price signal to the solar market. *Id.* at 49.

Finally, in concluding that QFs should only receive capacity payments in years in which the utility has a capacity need, the Commission noted that the operating characteristics of a QF resource must be considered in evaluating whether a QF resource can help to avoid the utility's planned capacity addition. *Id.* In considering these characteristics and other factors, the Commission concluded that the capacity value provided by additional solar PV does not necessarily help the utilities offset or avoid their next capacity need. *Id.* The Commission encouraged utilities to focus on improving rate design to ensure that the change in policies adopted in the Sub 148 Order does not adversely impact other small power producers for "problems that are specifically related to solar energy." *Id.* at 49-50.

DSM/EE by its very nature is different from a solar QF, and none of the policy reasons behind the Commission's shift in avoided costs methodology articulated in the Sub 148 Order apply to DSM/EE. There is no evidence in this proceeding that there is an over-supply of DSM/EE programs, that customers are paying artificially high prices for DSM/EE, or that DSM/EE is burdening the system. There is no showing of an overabundance of DSM/EE programs such that the Commission needs to send a price signal to the Company to cut back on its DSM/EE programs. In addition, as discussed several times herein, in evaluating the characteristics of DSM/EE resource, it is clear that DSM/EE can help to avoid planned capacity additions. In sum, there is a fundamental difference between what the Commission and General Assembly were trying to avoid –

customers paying for capacity in the form of additional generation that the Company does not need – and the Company’s implementation of DSM/EE programs to encourage customers to use less energy and capacity in accordance with the policy of the State of North Carolina as expressed in Senate Bill 3 and elsewhere in the Public Utilities Act.

Accordingly, the Commission finds and concludes that the Public Staff’s recommendation that determinations of the Company’s PPI and cost-effectiveness of its DSM/EE programs should be based on avoided capacity rates that reflect zero avoided capacity value in years prior to the identified need for new capacity in the Company’s IRP should be rejected. The Commission, therefore, denies the Public Staff’s downward adjustment to the Vintage 2019 PPI, accepts the cost-effectiveness calculations performed by the Company for purposes of Rider 10, and approves the Company’s calculation of the DSM/EE rates for Vintage 2019, as reflected in the rebuttal testimony and exhibits of DEC witness Miller.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 16-30

The evidence in support of these findings and conclusions can be found in the Sub 831 Order, the Sub 831 Found Revenues Order, the Sub 938 Waiver Order, the Sub 938 Second Waiver Order, the Sub 979 Order, the Sub 1032 Order, and the Sub 1130 Order; the Company’s Application; the testimony and exhibits of Company witnesses Miller and Evans; and in the testimony of Public Staff witnesses Maness and Williamson.

On March 7, 2018, DEC filed its Application seeking approval of Rider 10, which includes the formula for calculation of Rider EE, as well as the proposed billing factors to be effective for the 2019 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. (*See* Tr. at 65-69.)

Witness Miller provided an overview of the Mechanism, which is designed to allow the Company to collect revenue equal to its incurred program costs²¹ 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 65-66.) 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 72.) The system amount of PPI is then allocated to North Carolina retail customer classes in order to derive customer rates. (*Id.* at 73.) 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 49.)

The Company is allowed to 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. (*Id.* at 66.) 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 fixed revenues. (*Id.* at 73.) The fixed cost portion of the tariff rates is calculated by deducting the recovery of fuel and variable operation and maintenance

²¹ 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 the purpose of adopting and implementing new DSM and EE measures previously approved pursuant to Rule R8-68.

costs from the tariff rates. (*Id.*) 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.*) 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 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 45.) 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 45-46.)

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 66.) 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 66-67.) 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 67.)

Under the Sub 1032 Stipulation, as with the Sub 938 First Waiver Order and the Sub 831 Pilot, qualifying non-residential customers may opt out of the DSM and/or EE portion of Rider EE during annual election periods. (*Id.* at 74.) 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 74-75.) 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 75.) 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.*)

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 70.) For non-residential rates, the forecasted sales exclude the estimated sales to customers who have elected to opt out of paying Rider EE. (*Id.* at 70-71.) The non-residential billing factors are separately computed for each vintage. (*Id.* at 71.)

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.*)

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. (*Id.* at 72.) 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 67.) 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. (*Id.*) 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 10

Rider 10 consists of four prospective components: (1) a prospective Vintage 2019 component designed to collect program costs and the PPI for DEC's 2019 vintage of DSM programs; (2) a prospective Vintage 2019 component to collect program costs, the PPI, and the first year of NLR for DEC's 2019 vintage of EE programs; (3) a prospective

Vintage 2018 component designed to collect the second year of estimated NLR for DEC's 2018 vintage of EE programs; and (4) a prospective Vintage 2017 component designed to collect the third year of estimated NLR for DEC's 2017 vintage of EE programs. (*Id.* at 70.)

Pursuant to the Sub 938 Second Waiver Order and the Sub 1032 Order, the rate period for the prospective components of Rider 10 is January 1, 2019 through December 31, 2019. (*Id.* at 76.)

The prospective revenue requirements for Vintage 2017 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 2017 EE programs. (*Id.* at 77.) 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 1026, which became effective September 25, 2013 ("Sub 1026 Rates"). (*Id.*) These rates will be trued up during the EMF period to reflect the rates approved in Docket No. E-7, Sub 1146 ("Sub 1146 Rates"). (*Id.*)

The prospective revenue requirements for Vintage 2018 are determined separately for residential and non-residential customer classes and are based on the second year of estimated NLR for the Company's Vintage 2018 EE programs. (*Id.*) The amounts are based on estimated North Carolina retail kW and kWh reductions and the Sub 1026 Rates and will be trued up during the EMF period to reflect the Sub 1146 Rates. (*Id.*)

The prospective revenue requirements for Vintage 2019 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 78.) The program costs and

shared savings incentive are computed at the system level and allocated to North Carolina retail operations. (*Id.*) The NLR for EE programs are based on estimated North Carolina retail kW and kWh reductions and the Sub 1026 Rates and will be trued up during the EMF period to reflect the Sub 1146 Rates. (*Id.*)

On June 1, 2018, DEC witness Miller filed rebuttal testimony and exhibits reflecting prospective billing factors for Rider 10 of 0.4229 cents per kWh for all North Carolina retail residential customers, 0.3158 cents per kWh for non-residential Vintage 2019 EE participants, 0.0877 cents per kWh for non-residential Vintage 2019 DSM participants, 0.0695 cents per kWh for non-residential Vintage 2018 EE participants, 0.0030 cents per kWh for non-residential Vintage 2018 DSM participants, and 0.0801 cents per kWh for non-residential Vintage 2017 EE participants. (*Id.* at 296.)

EMF Components of Rider 10

Rider 10 includes the following EMF components: (1) an EMF component which consists of the true-up of Vintage 2017 program costs, PPI (shared savings and participation), and NLR for the Company's 2017 vintage of DSM and EE programs; (2) an EMF component which consists of the true-up of Vintage 2016 program costs, PPI (shared savings and participation), and NLR for the Company's 2016 vintage of DSM and EE programs; and (3) an EMF component which consists of the true-up of Vintage 2014 PPI (shared savings and participation) and NLR for the Company's 2014 vintage of DSM and EE programs. (*Id.* at 70.)

Witness Miller testified that pursuant to the Sub 938 Second Waiver Order and the Sub 1032 Order, the "test period" for the Vintage 2017 EMF component is January 1, 2017 through December 31, 2017. (*Id.* at 78.) As the Sub 938 Second Waiver Order

allows the EMF to cover multiple test periods, the test period for the Vintage 2016 EMF component is January 1, 2016 through December 31, 2016, the test period for the Vintage 2015 EMF component is January 1, 2015 through December 31, 2015, and the test period for the Vintage 2014 EMF component is January 1, 2014 through December 31, 2014. (*Id.*)

Witness Miller explained the updates to the Vintage 2017 estimate filed in 2016 that comprise the Vintage 2017 EMF component of Rider 10. (*Id.* at 79.) Estimated participation for Vintage 2017 was updated for actual participation for the period January through December 2017. (*Id.*) With regard to NLR, estimated participation for the Year 1 Vintage 2017 estimate assumed a January 1, 2017 sign-up date and used a half-year convention, while the NLR Year 1 Vintage 2017 true-up was updated for actual participation for the period January through December 2017 and actual 2017 lost revenue rates. (*Id.*) Found revenues for Year 1 of Vintage 2017 were trued up according to Commission-approved guidelines. (*Id.*) To reflect the results of EM&V, Vintage 2017 estimated avoided cost savings were updated pursuant to the EM&V Agreement. (*Id.*) Finally, while the Vintage 2017 estimate included only the programs approved prior to the filing of the estimated Vintage 2017 revenue requirement, the Vintage 2017 true-up was updated for new programs and pilots approved and implemented during Vintage 2017. (*Id.*) For DSM programs, the Vintage 2017 true-up reflects the actual quantity of demand reduction capability for the Vintage 2017 period. (*Id.* at 80.)

Actual year one (2017) NLR for Vintage 2017 were calculated using actual kW and kWh savings by North Carolina retail participants by customer class in 2017, based on actual participation and load impacts applied according to the EM&V Agreement. (*Id.*)

The rates applied to the kW and kWh savings are those in effect for 2017, reduced by fuel and variable operation costs. (*Id.*) NLR were then offset by actual found revenues for Year 1 NLR of Vintage 2017. (*Id.*) NLR were calculated by rate schedule within the residential and non-residential customer classes. (*Id.* at 81.)

Witness Miller also described the basis for the Vintage 2016 EMF component of Rider 10. (*Id.* at 81.) She explained that avoided costs and NLR for Vintage 2016 EE programs were trued-up based on updated EM&V participation results. (*Id.*) Avoided costs for Vintage 2016 EE programs were being trued up based on projected impacts of Docket No. E-7, Sub 1146. (*Id.*) Avoided costs for Vintage 2016 DSM programs were trued-up to update participation results. (*Id.*) She explained that the actual kW and kWh savings were as experienced during the period January 1, 2016 through December 31, 2016. (*Id.*) 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 2015 EMF component of Rider 10. (*Id.*) She explained that avoided costs and NLR for Vintage 2015 EE programs were trued-up based on updated EM&V results. (*Id.*) NLR for all years were also trued up for the projected impacts of Docket No. E-7, Sub 1146. (*Id.*) She explained that the actual kW and kWh savings were as experienced during the period January 1, 2015 through December 31, 2015. (*Id.*) 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 2014 EMF component of Rider 10. (*Id.*) She explained that avoided costs and NLR for Vintage 2014 EE programs 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, 2014 through December 31, 2014. (*Id.* at 82.) 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.*)

Overall, as set forth on Rebuttal Miller Exhibit 1, the Company proposed an EMF of 0.1091 cents per kWh for its North Carolina retail residential customers, 0.2924 cents per kWh for non-residential Vintage 2017 EE participants, 0.0005 cents per kWh for non-residential Vintage 2017 DSM participants, (0.0126) cents per kWh for non-residential Vintage 2016 EE participants, (0.0015) cents per kWh for non-residential Vintage 2016 DSM participants, 0.0024 cents per kWh for non-residential Vintage 2015 EE participants, (0.0024) cents per kWh for non-residential Vintage 2015 DSM participants, (0.0061) for non-residential Vintage 2014 EE participants, and (0.0002) cents per kWh for non-residential Vintage 2014 DSM participants. (*See also* Tr. at 297.)

Public Staff Review of Company Rider 10 Calculations

As discussed above, Public Staff witness Williamson filed testimony in this proceeding discussing several EM&V-related topics and issues related to the Company's filing. None of these topics and issues necessitates an adjustment to the Company's billing factor calculations. (Tr. at 155.) 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 147.) With the exception of the items discussed below, Witness Maness testified that he believes that the Company has calculated the Rider 10 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 148.)

- 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, 2017. (*Id.* at 147.) 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. (*Id.*) 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. (*Id.*) As of the date of the filing of the Public Staff's testimony, this program cost audit was still underway. (*Id.* at 147-48.) 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.* at 148.) In its July 19, 2018 letter, the Public Staff indicated that it had completed its detailed review of test year program costs and found no material differences between the program costs as filed by the Company and the costs as reflected in the supporting documentation examined. As a result of its

review, the Public Staff is of the opinion that the Company has done a good job overall preventing inappropriate costs from being recorded in DSM/EE program costs. The Public Staff also indicated that during the course of the review, it began examining some matters related to the Company's processes for inspecting installed DSM/EE measures, and sometimes requesting refunds from DSM/EE contractors. While finding no exceptions in this proceeding related to those matters, the Public Staff noted that it intends to continue to review them in future proceedings.

- As discussed above, Witness Maness recommended that for as long as the Docket No. E-100, Sub 148 avoided cost rates remain in effect, the Company should assign a capacity cost value of zero to all kW savings occurring before year 2023. (*Id.* at 149.) Calculating avoided cost benefits for Vintage 2019 under the assumption that avoided capacity kW occurring prior to year 2023 is assigned a zero dollar value would reduce the Company's estimated Vintage 2019 system-level PPI by \$8,994,251. (*Id.* at 150.) Witness Maness incorporates this reduction into his recommended billing factors. (*Id.*; *see also* Maness Ex. 1.)
- Witness Maness indicated that he is concerned that the Company's use of the 2017 actual opt-out usage experience combined with a lower projected 2019 sales forecast results in an understatement of participating usage for non-residential customers and a possible "rate spike." (*Id.* at 153-54.) Witness Maness has proposed a 3.90% decrease to the actual 2017 opt-out usage, which corresponds to the decrease from the overall 2018 non-

residential kWh sales forecast to the overall 2019 non-residential kWh sales forecast. (*Id.* at 154.) He also proposes that the Company be allowed to recover carrying costs on any understatements of Rider 10 billing factors caused by use of the Public Staff's recommended levels of participating Rider 10 kWh sales versus the actual levels of such kWh sales, but with the understatement eligible for carrying charges limited to the difference between the Public Staff's recommended levels of participating Rider 10 kWh sales and the Company's initially proposed levels of such sales in this proceeding. (*Id.*) Witness Maness also incorporated this adjustment into his recommended billing factors. (*Id.* at 155; *see also* Maness Ex. 1.)

- As in past proceedings, witness Maness stated that the Public Staff reserves the right to raise the issue of the appropriate interest rate on over-recoveries of utility incentives in the future. (*Id.* at 155.)

Witness Maness concluded that there are two issues that necessitate adjustment to the DSM/EE billing factors proposed by the Company: (1) the valuation of avoided capacity benefits produced by DSM/EE measures estimated to be installed/implemented in Vintage 2019; and (2) the potential understatement of calendar year 2019 kWh sales. Other than these issues, the Public Staff found no errors or other issues necessitating an adjustment to Rider 10 billing factors. (*Id.* at 155-56.)

In her rebuttal testimony and exhibits, Company witness Miller explained that the Company disagrees with the premise that the non-residential participating sales used to calculate DSM/EE rates that the Company has proposed for Rider 10 are too low. (*Id.* at

293.) The Company has seen an increase in the number of customers that have opted out each year, so it seems improbable that opt-out usage would decline in future periods. (*Id.*) She testified that using actual opt-out sales from the test period as a basis for determining projected opt-out sales has resulted in under-collection of revenue for each prior vintage year on a consistent basis. (*Id.*) She added that there is no direct correlation between overall non-residential kWh sales and the level of sales associated with those customers that have opted out of DSM and EE programs. (*Id.*)

Nevertheless, she testified that DEC is willing to make this concession in this case and to agree to witness Maness's adjustment to the opt-out sales as the Company would be made whole with the collection of any under-recovery of the non-residential revenue requirement and carrying charges on the eligible under-collected amount as described above. (*Id.*) She noted that this adjustment is unique for Rider 10 and should not be used as precedent any future DSM/EE rider filings. (*Id.*)

Conclusions on Calculations of Rider EE

For the reasons set forth in the Evidence and Conclusions for Finding of Fact No. 15, the Commission finds that the reduction to the Company's PPI recommended by witness Maness as a result of the Public Staff's position on avoided costs is inappropriate. As discussed above, the Public Staff's recommended adjustment relating to forecasted opt-out kWh sales has already been made in the Rebuttal Testimony and Exhibits of witness Miller. The Commission finds and concludes that the components of Rider 10, as revised in Miller Rebuttal Exhibit 1, are appropriately 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 831 Found Revenues Order, the Sub 938 First Waiver

Order, the Sub 938 Second Waiver Order, the Sub 979 Order, the Sub 1032 Order, and the Sub 1130 Order.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 31-32

The evidence in support of these findings and conclusions can be found in the testimony of DEC witnesses Evans and NC Justice Center, et al. witness Neme.

Company witness Evans noted that Vintage 2017 of the Company's DSM and EE programs produced over 907 million kWh of energy savings and over 1,022 MW of capacity savings, which produced net present value of avoided cost savings of over \$586 million. (Tr. at 36-37.) During Vintage 2017, DEC's portfolio of DSM/EE programs was able to deliver energy and capacity savings that yielded avoided costs that were 162 percent of its target, while expending 147 percent of targeted program costs. (*Id.* at 37.)

Witness Evans 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 47.) For Vintage 2017, 4,075 eligible customer accounts opted out of participating in DEC's non-residential portfolio of EE programs, and 4,863 eligible customer accounts opted out of participating in the Company's non-residential DSM programs. (*Id.*) While only 78 eligible customers that were opted out of the EE portion of the Vintage 2016 Rider opted in to the Vintage 2016 Rider, 199 eligible customers that were previously opted out chose to opt in to the EE portion of the Vintage 2017 Rider. (*Id.*)

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. (*Id.* at 48.) 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.*)

SACE witness Neme testified that DEC delivered its highest DSM/EE portfolio savings yet in 2017, saving 1.07% of prior-year sales and exceeding the one percent annual energy savings target contained in the settlement of the then-proposed merger of Duke Energy and Progress Energy. (*Id.* at 93.) He stated that DEC's forecast of the amount of new annual savings its DSM/EE programs will produce in 2019 are equal to approximately 0.95% of total forecast sales and 1.38 percent of sales to non-opt-out customers, which he described as significant milestones. (*Id.*) He also commended the Company for including a wide range of efficiency measures and programs, including "some national state-of-the art program design features." (*Id.*)

Witness Neme also raised several issues relating to current and potential EE programs. He emphasized that Collaborate discussions are often a more effective venue for addressing complex program design and EM&V issues than regulatory proceedings. (*Id.* at 126.) In particular, he recommended that DEC should leverage its Collaborative to discuss: (a) ways to improve participation in the Company's Residential Smart \$aver Program, such as establishing a midstream channel for promoting measures, increasing incentives, and enhancing marketing; (b) greater promotion of whole-building retrofits, with an initial focus on targeting low-income communities; (c) building on DEC's recent successes in promoting measures in the midstream channel of its Non-Residential Prescriptive Rebate measure; (d) the potential to reduce the number of customers who opt out by educating customers who are eligible to opt out on available programs and/or

improving program design to make programs more attractive to these customers; (e) the value of a Technical Reference Manual (“TRM”); (f) the propriety of assuming a one-year life for savings from the My Home Energy Report; and (g) the impact of EISA on the Company’s savings assumptions for residential light bulbs. (*Id.* at 95-96, 99-111.) In addition, he suggested that the Collaborative explore program options for decreasing emphasis on short-lived savings, increasing investment in longer-lived measures, filling the “savings gap” that will be created by the elimination of most residential-lighting savings potential in 2020, and increasing program offerings to low-income communities. (*Id.* at 125.) He noted that analysis and consideration of his program ideas will likely require more than a quarterly Collaborative meeting. (*Id.* at 96.)

In his rebuttal testimony, DEC witness Evans agreed that the Company’s Collaborative meetings are the appropriate forum to discuss Witness Neme’s program ideas. (*Id.* at 247.) He indicated that given the commonality between DEC’s and DEP’s programs, a combined DEC/DEP Collaborative would be preferable to a DEC-only Collaborative. (*Id.*) He also agreed with Witness Neme’s assessment that quarterly meetings would be insufficient to adequately address the issues raised in his testimony, and recommended that the Collaborative meetings be expanded to every two months, with working groups employed when deemed beneficial by the Collaborative. (*Id.* at 247-48.)

As to the employment of a TRM, witness Evans explained that a North Carolina-specific TRM working group met on several occasions during 2012, 2013, and 2014. (*Id.* at 248.) The working group did not go forward with the establishment of a TRM. (*Id.*) Given the time elapsed since the last examination of a TRM, he indicated that the

Company does not object to a related working group. (*Id.*) He noted, however, that such a working group would, at a minimum, require representation by the Public Staff, electric membership cooperatives, impacted municipalities, and investor-owned utilities, and should encompass South Carolina as well. (*Id.*)

The Commission believes that the Collaborative is the appropriate forum for consideration of the issues raised by witness Neme as outlined herein. The Commission agrees that given the overlap between DEC's and DEP's programs, as well as the stakeholders who participate in each utility's Collaborative, a combined Collaborative is appropriate and should meet every other month as suggested by witness Evans.

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 Rebuttal Testimony and Exhibits of Carolyn T. Miller, and the resulting billing factors as set forth in Miller Rebuttal Exhibit 1, to go into effect for the rate period January 1, 2019 through December 31, 2019, 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. The Company shall propose modifications to the Residential Smart Saver EE Program no later than October 31, 2018, with the goal of restoring the TRC score to 1.0 or greater, and the Company shall include a discussion of impact of these

modifications and any other actions it has taken to improve cost-effectiveness in next year's DSM/EE rider proceeding.

4. That in its next rider application, DEC shall address the continuing cost-effectiveness of the Non-Residential Smart \$aver Performance Incentive Program and if it is not cost-effective, provide details of plans to modify or close the program.

5. That the EM&V report for the Non-Residential Smart \$aver Custom program (Evans Exhibit B) shall be revised as discussed by Public Staff witness Williamson and refiled in the next rider.

6. That the results of the EM&V report for the My Home Energy Report program (Evans Exhibit C) are accepted conditionally for purposes of this proceeding. The Public Staff may continue to review this report and offer further recommendations for the Company's consideration in the next DSM/EE rider proceeding.

7. That DEC shall leverage its Collaborative to discuss the EM&V issues and program design issues raised in the testimony of NC Justice Center, et al. witness Neme as discussed herein. The results of these discussions shall be reported to the Commission in the Company's 2019 DSM/EE rider filing.

8. Beginning in 2019, the combined DEC/DEP Collaborative shall meet every other month.

ISSUED BY ORDER OF THE COMMISSION.

NORTH CAROLINA UTILITIES COMMISSION

M. Lynn Jarvis, Chief Clerk

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a copy of the foregoing PROPOSED ORDER OF DUKE ENERGY CAROLINAS, LLC upon each of the parties of record in this proceeding or their attorneys of record by deposit in the U.S. Mail, postage prepaid or by email transmission with the party's consent.

This 20th day of July, 2018.

/s/ Molly McIntosh Jagannathan

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