

STATE OF NORTH CAROLINA  
UTILITIES COMMISSION  
RALEIGH

DOCKET NO. E-7, SUB 1073

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of  
Application of Duke Energy Carolinas, LLC, for ) **JOINT PROPOSED ORDER**  
Approval of Demand-Side Management and ) **OF DUKE ENERGY**  
Energy Efficiency Cost Recovery Rider ) **CAROLINAS, LLC, AND**  
Pursuant to G.S. 62-133.9 and Commission ) **THE PUBLIC STAFF**  
Rule R8-69 )

HEARD IN: Commission Hearing Room 2115, Dobbs Building, 430 North  
Salisbury Street, Raleigh, North Carolina, on Tuesday, June 2, 2015  
and July 7, 2015

BEFORE: Commissioner ToNola D. Brown-Bland, Presiding; Chairman Edward  
S. Finley, Jr.; and Commissioners Brian E. Beatty; Don M. Bailey;  
Jerry C. Dockham; and James G. Patterson

APPEARANCES:

For Duke Energy Carolinas, LLC:

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For Carolina Utility Customers Association, Inc.:

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205, Raleigh, North Carolina 27609

For North Carolina Sustainable Energy Association:

Peter Ledford, 4800 Six Forks Road, Suite 300, Raleigh, North  
Carolina 27609

For Carolina Industrial Group for Fair Utility Rates III:

Adam Olls, Bailey & Dixon, 434 Fayetteville Street, Suite 2500,  
Raleigh, North Carolina 27601

For Southern Alliance for Clean Energy:

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

For the Using and Consuming Public:

Lucy E. Edmondson, Staff Attorney, Public Staff – North Carolina  
Utilities Commission, 430 North Salisbury Street, Raleigh, North  
Carolina 27603

BY THE COMMISSION: General Statute (G.S). 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 the Commission will each year conduct a proceeding for each electric public utility to establish an annual DSM/EE rider to recover the reasonable and prudent costs incurred for adopting and implementing new DSM/EE measures previously approved by the Commission pursuant to Commission Rule R8-68. 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 1073, on March 4, 2015, Duke Energy Carolinas, LLC (DEC or the Company), filed an application for approval of its DSM/EE rider (Rider EE<sup>1</sup> or Rider 7) for 2016<sup>2</sup> (Application) and the

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

<sup>2</sup> The Rider EE proposed in this proceeding is the Company's seventh Rider EE and includes components that relate to Vintages 1, 2, 3, and 4 of the cost recovery mechanism approved in Docket No. E-7, Sub 831, and components that relate to Vintages 2014, 2015, and 2016 of the cost recovery mechanism approved in Docket No. E-7, Sub 1032. For purposes of clarity, the aggregate rider is referred to in this proposed order as "Rider 7" or the proposed "Rider EE." Rider 7 is proposed to be effective for the rate period January 1, 2016, through December 31, 2016.

direct testimony and exhibits of Carolyn T. Miller, Rates Manager for DEC; Conitsha B. Barnes, Strategy and Collaboration Manager for the Company's Market Solutions Regulatory Strategy and Evaluation group; and Roshena M. Ham, Manager, Measurement and Verification for DEC.

On March 16, 2015, DEC filed an Amended Application along with the corrected testimony and exhibits of witness Miller.

On March 18, 2015, the Commission issued an Order scheduling a hearing for June 2, 2015, 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) has been recognized pursuant to G.S. 62-15(d) and Commission Rule R1-19(e). On March 17, 2015, the North Carolina Sustainable Energy Association (NCSEA) filed a petition to intervene, which was granted on March 24, 2015. On March 23, 2015, the Carolina Utility Customers Association, Inc. (CUCA), filed a petition to intervene, which was granted on March 24, 2015. The Carolina Industrial Group for Fair Utility Rates III filed a petition to intervene on May 18, 2015, which was granted on May 21, 2015. On May 18, 2015, the Southern Alliance for Clean Energy (SACE) filed a petition to intervene, which was granted on May 21, 2015.

On May 15, 2015, DEC filed the supplemental direct testimony and exhibits of witness Miller and the supplemental exhibits of witness Barnes.

On May 15, 2015, DEC filed a Motion for Additional Public Hearing and Public Notice of Revised Proposed Rates.

On May 20, 2015, SACE filed the testimony of Taylor Allred, its Energy Policy Manager; and the Public Staff filed testimony in the form of the affidavits of Michael C. Maness, Assistant Director of the Accounting Division, and Jack L. Floyd, Engineer in the Electric Division.

On May 22, 2015, DEC, SACE, and the Public Staff filed a joint motion to excuse their witnesses from appearing at the June 2, 2015 evidentiary hearing. On May 28, 2015, the Commission issued an Order Granting Motion to Excuse Witnesses From Attending Hearing.

On May 28, 2015, the Commission issued an Order scheduling an additional public hearing in this matter for July 7, 2015 and requiring public notice.

The case came on for hearing as scheduled on June 2, 2015. No public witnesses appeared at the hearing.

The case came on for additional public hearing as scheduled on July 7, 2015. No public witnesses appeared at the hearing.

On July 7, 2015, the Public Staff filed a motion requesting that the date for the filing of proposed orders and briefs be extended to July 17, 2015. The Commission granted this motion on July 8, 2015.

On July 17, 2015, the parties filed briefs or proposed orders, as allowed by the Commission.

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

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, the Natural Resources Defense Council, and the Southern Environmental Law Center (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 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.<sup>3</sup> 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.<sup>4</sup>

On February 24, 2010, in Docket No. E-7, Sub 938, the Commission issued an *Order Requesting Comments* on the Company’s Sub 938 Waiver Application. After receiving comments and reply comments, the Commission entered an *Order Granting Waiver, in Part, and Denying Waiver, in Part* (Sub 938 Waiver Order) on April 6, 2010. 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

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<sup>3</sup> 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.

<sup>4</sup> 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 requires 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.

of 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.

Consistent with the Sub 938 Second Waiver Order, the Company calculated Rider EE for purposes of the present proceeding (Docket No. E-7, Sub 1073) using the rate period of January 1, 2016, through December 31, 2016. In addition, the present filing for Rider EE includes EMF components for Vintage 2014 because that vintage year (2014, also the test year in this proceeding) has been completed as of the filing date. DEC also included in the present filing adjustments to the EMF components for Vintages 1, 2, 3, and 4, as well as the final true-up of all four vintages under the Sub 831 Mechanism.

On February 8, 2011, in Docket No. E-7, Sub 831, the Commission issued its *Order Adopting “Decision Tree” to Determine “Found Revenues” and Requiring Reporting in DSM/EE Cost Recovery Filings* in Docket No. E-7, Sub 831 (Sub 831 Found Revenues Order), which included, in Appendix A, a “Decision Tree” to



identify, categorize, and net possible found revenues against the NLR created by the Company's EE programs. Found revenues may result from activities that directly or indirectly result in an increase in customer demand or energy consumption within the Company's service territory.

On November 8, 2011, in Docket No. E-7, Sub 979, the Commission issued its *Order Approving DSM/EE Rider and Requiring Filing of Proposed Customer Notice* (Sub 979 Order), in which it approved the Evaluation, Measurement, and Verification (EM&V) agreement (EM&V Agreement) reached by the Company, SACE, and the Public Staff. Pursuant to the EM&V Agreement, for all EE programs, with the exception of the Non-Residential Smart Saver® Custom Rebate Program and the Low Income Energy Efficiency 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 and EE Programs (Sub 1032 Mechanism) and a portfolio of DSM/EE programs to be effective January 1, 2014, (Sub 1032 portfolio of programs) to replace the cost recovery mechanism and portfolio of DSM/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; the Environmental Defense Fund; SACE; the South Carolina Coastal Conservation League; the Natural

Resources Defense Council; the Sierra Club; and the Public Staff (Stipulating Parties), which incorporates the Sub 1032 Mechanism (Sub 1032 Settlement).

Under the Sub 1032 Settlement, 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 at December 31, 2013). Additionally, the Sub 1032 Settlement included a provision that the Company and Public Staff would study the issue of the appropriate avoided transmission and distribution (T&D) costs to be used in the Company's calculations of cost-effectiveness and, if appropriate, recommend in the Company's 2014 DSM/EE rider proceeding adjustments to the rate filed in the Sub 1032 proceeding, to be made on a prospective basis. The Stipulating Parties also agreed that the Company would meet with the North Carolina Waste Awareness and Reduction Network (NC WARN) and other interested intervenors to discuss the low-income program proposed by NC WARN. The Stipulating Parties further agreed to have discussion and consideration of on-bill repayment and combined heat and power (CHP) as part of the Company's EE Collaborative (Collaborative), and to report to the Commission the status and results of that discussion and consideration. Finally, the Sub 1032 Settlement also provided that the Company's annual DSM/EE rider would be determined according to the Sub 1032 Settlement and the terms and conditions set forth in the Sub 1032 Mechanism.

The overall purpose of the Sub 1032 Mechanism, as approved as part of the Sub 1032 Settlement, is to (1) allow DEC to recover all reasonable and prudent costs incurred for adopting and implementing new DSM and new 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; and (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.

Docket No. E-7, Sub 1073

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

## FINDINGS AND CONCLUSIONS

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. A utility may petition the Commission for approval of an annual rider to recover all reasonable and prudent costs incurred for the adoption and implementation of new DSM and EE measures, as well as appropriate utility incentives, pursuant to G.S. 62-133.9 and Commission Rules R8-68 and R8-69. Based on the specific recovery of costs and incentives proposed by DEC in this proceeding, the Commission concludes 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 7: Appliance Recycling Program; Energy Assessments Program; Energy Efficiency Education Program; Energy Efficient Appliances and Devices; HVAC Energy Efficiency Program; Multi-Family Energy Efficiency Program; My Home Energy Report; Income-Qualified Energy Efficiency and Weatherization Program; Residential Retrofit Pilot Program; Power Manager; Nonresidential Smart \$aver® Energy Efficient Food Service Products Program; Nonresidential Smart \$aver® Energy Efficient HVAC Products Program; Nonresidential Smart \$aver® Energy Efficient IT Products Program; Nonresidential Smart \$aver® Energy Efficient

Lighting Products Program; Nonresidential Smart \$aver® Energy Efficient Process Equipment Products Program; Nonresidential Smart \$aver® Energy Efficient Pumps and Drives Products Program; Nonresidential Smart \$aver® Custom Program; Nonresidential Smart \$aver® Custom Energy Assessments Program; PowerShare®; PowerShare® Call Option; Energy Management and Information Services Pilot Program; Small Business Energy Saver; and Smart Energy in Offices.

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

5. The EM&V analyses and reports prepared by DEC's independent third party evaluator are acceptable for purposes of this proceeding.

6. The Public Staff and DEC agreed to continue to discuss the EM&V presented in Ham Exhibit B (Smart Energy Now Pilot)<sup>5</sup> and Ham Exhibit E (Energy Efficient Appliances and Devices Program (Specialty Bulb measures)), and further agreed that the vintages of these programs covered by these EM&V reports may be subject to further adjustment in next year's proceeding depending upon the outcome of these discussions. It is reasonable and appropriate to accept the impacts derived through the EM&V analyses for the Smart Energy Now Pilot and the Specialty Bulb measures of the Energy Efficient Appliances and Devices

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<sup>5</sup> The Smart Energy Now Pilot program was approved on February 14, 2011, in Docket No. E-7, Sub 961. On August 13, 2014, the Commission approved a fully commercialized version of the program, which is called Smart Energy in Offices.

Program for purposes of this proceeding, subject to true-up in next year's proceeding.

7. The EM&V recommendations contained in the affidavit of Public Staff witness Floyd are appropriate for inclusion in future EM&V reports for the applicable EE programs, including certain program vintages that remain to be verified and trued up.

8. It is reasonable, for purposes of this proceeding, for DEC to include negative found revenues associated with its current initiative to replace mercury vapor (MV) lighting with light emitting diode (LED) fixtures in the calculation of net found revenues used in the Company's calculation of NLR.

9. Subject to future adjustments and true-ups to vintages of the programs covered by the EM&V filed in Ham Exhibits B and E in this proceeding, it is reasonable for the Company to make a modified save-a-watt earnings cap true-up in this proceeding, and that the benefit to the customers of the avoided cost revenue requirement previously being set at 85% of the amount that could be justified should be allowed to offset the earnings cap for purposes of the calculation of interest.

10. 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, 2016 through December 31, 2016.

11. Rider 7 includes EMF components for Vintage 2014 EE and DSM programs. Consistent with the Sub 938 Second Waiver Order, the test period for these EMF components is the period from January 1, 2014, through December 31, 2014 (Vintage 2014). Rider 7 also includes adjustments to the EMF components previously approved for Vintage Years 1, 2, 3, and 4, as well as the final true-up for those four vintages under the Sub 831 Mechanism.

12. DEC's proposed rates for Rider 7 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 2016 DSM and EE programs, as well as the first year of NLR for the Company's Vintage 2016 EE programs; the second year of NLR for Vintage 2015 EE programs; and the third year of NLR for Vintage 2014 EE programs. The EMF components include the true up of Vintage 2014 program costs and a partial true-up of Vintage 2014 NLR and PPI; factors designed to true up the recovery of revenue requirements related to Vintages 1, 2, 3, and 4; and the final true-up of Vintages 1 through 4, as provided for in the Sub 831 Mechanism. DEC, as reflected in the supplemental testimony and exhibits of Company witness Miller and the supplemental exhibits of Company witness Barnes, has calculated the components of Rider 7 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 938 Waiver Order, the Sub 938 Second Waiver Order, the Found Revenues Order, the Sub 979 Order, and the Sub 1032 Order.



13. The reasonable and prudent Rider 7 billing factor for residential customers<sup>6</sup> is 0.3621 cents per kWh (including regulatory fee).

14. The reasonable and prudent Rider 7 Vintage 2016 EE prospective billing factor for non-residential customers who do not opt out of Vintage 2016 of the Company's EE programs is 0.2164 cents per kWh (including regulatory fee)

15. The reasonable and prudent Rider 7 Vintage 2016 DSM prospective billing factor for non-residential customers who do not opt out of Vintage 2016 of the Company's DSM programs is 0.0709 cents per kWh (including regulatory fee).

16. The reasonable and prudent Rider 7 Vintage 2015 prospective EE 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) opt out of Vintage 2016) is 0.0345 cents per kWh (including regulatory fee).

17. The reasonable and prudent Rider 7 Vintage 2014 prospective EE 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) opt out of Vintage 2016) is 0.0256 cents per kWh (including regulatory fee).

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<sup>6</sup> 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.

18. The reasonable and prudent Rider 7 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) opt out of Vintage 2016) is 0.0150 cents per kWh (including regulatory fee).

19. The reasonable and prudent Rider 7 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) opt out of Vintage 2016) is (0.0044) cents per kWh (including regulatory fee).

20. The reasonable and prudent Rider 7 Vintage 4 EE EMF billing factor for non-residential customers who participated in Vintage 4 of the Company's EE programs (or who did not so participate, but neither (a) explicitly opted out of Vintage 4 (2013) during the annual enrollment period for that vintage, nor (b) opt out of Vintage 2016) is 0.0326 cents per kWh (including regulatory fee).

21. The reasonable and prudent Rider 7 Vintage 4 DSM EMF billing factor for non-residential customers who participated in Vintage 4 of the Company's DSM programs (or who did not so participate, but neither (a) explicitly opted out of Vintage 4 (2013) during the annual enrollment period for that vintage, nor (b) opt out of Vintage 2016) is 0.0005 cents per kWh (including regulatory fee).

22. The reasonable and prudent Rider 7 Vintage 3 EE EMF billing factor for non-residential customers who participated in Vintage 3 of the Company's EE programs (or who did not so participate, but neither (a) explicitly opted out of Vintage 3 (2012) during the annual enrollment periods for that vintage, nor (b) opt out of Vintage 2016) is 0.0261 cents per kWh (including regulatory fee).

23. The reasonable and prudent Rider 7 Vintage 3 DSM EMF billing factor associated with the true-up adjustment for non-residential customers who participated in Vintage 3 of the Company's DSM programs (or who did not so participate, but neither (a) explicitly opted out of Vintage 3 (2012) during the annual enrollment period for that vintage, nor (b) opt out of Vintage 2016) is (0.0017) cents per kWh (including regulatory fee).

24. The reasonable and prudent Rider 7 Vintage 2 EE EMF billing factor associated with the true-up adjustment for non-residential customers who participated in Vintage 2 of the Company's EE programs (or who did not so participate, but neither (a) explicitly opted out of Vintage 2 (2011) during the annual enrollment period for that vintage, nor (b) opt out of Vintage 2016) is 0.0148 cents per kWh (including regulatory fee).

25. The reasonable and prudent Rider 7 Vintage 2 DSM EMF billing factor associated with the true-up adjustment for non-residential customers who participated in Vintage 2 of the Company's DSM programs (or who did not so participate, but neither (a) explicitly opted out of Vintage 2 (2011) during the annual

enrollment period for that vintage, nor (b) opt out of Vintage 2016) is 0.0019 cents per kWh (including regulatory fee).

26. The reasonable and prudent Rider 7 Vintage 1 EE EMF billing factor associated with the true-up adjustment for non-residential customers who participated in Vintage 1 of the Company's EE programs (or who did not so participate, but neither (a) explicitly opted out of Vintage 1 (2009-2010) during the annual enrollment period for that vintage, nor (b) opt out of Vintage 2016) is 0.0027 cents per kWh (including regulatory fee).

27. The reasonable and prudent Rider 7 Vintage 1 DSM EMF billing factor associated with the true-up adjustment for non-residential customers who participated in Vintage 1 of the Company's DSM programs (or who did not so participate, but neither (a) explicitly opted out of Vintage 1 (2009-2010) during the annual enrollment period for that vintage, nor (b) opt out of Vintage 2016) is 0.0017 cents per kWh (including regulatory fee).

28. DEC should continue to use its Collaborative to work with stakeholders to find ways of increasing DSM and EE program impacts and participation, including programs designed to decrease opt-outs and changes to existing or development of new programs as discussed in the testimony of SACE witness Allred.

## EVIDENCE FOR FINDINGS AND CONCLUSIONS NOS. 1 AND 2

The evidence in support of these findings and conclusions can be found in the Application, the pleadings, the testimony and 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.

G.S. 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 G.S. 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 G.S. 62-133.9(d)(2)a-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.” Rule R8-69(a)(2). Commission Rule R8-69(c) allows a utility to apply for recovery of incentives for which the Commission will determine the appropriate ratemaking treatment.

G.S. 62-133.9, Rule R8-68, and Rule 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 EE and DSM programs as well as appropriate utility incentives, potentially including specifically “[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 Sub 831 Mechanism, a portion of the cost recovery and utility incentives the Company seeks through Rider 7 is based on the Company recovering a percentage of the avoided capacity costs achieved by DSM measures, and a separate percentage of the net present value (NPV) of avoided capacity costs and avoided energy costs achieved by EE measures. In addition, the Sub 831 Mechanism provides for a limited period of recovery of the Company’s NLR resulting from implementation of its EE measures approved as part of the Sub 831 pilot, net of found revenues. The remaining portion of proposed Rider 7 provides for the recovery, pursuant to the Sub 1032 Mechanism, of DSM/EE program costs, NLR (net of found revenues), and a PPI incentive related to DSM/EE programs approved in the Sub 1032 Order, after the end of the Sub 831 pilot, as well as the Small Business Energy Saver program, which was approved in Docket No. E-7,

Sub 1055. Recovery of these costs and utility incentives is also consistent with G.S. 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 FOR FINDING AND CONCLUSION NO. 3**

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

DEC witness Miller's testimony and exhibits show that the Company's request for approval of Rider 7 is associated with the Sub 831 pilot, as well as the Sub 1032 portfolio of programs and the Small Business Energy Saver program, which was approved in Docket No. E-7, Sub 1055. The direct testimony and exhibits of DEC witness Barnes listed the applicable DSM/EE programs as follows: Appliance Recycling Program; Energy Assessments Program; Energy Efficiency Education Program; Energy Efficient Appliances and Devices; HVAC Energy Efficiency Program; Multi-Family Energy Efficiency Program; My Home Energy Report; Income-Qualified Energy Efficiency and Weatherization Program; Power Manager; Nonresidential Smart \$aver® Energy Efficient Food Service Products Program; Nonresidential Smart \$aver® Energy Efficient HVAC Products Program; Nonresidential Smart \$aver® Energy Efficient IT Products Program; Nonresidential Smart \$aver® Energy Efficient Lighting Products Program; Nonresidential Smart \$aver® Energy Efficient Process Equipment Products

Program; Nonresidential Smart Saver® Energy Efficient Pumps and Drives Products Program; Nonresidential Smart Saver® Custom Program; Nonresidential Smart Saver® Custom Energy Assessments Program; PowerShare®; PowerShare® Call Option; Energy Management and Information Services Pilot Program;<sup>7</sup> Small Business Energy Saver; and Smart Energy in Offices.

In his affidavit, Public Staff witness Floyd also listed the DSM/EE programs and pilots for which the Company seeks cost recovery and noted that each of these programs and pilots has received approval as a new DSM or EE program and is eligible for cost recovery in this proceeding under G.S. 62-133.9.

Thus, the Commission concludes that each of the programs and pilots listed by witnesses Barnes and Floyd has received Commission approval as a new DSM or EE program or pilot and is, therefore, eligible for cost recovery in this proceeding under G.S. 62-133.9.

#### **EVIDENCE FOR FINDING AND CONCLUSION NO. 4**

The evidence for this finding can be found in the testimony and exhibits of Company witness Barnes and the affidavit of Public Staff witness Floyd.

DEC witness Barnes testified that the Company reviewed the portfolio of DSM/EE programs and performed prospective analyses of each of its programs

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<sup>7</sup> The Commission issued an Order on November 26, 2014, in Docket No. E-7, Sub 1032 approving DEC's request to discontinue the Energy Management and Information Services Pilot Program.



and the aggregate portfolio for the Vintage 2016 period, the results of which are incorporated in Barnes Exhibit No. 7. DEC's calculations indicate that with the exception of the Income-Qualified Energy Efficiency and Weatherization Program (which was not cost-effective at the time it was approved by the Commission, but was approved based on its societal benefit) and the HVAC Energy Efficiency Program, all of the programs in the portfolio, individually and in the aggregate, continue to be cost-effective. Ms. Barnes explained that since the HVAC Energy Efficiency Program provides efficiency opportunities for such a large component of overall residential usage, and because the program is on the border of being cost-effective, DEC does not plan to discontinue the program. Instead, DEC is currently evaluating opportunities to modify the HVAC Energy Efficiency Program in order to enhance the program and return it to being cost-effective. Ms. Barnes indicated that, based on the Company's cost-effectiveness analysis, aside from the HVAC Energy Efficiency Program, none of the programs had been modified or needed to be discontinued.

Public Staff witness Floyd stated in his affidavit that he reviewed DEC's calculations of cost-effectiveness under each of the four standard cost-effectiveness tests - the Utility Cost (UC), Total Resource Cost (TRC), Participant, and Ratepayer Impact Measure tests. He indicated that each program was cost-effective under all four tests, with the exception of the Income-Qualified Energy Efficiency and Weatherization Program and the HVAC Energy Efficiency Program, which are not cost-effective under the UC or TRC tests. He noted that the cost-effectiveness of the HVAC Energy Efficiency Program was impacted by new

federal standards that became effective in January 2015, and that DEC intends to discuss continuation of the program with its Collaborative to see if there are program design changes that can be made to improve the cost-effectiveness of this program. Finally, Mr. Floyd stated that his review indicated that the Sub 1032 portfolio as a whole remains cost-effective.

The Commission therefore concludes that DEC's portfolio of DSM and EE programs is cost-effective and eligible for inclusion in Rider 7. The Commission acknowledges the significant portion of residential customer usage associated with HVAC and that recent changes in the federal efficiency standards applicable to HVAC systems are likely to impact the HVAC EE Program's ability to remain cost-effective. The Commission therefore concludes that before DEC files its next DSM/EE rider case in 2016, DEC and its Collaborative will work to evaluate how the HVAC EE Program can be modified, if at all, such that the Program's cost-effectiveness can be enhanced in the future and maintain a viable program. If not, DEC should be prepared to justify, in its next DSM/EE rider case, why the HVAC EE Program should not be terminated.

#### **EVIDENCE FOR FINDINGS AND CONCLUSIONS NOS. 5 THROUGH 7**

The evidence in support of these findings can be found in the testimony and exhibits of DEC witness Ham and the affidavit of Public Staff witness Floyd.

DEC witness Ham testified regarding the EM&V process, activities, and results presented in this proceeding. She explained that the EMF component of

Rider 7 incorporates actual customer participation and evaluated load impacts determined through EM&V and applied pursuant to the EM&V Agreement. In addition, actual participation and evaluated load impacts are used prospectively to update NLR estimated for 2016. In this proceeding, the Company submitted, as exhibits to witness Ham's testimony, process evaluation and impact evaluation studies for My Home Energy Report, Smart Energy Now Pilot, Appliance Recycling Program, Income-Qualified Energy Efficiency (Neighborhoods), Energy Efficient Appliances and Devices (Specialty Bulb measures), and Power Manager. The Company also completed impact evaluation studies for HVAC Energy Efficiency (Tune & Seal) and PowerShare®.

In his affidavit, Public Staff witness Floyd stated that DEC had appropriately addressed EM&V-related recommendations made in previous DSM/EE rider proceedings. Mr. Floyd also provided recommendations concerning the content of future EM&V studies for particular EE programs, noting that DEC's implementation of these recommendations would be subject to the consideration of whether the cost would outweigh the benefit. He recommended that:

1. The Public Staff and DEC should further discuss the EM&V presented in Ham Exhibit B (Smart Energy Now Pilot) and Ham Exhibit E (Energy Efficient Appliances and Devices Program (Specialty Bulb measures)).

2. The Public Staff and DEC should work to coordinate an expeditious review of future planned program evaluations of existing programs and methodologies proposed for future EM&V;
3. Future planned program evaluation plans of existing programs, should include, as applicable, the survey instrument and scoring methodology used to account for net-to-gross (NTG) adjustments;
4. Future light logging studies should consider using stratification criteria to account for variables such as the percentage of people at home during the weekday (in the sample vs. the population) when appropriate;
5. Future evaluations which use an S-curve to estimate free-ridership (or spillover) in any NTG analysis, should provide an explanation of changes made to current S-curves relative to S-curves used in past evaluations of DEC programs;
6. Future evaluations which use technical reference manuals (TRMs) from other states to estimate program savings, should use available data (to the extent that is reasonable and cost-effective do to so) from DEC's Carolinas' service territory when calculating savings using algorithms in these TRMs; and
7. Future evaluation plans (for any program which addresses residential lighting measures) should consider the feasibility of collecting specific data from DEC's Carolinas' service territory to revise the final adjusted in-service rates for program bulbs.

Witness Floyd testified that with respect to program vintages for which EM&V reports were filed in this proceeding, he does not recommend any adjustment to the impacts at this time. Aside from EM&V for the Specialty Bulb measures in the Energy Efficient Appliances and Devices program and the Smart Energy Now Pilot, which DEC and the Public Staff have agreed to further discuss, Mr. Floyd agreed with Ms. Barnes' testimony that all program vintages for the original save-a-watt portfolio have been evaluated, that this rider represented a "final" true-up of the program impacts for these vintages and programs, and that except for the two programs mentioned above, he considered these programs and vintages to be complete.

With respect to the Specialty Bulb measures and Smart Energy Now Pilot, Mr. Floyd concluded that the impacts derived through the EM&V analyses should be accepted for purposes of this proceeding, but may be subject to true up in next year's proceeding depending upon the result of the discussions between DEC and the Public Staff.

With the exception of those EM&V-related recommendations made by Public Staff witness Floyd (which were not disputed by the Company), no party contested the EM&V information submitted by the Company. The Commission therefore finds that: (1) the EM&V analyses and reports submitted by DEC are acceptable for purposes of this proceeding; (2) the EM&V recommendations concerning future EM&V reports contained in the affidavit of Public Staff witness Floyd should be approved; and (3) subject to the caveat below, the EM&V reports

and applicable effective dates as identified by witness Floyd should be considered complete for purposes of calculating program impacts. The Commission further concludes that the vintages related to the Specialty Bulb measures in the Energy Efficient Appliances and Devices program and the Smart Energy Now Pilot impacted by the EM&V reports still being discussed by DEC and the Public Staff cannot be considered complete. As there are ongoing discussions related to the EM&V for these programs, the affected vintages for these programs may be subject to true up in future DSM/EE rider proceedings. Therefore, in the next proceeding, the Company should address in testimony and exhibits any adjustments to the EM&V for these programs, as well as how these adjustments, if any, affect the EMF and program impacts.

#### **EVIDENCE FOR FINDING AND CONCLUSION NO. 8**

The evidence supporting this finding and conclusion is found in the testimony of Public Staff witness Maness. Mr. Maness testified that in accordance with the Sub 831 Settlement, the Commission's Found Revenues Order, further Order in Sub 831, and the Sub 1032 Settlement, DEC has continued to reduce NLR by net found revenues in accordance with the Found Revenues Order. Additionally, he stated that as discussed in the Sub 1050 Proceeding and explained by Company witness Barnes, the Company has begun reducing net found revenues by the monetary impact ("negative found revenues") caused by reductions in consumption resulting from the current initiative to replace MV lights with LED fixtures. In his affidavit in Docket No. E-7, Sub 1050, Mr. Maness stated

that the Commission possesses significant discretion as to what items may be included in the calculation of the DSM/EE rider as either NLR or found revenues, but that negative found revenues should be approved only to the extent to which the underlying activity actually reduces the Company's profitability, much like positive found revenues increase profitability. He stated that he also testified in the Sub 1050 Proceeding that the underlying circumstances and impacts on the utility of any proposal to offset positive found revenues with negative ones should be evaluated very carefully, on a case-by-case basis. As the Company had not proposed to include any negative found revenues in Rider 6 in the Sub 1050 Proceeding, DEC and the Public Staff agreed, and the Commission found, that the issue was not ripe for adjudication.

Witness Maness explained that after review, the Public Staff has concluded that DEC's currently ongoing initiative to replace MV lighting with LED fixtures is an activity that can reasonably be considered to produce negative found revenues for inclusion in the Company's calculations. He stated that the Public Staff has reviewed DEC's calculations of negative found revenues and accepts them for purposes of this proceeding.

Based on the evidence presented in this proceeding, the Commission finds and concludes that for purposes of this proceeding, it is reasonable for DEC to include negative found revenues associated with its current initiative to replace MV lighting with LED fixtures as an offset to net found revenues in the Company's calculation of NLR.

## EVIDENCE FOR FINDING AND CONCLUSION NO. 9

The evidence supporting this finding and conclusion is found in the testimony of Company witnesses Miller and Barnes, and in the testimony of Public Staff witness Maness.

Company witness Miller explained that the final true-up of revenue requirements related to the Sub 831 pilot includes calculations that determine the earnings for the entire program and ensure that DEC's compensation is capped so that the actual after-tax return on program costs applicable to EE and DSM program costs does not exceed the predetermined earnings cap levels set out in the Sub 831 Settlement. DEC witness Barnes testified that during the four-year term of the Sub 831 pilot, the actual nominal avoided cost benefits generated by the Sub 831 portfolio of programs are nearly 123% of the target set in the Sub 831 Settlement. She stated that this achievement entitles the Company to the highest earning cap allowed under the Sub 831 Settlement, the lesser of the permitted avoided cost revenues or 15% of the program costs on an after-tax basis. After comparing the allowed avoided cost revenue calculation to the 15% earnings cap on program cost, the Company determined that it is appropriate to apply the 15% after-tax earnings cap, which is reflected in the final Sub 831 true-up component of Rider 7. Ms. Miller testified that the Company did not collect more than its earnings cap consisting of program costs plus allowed return.

Public Staff witness Maness also provided testimony relating to DEC's calculation of its proposed final earnings cap true-up. He stated that per the



Company and as agreed to by Public Staff witness Floyd, with the exception of the vintages associated with the EM&V for the Smart Energy Now Pilot and the Specialty Bulb measures of the Energy Efficient Appliances and Devices program, EM&V analyses covering all of the Sub 831 vintage years have been completed. (As discussed previously, the Public Staff and DEC have agreed to further discuss the EM&V for the Smart Energy Now pilot program and the specialty bulb measure of the Energy Efficient Appliances and Devices program; thus, the vintages of these programs covered by the EM&V filed in Ham Exhibits B and E in this proceeding are subject to further adjustment in next year's proceeding.) He also stated that as noted in the letter filed by the Public Staff in Sub 1050 on October 1, 2014, the Public Staff has completed its audit of save-a-watt program costs, and the revised level of costs has also been incorporated into the final calculation. Therefore, subject to future adjustment to vintages of the programs covered by the EM&V filed in Ham Exhibits B and E in this proceeding, Mr. Maness indicated that the Public Staff has no objection to the Company making an earnings cap true-up in this case, subject to possible future adjustment and further true-up.

Witness Maness also testified that in the Sub 1050 Proceeding, he expressed certain concerns regarding the Company's application of the Sub 831 Settlement provisions regarding interest on various true ups, and specifically the Company's decision not to calculate interest on the earnings cap over-collection. He discussed the appropriateness of calculating interest on the various true ups separately, versus netting them as DEC has done. Based on further discussions with the Company and further internal deliberation, Mr. Maness indicated that the

Public Staff has concluded that the Company's approach is reasonable, and that no interest (other than the amount that the Company has calculated for Vintage 3 non-residential DSM) is necessary. Essentially, the earnings cap over-collection has been beneficially offset by the avoided cost revenue requirement being set at 85% of the amount that could be justified throughout the Sub 831 pilot, resulting in customers' bills being lower than they otherwise would have been (in fact, lower than the bills justified by the earnings cap). In this particular case, the Public Staff considers it reasonable to allow this benefit to offset the earnings cap for purposes of the calculation of interest.

Based on the evidence presented in this proceeding, the Commission finds and concludes that, subject to future adjustments and true-ups to vintages of the programs covered by the EM&V filed in Ham Exhibits B and E in this proceeding, it is reasonable for the Company to make a modified save-a-watt earnings cap true-up in this proceeding, and that the benefit to the customers of the avoided cost revenue requirement previously being set at 85% of the amount that could be justified should be allowed to offset the earnings cap for purposes of the calculation of interest.

#### **EVIDENCE FOR FINDINGS AND CONCLUSIONS NOS. 10 AND 11**

The evidence in support of these findings can be found in the Sub 938 Second Waiver Order; the Sub 1032 Order; the testimony of Company witnesses Miller and Barnes; and the testimony of Public Staff witness Maness. The rate period and the scope of the EMF components of Rider 7 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 FOR FINDINGS AND CONCLUSIONS NOS. 12 THROUGH 27**

The evidence in support of these findings and conclusions can be found in the Sub 831, Found Revenues, Sub 938 Waiver, Sub 938 Second Waiver, Sub 979, and Sub 1032 Orders; in the Company's Application, as set forth in the testimony and exhibits of Company witnesses Miller, Ham, and Barnes; and in the testimony of Public Staff witnesses Maness and Floyd.

On March 4, 2015, DEC filed its Application seeking approval of Rider 7, which includes the formula for calculation of Rider EE, as well as the proposed billing factors to be effective for the 2016 rate period. Company witness Miller and Public Staff witness Maness testified that the methods by which DEC has calculated its proposed Rider EE are the Sub 831 Mechanism as described in the Sub 831 Settlement and approved, with certain modifications, in the Sub 831 Order and other relevant Orders of the Commission, and the Sub 1032 Settlement and Sub 1032 Mechanism approved in the Sub 1032 Order.

### The Sub 831 Mechanism

Witness Miller described the Sub 831 Mechanism as set out in the Sub 831 Settlement and approved in the Sub 831 Order. It was designed to allow the Company to collect revenue equal to 75% of its estimated avoided capacity costs applicable to DSM programs approved as part of the Sub 831 pilot and 50% of the

NPV of estimated avoided capacity and energy costs applicable to the same category of EE programs, and to recover NLR for EE programs only. Revenues were to be based on the expected avoided costs and the associated NLR to be realized at an 85% level of achievement of the Company's avoided cost savings target for the applicable vintage. The 85% billing factor was to be used until the true-up to be performed at the end of the four-year pilot. Billing factors related to the Sub 831 pilot are calculated separately for residential and non-residential customers, with the charges calculated based on the avoided costs of the programs targeted to each class of customers.

Ms. Miller explained that the Sub 831 Mechanism uses vintage years for each of the four calendar year vintages<sup>8</sup> during the Sub 831 pilot. Annual NLR associated with each vintage of EE programs are recovered for a 36-month period, so the recovery of NLR for EE programs for certain vintage years extends several years beyond the initial four-year cost recovery period.

Ms. Miller testified that the Sub 831 Settlement provides for a series of vintage true-ups conducted to update revenue requirements, including NLR, based on actual customer participation results for each vintage. EM&V results are applied during vintage true-ups in accordance with the EM&V Agreement. The true-ups for each vintage also incorporate the difference between (1) the revenues

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<sup>8</sup> Vintage 1 is an exception in terms of length. Vintage 1 is the 19-month period beginning June 1, 2009 and ending December 31, 2010, as a result of the approval of the Sub 831 programs prior to the approval of the Sub 831 Mechanism. The remaining Sub 831 vintages are 12-month periods aligning with calendar years as follows: Vintage 2 (January 1, 2011 through December 31, 2011); Vintage 3 (January 1, 2012 through December 31, 2012); and Vintage 4 (January 1, 2013 through December 31, 2013).

collected based on billings at 85% of targeted savings, based on estimated participation levels and initial assumptions of load impacts; and (2) the allowable revenues based on actual participation levels and load impacts. The cost of pilot programs or new programs introduced during a vintage year may be recovered during these vintage true-ups.

Ms. Miller noted that after the end of the Sub 831 pilot, there is to be a final true-up, including a final comparison of the revenues collected from customers through Rider EE during the Sub 831 pilot to 100% of the amount of revenue the Company is authorized to collect from customers based on the independently measured and verified results. Any difference will be flowed through to or collected from customers. Any amounts owed to customers will be refunded with interest at a rate to be determined by the Commission in the first true-up proceeding in which an over-collection occurs.

According to Ms. Miller, the final true-up is also to include a determination of the earnings for the entire program to ensure that the after-tax rate of return on actual program costs applicable to EE and DSM programs does not exceed the predetermined earnings cap levels set out in the Sub 831 Settlement. Any excess earnings collected from customers will be refunded to customers with interest.

Ms. Miller testified that under the Sub 831 Mechanism, pursuant to the Sub 938 First Waiver Order, qualifying non-residential customers<sup>9</sup> may opt out of the

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<sup>9</sup> Individual commercial customer accounts with annual energy usage of not less than 1,000,000 kWh and any industrial customer account.

DSM and/or EE portion of Rider EE during annual election periods. If a customer opts into a DSM program (or never opted out), it is required to participate for three years in the programs and rider. If a customer chooses to participate in an EE program (or never opted out), that customer is required to pay the EE-related avoided cost revenue requirements and the NLR for the corresponding vintages of the programs in which it participated. Customers that opt out of the Company's DSM or EE programs remain opted-out for the term of the Sub 831 pilot, unless they choose to opt back in during any of the succeeding annual election periods, which occur from November 1 to December 31 each year. If a customer participates in any vintage of programs, the customer is subject to all true-up provisions of the approved Rider EE for any vintages in which the customer participates.

Ms. Miller explained that proposed Rider 7 consists, in part, of five components related to the Sub 831 pilot, which are all calculated pursuant to the Sub 831 Mechanism: (1) an EMF component designed to collect the final half-year of NLR for Vintage 4 EE programs; 2) an EMF component that consists of the true-up of the third year of NLR for Vintage 4 EE programs; (3) an EMF component which consists of the true-up of the final year of NLR for participants in Vintage 3 EE programs; (4) an EMF component for Vintages 1-4 resulting from the final EM&V; and (5) an EMF component for Vintages 1-4 resulting from the final true-up process.

### The Sub 1032 Mechanism

Company witness Miller testified that the Sub 1032 Mechanism, which replaces the Sub 831 Mechanism, is set out in the Sub 1032 Settlement, which was approved in the Sub 1032 Order. The Sub 1032 Mechanism is designed to allow the Company to collect revenue equal to its incurred program costs<sup>10</sup> 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. The Company will continue 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.

Ms. Miller noted that the Sub 1032 Mechanism also employs a vintage year concept based on the calendar year.<sup>11</sup> In each annual rider filing, prior calendar year vintages will be trued up to the extent possible, reflecting actual participation and verified EM&V results, applied pursuant to the EM&V Agreement.

Under the Sub 1032 Settlement, as Ms. Miller explained, deferral accounting may be used for over- and under-recoveries of costs eligible for recovery through the annual DSM/EE rider. The balance in the deferral accounts, net of deferred income taxes, may accrue a return at the net-of-tax rate of return

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<sup>10</sup> 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.

<sup>11</sup> To distinguish from Sub 831 vintages, each vintage under the Sub 1032 Mechanism is referred to by the calendar year of its respective rate period (e.g., Vintage 2015).

approved in the Company's then most recent general rate case. 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.

DEC witness Miller testified that pursuant to the Sub 1032 Settlement, 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%. The system amount of PPI is then allocated to North Carolina retail customer classes in order to derive customer rates. The calculation of the PPI is based on avoided cost savings achieved through the implementation of the Company's DSM and EE programs, net of program costs.

Witness Barnes testified that consistent with the notice that the Company filed with the Commission on December 18, 2013 in Docket No. E-7, Sub 1032, the Company updated the avoided capacity rates used to estimate Vintage 2016 to reflect the rates contained in the Stipulation of Settlement among DEC, Duke Energy Progress, Inc. and the Public Staff, filed October 29, 2013 in Docket No. E-100, Sub 136. Witness Floyd explained that DEC also updated the avoided T&D rates to those determined by the avoided cost study conducted pursuant to the Sub 1032 Order. The avoided energy costs used to estimate Vintage 2016 did not change from those used to estimate Vintage 2014.



Under the Sub 1032 Settlement, 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. 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. Ms. Miller explained that the Sub 1032 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. Customers who elect to begin participating in the Company's EE and DSM 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.

Ms. Miller testified that proposed Rider 7 consists of five components related to the Sub 1032 Mechanism: (1) a prospective Vintage 2014 component designed to collect the third year of estimated NLR for the Company's 2014 vintage of EE programs; (2) a prospective Vintage 2015 component designed to collect the second year of estimated NLR for the Company's 2015 vintage of EE programs; (3) a prospective Vintage 2016 component designed to collect program costs, the PPI, and the first year of NLR for the Company's 2016 vintage of EE programs; (4) a prospective Vintage 2016 component designed to collect program costs and the PPI for the Company's 2016 vintage of DSM programs; and (5) an EMF component

which consists of the true-up of Vintage 2014 program costs, shared savings and participation for the Company's 2014 vintage of EE and DSM programs.

#### Allocation of Costs and Incentives

Company witness Miller testified that under both mechanisms, 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. 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. The portion of revenue requirements related to NLR is computed based on the kilowatt (kW) and kWh savings of North Carolina retail customers.

For DSM programs, Ms. Miller noted, the aggregated revenue requirement for all retail DSM programs targeted at both residential and non-residential customers across North Carolina and South Carolina is allocated to the North Carolina retail jurisdiction based on the North Carolina retail contribution to total retail peak demand. Both residential and non-residential customer classes are

allocated a share of total system DSM revenue requirements based on each group's contribution to total retail peak demand.

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. 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.

### Prospective Components of Proposed Rider 7

Company 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 represent the recovery of fixed costs by the estimated North Carolina retail kW and kWh reductions applicable to EE programs by rate schedule, and reducing this amount by estimated found revenues. The fixed cost portion of the tariff rates is calculated by deducting the recovery of fuel and variable operation and maintenance costs from the tariff rates. 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. 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.

Ms. Miller explained that the billing factors are computed separately for EE and DSM 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. For non-residential rates, the forecasted sales exclude the estimated sales to customers who have elected to opt out of paying Rider EE. The non-residential billing factors are separately computed for each vintage. Pursuant to the Sub 938 Second Waiver Order and the Sub 1032 Order, the rate period for

the prospective components of Rider 7 is January 1, 2016 through December 31, 2016.

Ms. Miller testified that the prospective revenue requirements for Vintage 2014 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 2014 EE programs. 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).

The prospective revenue requirements for Vintage 2015 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 2015 EE programs. The amounts are based on estimated North Carolina retail kW and kWh reductions and the Sub 1026 Rates.

The prospective revenue requirements for Vintage 2016 EE programs include estimates of program costs, a PPI, and the first year of NLR determined separately for residential and non-residential customer classes. The program costs and shared savings incentive are computed at the system level and allocated to North Carolina retail operations. The NLR for EE programs are based on estimated North Carolina retail kW and kWh reductions and the Sub 1026 Rates.

On May 15, 2015, Ms. Miller filed supplemental testimony and exhibits reflecting prospective billing factors for Rider 7 of 0.3361 cents per kWh for all North Carolina retail residential customers, 0.2164 cents per kWh for non-residential Vintage 2016 EE participants, 0.0709 cents per kWh for non-residential Vintage 2016 DSM participants, 0.0345 cents per kWh for non-residential Vintage 2015 EE participants, and 0.0256 cents per kWh for non-residential Vintage 2014 EE participants.

#### EMF Component of Rider 7

Company witness Miller testified that pursuant to the Sub 938 Second Waiver Order and the Sub 1032 Order, the “test period” for the Vintage 2014 EMF component is January 1, 2014 through December 31, 2014. As the Sub 938 Second Waiver Order allows the EMF to cover multiple test periods, the test period for the EMF related to the final true-up includes the four prior Sub 831 vintages: Vintage 1 (June 1, 2009 through December 31, 2010); Vintage 2 (January 1, 2011 through December 31, 2011); Vintage 3 (January 1, 2012 through December 31, 2012); and Vintage 4 (January 1, 2013 through December 31, 2013).

Ms. Miller explained the updates in this proceeding to the Vintage 2014 estimate filed in 2013 that comprise the Vintage 2014 EMF component of Rider 7. Estimated participation for Vintage 2014 was updated for actual participation for the period January through December 2014. With regard to NLR, estimated participation for the Year 1 Vintage 2014 estimate assumed a January 1, 2014 sign-up date and used a half-year convention, while the NLR Year 1 Vintage 2014

true up was updated for actual participation for the period January through December 2014 and actual 2014 lost revenue rates. Found revenues for Year 1 of Vintage 2014 were trued up according to Commission-approved guidelines. To reflect the results of EM&V, Vintage 2014 estimated avoided cost savings were updated pursuant to the EM&V Agreement. Finally, while the Vintage 2014 estimate included only the programs approved prior to the filing of the estimated Vintage 2014 revenue requirement, the Vintage 2014 true-up was updated for new programs and pilots approved and implemented during Vintage 2014. For DSM programs, the Vintage 2014 true-up reflects the actual quantity of demand reduction capability for the Vintage 2014 period.

Actual year one (2014) NLR for Vintage 2014 were calculated using actual kW and kWh savings by North Carolina retail participants by customer class in 2014, based on actual participation and load impacts applied according to the EM&V Agreement. The rates applied to the kW and kWh savings are those in effect for 2014, reduced by fuel and variable operation and maintenance costs. NLR were then offset by actual found revenues for Year 1 NLR of Vintage 2014. NLR were calculated by rate schedule within the residential and non-residential customer classes.

Witness Miller explained that for the Vintage 4 EMF component, avoided costs for Vintage 4 EE programs are being trued up based on updated EM&V participation results and program costs. Avoided costs for Vintage 4 DSM programs are being trued up to correct participation results and program costs.

NLR for all years were trued up for updated EM&V participation results. The actual kW and kWh savings were as experienced during the period January 1, 2013 through December 31, 2013. The rates applied to the kW and kWh savings are the rates that were in effect during each period the lost revenues were earned.

Witness Miller testified that avoided costs for Vintage 3 EE programs are being trued up based on updated EM&V results and program costs. Avoided costs for Vintage 3 DSM programs are being trued up to reflect participation results and program costs. NLR for all years of Vintage 3 EE programs were trued up for updated EM&V participation results. The actual kW and kWh savings were as experienced during the period July 1, 2012 through December 31, 2012. NLR associated with January through June 2012 participation in Vintage 3 have been incorporated into the Sub 1026 Rates, which went into effect on September 25, 2013. As a result, DEC has discontinued collection of NLR associated with January through June 2012 participation in Vintage 3 through Rider EE effective September 25, 2013. The rates applied to the kW and kWh savings are the rates that were in effect during each period lost revenues were earned.

According to witness Miller, avoided costs for Vintage 2 EE programs are being trued up based on updated EM&V participation results and program costs. Avoided costs for Vintage 2 DSM programs are being also being trued up to reflect updated EM&V participation results and program costs. The actual kW and kWh savings were as experienced during the period January 1, 2011 through December 31, 2011. DEC has incorporated lost revenues associated with participation in



Vintage 2 into the Sub 1026 Rates. As a result, Rider 7 includes collection of NLR for the third year of Vintage 2 only for the period January 1, 2013 through September 25, 2013. The rates applied to the kW and kWh savings are the rates that were in effect during each period lost revenues were earned.

Ms. Miller added that Vintage 1 is being trued up to reflect updated DSM program costs.

Witness Miller explained that the final true-up of revenue requirements related to the Sub 831 pilot includes a final comparison of the revenues collected from customers through Rider EE during the Sub 831 pilot to 100% of the amount of revenue DEC is authorized to collect from customers based on the independently measured and verified results as described in the Sub 831 Settlement. The final true-up process also includes calculations that determine the earnings for the entire program and ensure that DEC's compensation is capped so that the actual after-tax return on program costs applicable to EE and DSM program costs does not exceed the predetermined earnings cap levels set out in the Sub 831 Settlement (as further discussed in the Evidence for Finding and Conclusion No. 9). The Company has updated Vintages 1-4 for the final participation and EM&V results. Therefore, although Rider 7 includes estimates for Vintage 3 Year 4 of NLR, and Vintage 4 Year 3 and 4 NLR, no further true-ups will be made to adjust these components of Rider 7, and all adjustments relating to the Sub 831 pilot are included in the EMF component of the Rider. The Company is also revising the revenue estimated to be collected in 2015 by utilizing

the fall 2014 forecast and the most recent opt-out information. Finally, the final true-up of Sub 831 clarifies the amount of gross receipts tax due and paid during the life of each vintage year.

Witness Miller testified that, as a result of the final true-up, DEC owes interest relating to one component. The Company over-collected for the Vintage 3 Non-Residential DSM program. Ms. Miller explained that the Company has calculated interest using the same methodology utilized in its North Carolina fuel rider proceedings, whereby interest is calculated at 10% from the mid-point of the over-collection period to the mid-point of the give-back period. She added that this methodology benefits customers by using a higher interest rate than DEC's weighted average cost of capital approved in its most recent rate case, and provides a simple and consistent approach.

Overall, as set forth on Supplemental Miller Exhibit 1, the Company proposed an EMF of 0.0260 cents per kWh for its North Carolina retail residential customers, 0.0150 cents per kWh for non-residential Vintage 2014 EE participants, (0.0044) cents per kWh for non-residential Vintage 2014 DSM participants, 0.0326 cents per kWh for non-residential Vintage 4 EE participants, 0.0005 cents per kWh for non-residential Vintage 4 DSM participants, 0.0261 cents per kWh for non-residential Vintage 3 EE participants, (0.0017) cents per kWh for non-residential Vintage 3 DSM participants, 0.0148 cents per kWh for non-residential Vintage 2 EE participants, 0.0019 cents per kWh for non-residential Vintage 2 DSM

participants, 0.0027 cents per kWh for non-residential Vintage 1 EE participants, and 0.0017 cents per kWh for non-residential Vintage 1 DSM participants.

#### Public Staff Review of Company Rider 7 Calculations

As discussed above, Public Staff witness Floyd filed an affidavit in this proceeding discussing several topics and issues related to the Company's filing. The Public Staff pointed out that none of these topics and issues necessitate an adjustment in this particular proceeding to the Company's billing factor calculations. However, as Mr. Floyd notes, the Public Staff and DEC have agreed to further discuss the EM&V for the Smart Energy Now Pilot and the Specialty Bulb measures of the Energy Efficient Appliances and Devices program, and therefore agree that the vintages of these programs covered by the EM&V filed in Ham Exhibits B and E in this proceeding are subject to possible adjustment in next year's proceeding depending upon the outcome of those discussions.

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 831 Settlement (as modified by the Commission) and the Sub 1032 Settlement, as applicable, as well as other relevant Commission orders, and (b) otherwise adhered to sound ratemaking concepts and principles. With the possible exception of the EM&V items identified by Mr. Floyd, which may require adjustment in next year's proceeding, Mr. Maness testified that he believes that the Company has calculated the Rider 7 billing factors in a manner consistent with G.S. 62-133.9, Commission Rule R8-69, the Sub 831

Settlement as modified by the Commission, the EM&V Agreement, the Sub 1032 Settlement, and other relevant Commission Orders. He noted that while the Public Staff and DEC became aware of certain relatively minor input and calculation errors in the determination of the billing factors, corrections of these minor errors were appropriately addressed by DEC in its supplemental filing made on May 15, 2015 and are reflected in the revised billing factors included in Miller Supplemental Exhibit 1 and Maness Exhibit I.

Witness Maness also provided testimony relating to the DEC's calculation of its proposed final earnings cap true-up, as discussed in the Evidence for Finding and Conclusion No. 9, and negative found revenues, as discussed in the Evidence for Finding and Conclusion No. 8. Mr. Maness also 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, 2014. To accomplish this, the Public Staff selected and reviewed a sample of source documentation for test year costs included by the Company for recovery through the DSM/EE riders. Review of this sample was intended to test whether the costs included by the Company in the DSM/EE riders are valid costs of approved DSM and EE programs. The Public Staff's review resulted in only one error being found in the costs included in the sample; however, this error had already been corrected by DEC in its books and records. Therefore, no adjustments to program costs were found necessary as a result of this review.

Based on the results of the Public Staff's investigation, Mr. Maness recommended approval of Rider 7 proposed by DEC in its Supplemental Filing in this proceeding. He concluded that all the recommended billing factors in Miller Supplemental Exhibit 1 and Maness Exhibit I should be approved subject to any appropriate and reasonable true-ups in future cost recovery proceedings consistent with the Sub 831 and Sub 1032 Orders, as well as other relevant orders of the Commission, including the Commission's final order in this proceeding.

#### Conclusions on Calculations of Rider EE

The Commission finds and concludes that the components of Rider 7, as revised in Miller Supplemental Exhibit 1 and Maness Exhibit I, appropriately reflect the Commission's findings and conclusions herein, as well as the Commission's findings and conclusions as set forth in the Sub 831 Order, the Sub 938 First Waiver Order, the Sub 938 Second Waiver Order, the Found Revenues Order, the Sub 979 Order, and the Sub 1032 Order.

#### **EVIDENCE FOR FINDING AND CONCLUSION NO. 28**

The evidence in support of these findings and conclusions can be found in the testimony of DEC witness Barnes and SACE witness Allred.

Ms. Barnes noted that Vintage 2014 of the EE and DSM programs produced over 546 million kWh of energy savings and nearly 880 megawatts (MW) of capacity savings, which produced NPV avoided cost savings of \$324 million. Since the beginning of the Sub 831 pilot, the Company has generated over 2,030

gigawatt-hours of energy reductions, over 980 MW of capacity reductions, and nearly \$925 million in nominal avoided cost benefits.

In regard to the opting out by qualifying industrial and commercial customers, Ms. Barnes testified that these opt-outs have had a negative effect on the Company's overall non-residential impacts. For Vintage 2014, 1,782 eligible customer accounts opted out of participating in the non-residential portfolio of EE programs, constituting slightly more than 15% of eligible customer accounts, but nearly 49% of the load for all eligible customers. To reduce opt-outs, the Company has added the March opt-in window (which resulted in 101 customers' accounts accounting for a total annual usage of approximately 147,295 MWh electing to opt in March 2014), restructured some programs (including increasing the incentive for the Non-Residential Smart Saver® Program), and plans to investigate adding additional measures and programs to attract these customers.

SACE witness Allred testified that the Company has achieved significant EE savings and that SACE supports the Company's requested Rider 7. He also noted that Company's energy savings forecasts are declining and the percentage of non-residential customers electing to opt out of the Company's DSM and EE programs is increasing. While acknowledging DEC's efforts to increase non-residential participation in EE/DSM programs, he recommended additional improvements in the Company's DSM/EE efforts, including several recommendations that could encourage commercial and industrial customers to participate in DEC's DSM/EE programs. Mr. Allred made specific recommendations regarding ways to expand

and improve the Company's non-residential programs, as well as its residential programs, including low-income program opportunities. Mr. Allred also made specific recommendations regarding low income EE programs and the operation of the Collaborative.

### CONCLUSIONS

The Commission continues to encourage DEC and other stakeholders to find ways that would improve residential and non-residential program participation. Due to the ability of certain non-residential customers to opt out of the DSM/EE rider, it may be difficult to attract non-residential participation, either through increased incentives or restructuring of programs.

The Commission believes that the Collaborative is the appropriate forum for reviewing potential programs and enhancements to existing DSM/EE programs in DEC's service territory. Specifically, the Commission finds that the Collaborative should continue to discuss how to increase program participation and impacts, reduce opt-outs, and the specific recommendations made by Mr. Allred regarding new programs or enhancements to existing programs.

IT IS, THEREFORE, ORDERED as follows:

1. That the Commission hereby approves the calculation of Rider EE as filed by DEC and revised in the Supplemental Testimony and Exhibits of Carolyn Miller and the Supplemental Exhibits of Conitsha Barnes, and the resulting billing factors as set forth in Miller Supplemental Exhibit 1 and Maness Exhibit I, to go

into effect for the rate period January 1, 2016, through December 31, 2016, subject to appropriate true-ups in future cost recovery proceedings consistent with the Sub 831 Order, the Sub 1032 Order, and other relevant orders of the Commission.

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

3. That the Company should incorporate the recommendations made by Public Staff witness Floyd into future EM&V reports filed with the Commission in subsequent DSM/EE rider proceedings.

4. In the next proceeding, the Company should address in testimony and exhibits any adjustments to the EM&V for the Smart Energy Now Pilot and the Specialty Bulb measures in the Energy Efficiency Appliance and Devices program, as well as how these adjustments, if any, affect the EMF and program impacts.

5. That the Collaborative should continue to discuss program offerings that could reduce the number of opt-outs.

6. That the specific recommendations made by Mr. Allred regarding new programs or enhancements to existing programs should be considered by the Collaborative.

This \_\_\_\_ day of \_\_\_\_\_, 2015.



THE NORTH CAROLINA UTILITIES COMMISSION

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Gail L. Mount, Chief Clerk