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July 20, 2018

VIA ELECTRONIC FILING

Ms. M. Lynn Jarvis
Chief Clerk
North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, North Carolina 27699-4300

**Re: Duke Energy Carolinas, LLC's and the Public Staff's Joint Proposed
Order
Docket No. E-7 Sub 1162**

Dear Ms. Jarvis:

Please find enclosed for filing in the above-referenced docket the Joint Proposed Order of Duke Energy Carolinas, LLC and the Public Staff. An electronic copy is being emailed to briefs@ncuc.net.

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

Sincerely,

A handwritten signature in black ink that reads 'Kendrick C. Fentress'.

Kendrick C. Fentress

Enclosure

cc: Parties of Record

OFFICIAL COPY

JUL 20 2018

**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

DOCKET NO. E-7, SUB 1162

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of:

Application of Duke Energy Carolinas,)	
LLC for Approval of Renewable Energy)	
and Energy Efficiency Portfolio)	JOINT PROPOSED ORDER OF
Standard (REPS) Compliance Report)	DUKE ENERGY CAROLINAS, LLC
and Cost Recovery Rider Pursuant to)	AND THE PUBLIC STAFF
N.C. Gen. Stat. 62-133.8 and)	
Commission Rule R8-67)	

HEARD: Tuesday, June 5, 2018 at 9:30 a.m. in the 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.
Commissioner Jerry C. Dockham
Commissioner James G. Patterson
Commissioner Lyons Gray

APPEARANCES:

For Duke Energy Carolinas, LLC:

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For North Carolina Sustainable Energy Association:

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

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For the Using and Consuming Public:

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BY THE COMMISSION: On March 7, 2018, Duke Energy Carolinas, LLC (“DEC” or “the Company”) filed its 2017 REPS Compliance Report and application seeking an adjustment to its North Carolina retail rates and charges pursuant to N.C. Gen. Stat. § 62-133.8(h) and Commission Rule R8-67, which require the Commission to

conduct an annual proceeding for the purpose of determining whether a rider should be established to permit the recovery of the incremental costs incurred to comply with the requirements of the Renewable Energy and Energy Efficiency Portfolio Standard (“REPS”), N.C. Gen. Stat. (“G.S.”) § 62-133.8(b), (d), (e) and (f), and to true up any under-recovery or over-recovery of compliance costs. DEC’s application was accompanied by the testimony and exhibits of Megan W. Jennings, Renewable Compliance Manager, and Veronica I. Williams, Rates and Regulatory Strategy Manager. In its application and pre-filed testimony, DEC sought approval of its proposed REPS Rider, which incorporated the Company’s proposed adjustments to its North Carolina retail rates.

On March 28, 2018, DEC filed supplemental testimony and exhibits of witnesses Jennings and Williams.

On March 29, 2018, the Commission issued an *Order Scheduling Hearing, Requiring Filing of Testimony, Establishing Discovery Guidelines and Requiring Public Notice*, in which the Commission set this matter for hearing; established deadlines for the submission of intervention petitions, intervenor testimony, and DEC rebuttal testimony; required the provision of appropriate public notice; and mandated compliance with certain discovery guidelines.

The North Carolina Sustainable Energy Association (“NCSEA”), the Carolina Utility Customers Association, Incorporated, Rutherford Electric Membership Corporation, and Blue Ridge Electric Membership Corporation filed separate petitions to intervene in this docket, and the interventions were allowed by the Commission. The

intervention and participation by the Public Staff are recognized pursuant to G.S. § 62-15(d) and Commission Rule R1-19(e).

On May 21, 2018, the Public Staff filed a motion for extension of time to file testimony, which the Commission granted on the same day.

Also on May 21, 2018, DEC filed additional supplemental testimony and revised exhibits of witnesses Jennings and Williams.

On May 23, 2018, the Public Staff filed the affidavits of Sonja R. Johnson, an Accountant in the Accounting Division of the Public Staff, and Jay B. Lucas, an Engineer in the Electric Division of the Public Staff.

On May 29, 2018, DEC and the Public Staff filed a joint motion to excuse all witnesses from the evidentiary hearing. On June 1, 2018, the Commission granted the motion.

On June 4, 2018, DEC filed the required affidavits of publication for the public notice in accordance with the Commission's March 29, 2018 Order.

The matter came on for hearing on June 5, 2018. DEC presented the testimony and exhibits of Ms. Jennings and Ms. Williams, and the Public Staff presented the affidavits of Ms. Johnson and Mr. Lucas. All pre-filed testimony, exhibits, and affidavits from the DEC and Public Staff witnesses were received into evidence.

On July 20, 2018, DEC and the Public Staff filed a joint proposed order.

Based upon the foregoing, the testimony, exhibits, and affidavits introduced at the hearing, and the entire record in this proceeding, the Commission now makes the following:

FINDINGS OF FACT

1. DEC is a duly organized limited liability company existing under the laws of the State of North Carolina, is engaged in the business of developing, generating, transmitting, distributing, and selling electric power to the public in North Carolina, and is subject to the jurisdiction of the North Carolina Utilities Commission as a public utility. DEC is lawfully before this Commission based upon its application filed pursuant to G.S. § 62-133.8 and Commission Rule R8-67.

2. For calendar year 2017, the Company must generally supply an amount of at least 6% of its previous year's North Carolina retail electric sales by a combination of renewable energy and energy reductions due to the implementation of energy efficiency measures. Also in 2017, energy in the amount of at least 0.14% of the previous year's total electric power sold by DEC to its North Carolina retail customers must be supplied by solar energy resources.

3. Beginning in 2012, G.S. § 62-133.8(e) and (f) require DEC and the other electric suppliers of North Carolina, in the aggregate, to procure a certain portion of their renewable energy requirements from electricity generated from swine and poultry waste, based on each electric power supplier's respective pro-rata share derived from the ratio of its North Carolina retail sales as compared to total North Carolina retail sales. In its *Order Modifying the Swine and Poultry Waste Set-Aside Requirements and Providing Other Relief* ("2017 Delay Order"), issued on October 16, 2017 in Docket No. E-100, Sub 113, the Commission delayed for one year the Swine Waste Set-Aside requirement, directing that the Swine Waste Set-Aside requirements will commence in 2018. In addition, the 2017 Delay Order lowered the 2017 Poultry Waste Set-Aside Requirement

to 170,000 MWh state-wide, maintaining the same level as the 2016 requirement, and delayed the subsequent increases by one year.

4. G.S. § 62-133.8(h) authorizes an electric power supplier to recover the “incremental costs” of compliance with the REPS requirement through an annual REPS rider. The “incremental costs,” as defined in G.S. § 62-133.8(h)(1), include the reasonable and prudent costs of compliance with REPS “that are in excess of the electric supplier’s avoided costs other than those costs recovered pursuant to G.S. § 62-133.9.” The term “avoided costs” includes both avoided energy costs and avoided capacity costs.

5. Under Commission Rule R8-67(e)(2), the total costs reasonably and prudently incurred during the test period to purchase unbundled renewable energy certificates (“RECs”) constitute incremental costs. The projected costs to purchase such RECs during the billing period constitute forecasted incremental costs.

6. DEC has agreed to provide compliance services, including the procurement of RECs, to the following electric power suppliers, pursuant to G.S. § 62-133.8(c)(2)(e): Blue Ridge Electric Membership Corporation (“EMC”), the City of Concord, the Town of Dallas, the Town of Forest City, the Town of Highlands, the City of Kings Mountain, and Rutherford EMC (collectively the “Wholesale Customers”).

7. DEC complied with the 2017 solar set-aside requirements, for itself and the Wholesale Customers for which DEC provides compliance services, by submitting for retirement 85,576 RECs procured or generated from solar electric facilities and metered solar thermal energy facilities. DEC also complied with the 2017 Poultry Waste Set-Aside requirements, for itself and the Wholesale Customers for which DEC provides compliance services, by submitting for retirement, 37,291 poultry waste RECs and

20,076 Senate Bill 886 RECs (which count as 40,152 poultry waste RECs), for a total of 77,443 poultry waste RECs.

8. DEC and the seven electric power suppliers for which DEC is providing compliance services met their 2017 REPS obligations, except for those from which they had been relieved under the Commission's Orders in Docket No. E-100, Sub 113. Therefore, DEC's 2017 REPS Compliance Report should be approved.

9. DEC's ability to comply with the 2018 swine waste resource requirement or the increased 2018 poultry waste resource requirement is dependent on the performance of poultry and swine waste-to-energy developers on current contracts and new contracts that are coming online.

10. DEC has RECs in its inventory that were generated by its own hydroelectric ("hydro") facilities that it cannot use to meet its REPS requirements because those hydro facilities are renewable energy facilities, but not new renewable energy facilities. DEC's proposal to exchange these hydro RECs for General Requirement RECs from the North Carolina Electric Membership Corporation is reasonable and consistent with G.S. § 62-133.8(c)(2)(d), which allows an electric membership corporation to meet its REPS requirements through RECs derived from renewable, as opposed to new renewable energy facilities.

11. For purposes of DEC's annual rider pursuant to G.S. § 62-133.8(h), the test period for this proceeding is the calendar year 2017, updated to include the months of January through April 2018, under Commission Rule R8-67(e)(5). The billing period for this proceeding is the 12-month period beginning September 1, 2018 and ending August

31, 2019. The test period for DEC's 2019 REPS filing will remain January 1, 2018 through December 31, 2018.

12. The research activities funded by DEC during the test period are recoverable under G.S. § 62-133.8(h)(1)(b). These research costs are within the statute's \$1 million annual limit.

13. For purposes of establishing the REPS experience modification factor ("EMF") rider in this proceeding, DEC's incremental costs for REPS compliance during the test period, updated to include January 1, 2018 through April 30, 2018, were \$26,491,680, including the costs incurred for its Wholesale Customers, and these costs were reasonably and prudently incurred. The Company's projected incremental costs for REPS compliance for the billing period total \$29,409,151 including the costs incurred for its Wholesale Customers.

14. DEC's sales of RECs reviewed in this proceeding are appropriate, and DEC has accounted for them correctly.

15. DEC appropriately calculated its avoided costs and incremental REPS compliance costs for the test period and billing period, including those avoided and incremental costs specifically related both to the Company's Solar Photovoltaic Distributed Generation ("Solar DG") program and to DEC's other owned solar facilities as required by the following Commission orders: (1) *Order Granting Certificate of Public Convenience and Necessity with Conditions*, issued December 31, 2008, and its *Order on Reconsideration*, issued May 8, 2009, in Docket No. E-7, Sub 856; (2) *Order Transferring Certificate of Public Convenience and Necessity*, issued May 16, 2016 in

Docket No. E-7, Sub 1079; and (3) *Order Transferring Certificate of Public Convenience and Necessity*, issued May 16, 2016 in Docket No. E-7, Sub 1098.

16. DEC's Other Incremental and Solar Rebate Program costs are recoverable under G.S. § 62-133.8(h)(1)(a) and will be approved for this proceeding.

17. DEC's test period REPS expense over-collections, including interest, amounted to \$13,250,561 for the residential class, \$7,730,438 for the general service class, and \$1,051,822 for the industrial class. In addition, the Company credited to customers' amounts received from REC suppliers during the test period related to contract amendments, penalties and other conditions of the supply agreements. Contract-related receipts credited to each customer class were \$568,919 for residential, \$412,380 for general service, and \$25,510 for industrial. Total credits to customers' accounts including over-collections and the contract-related credits were \$13,819,480 for the residential class, \$8,142,818 for the general service class, and \$1,077,332 for the industrial class. All amounts exclude the North Carolina regulatory fee ("regulatory fee").

18. DEC's North Carolina retail prospective billing period expenses for use in this proceeding are \$15,315,696, \$11,167,611, and \$713,415 for the residential, general service, and industrial classes, respectively, excluding regulatory fee.

19. The appropriate monthly REPS EMF riders per customer account, excluding regulatory fee, to be credited to customers during the billing period are \$(0.67) for residential accounts, \$(2.79) for general service accounts, and \$(19.04) for industrial accounts.

20. The appropriate monthly prospective REPS riders per customer account, excluding regulatory fee, to be collected during the billing period are \$0.74 for residential accounts, \$3.82 for general service accounts, and \$12.61 for industrial accounts.

21. The combined monthly REPS and REPS EMF rider charges per customer account, excluding the regulatory fee, to be collected during the billing period are \$0.07 for residential accounts, \$1.03 for general service accounts, and \$(6.43) for industrial accounts. Including the regulatory fee, the combined monthly REPS and REPS EMF rider charges per customer account to be collected during the billing period are \$0.07 for residential accounts, \$1.03 for general service accounts, and \$(6.44) for industrial accounts.

22. DEC's REPS incremental cost rider, including the regulatory fee, to be charged to each customer account for the billing period is within the annual cost cap established for each class in G.S. § 62-133.8(h)(4).

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 1-6

These findings of fact are essentially informational, jurisdictional and procedural in nature and are not contested.

G.S. § 62-133.8(b)(1) establishes a REPS requirement for all electric power suppliers in the State. The statute requires each electric public utility to provide a certain percentage of its North Carolina retail sales from various renewable energy or energy efficiency resources, including the following: (a) generating electric power at a new renewable energy facility; (b) using a renewable energy resource to generate electric power at a generating facility other than the generation of electric power from waste heat derived from the combustion of fossil fuel; (c) reducing energy consumption through the

implementation of energy efficiency measures; (d) purchasing electric power from a new renewable energy facility; (e) purchasing RECs; (f) using electric power that is supplied by a new renewable energy facility or saved due to the implementation of an energy efficiency measure that exceeds the requirements of the REPS in any calendar year as a credit toward the requirements of the REPS in the following calendar year; or (g) electricity demand reduction. Each of these measures is subject to additional limitations and conditions. For 2017, DEC must meet a total REPS requirement of 6% of its previous year's North Carolina retail electric sales by a combination of these measures.

G.S. § 62-133.8(d) requires a certain percentage of the total electric power sold to retail electric customers in the State, or an equivalent amount of energy, to be supplied by a combination of new solar electric facilities and new metered solar thermal energy facilities. The percentage requirement for solar resources in 2017 is 0.14%.

G.S. § 62-133.8(e) and (f) require DEC and the other electric suppliers of North Carolina, in the aggregate, to procure a certain portion of their renewable energy requirements from electricity generated from swine and poultry waste, based on each electric power supplier's respective pro-rata share derived from the ratio of its North Carolina retail sales as compared to the total North Carolina retail sales. Pursuant to the Commission's *Order on Pro-Rata Allocation of Aggregate Swine and Poultry Waste Set-Aside Requirements and Motion for Clarification*, issued on March 31, 2010, in Docket No. E-100, Sub 113, DEC's share of the aggregate State set-aside requirements for energy from swine and poultry waste is based on the ratio of its North Carolina retail kilowatt-hour sales for the previous year divided by the previous year's total North Carolina retail kilowatt-hour sales. In its 2017 Delay Order, the Commission further

delayed for one year the Swine Waste Set-Aside requirement; accordingly, the Swine Waste compliance requirements will now commence in compliance year 2018. The Commission also modified the 2017 Poultry Waste Set-Aside requirement to remain at the same level as the 2016 requirement, and delayed by one year the scheduled increases in the requirement.

G.S. § 62-133.8(h)(4) requires the Commission to allow an electric power supplier to recover all of its incremental costs incurred to comply with G.S. § 62-133.8 through an annual rider. G.S. § 62-133.8(h)(1) provides that “incremental costs” means all reasonable and prudent costs incurred by an electric power supplier to comply with the REPS requirements that are in excess of the electric power supplier’s avoided costs other than those costs recovered pursuant to G.S. § 62-133.9. The term “avoided costs” includes both avoided energy and avoided capacity costs.

Commission Rule R8-67(e)(2) provides that the “cost of an unbundled renewable energy certificate to the extent that it is reasonable and prudently incurred is an incremental cost and had no avoided cost component.”

Commission Rule R8-67(e)(5) provides that “the REPS EMF rider will reflect the difference between reasonable and prudently incurred incremental costs and the revenues that were actually realized during the test period under the REPS rider then in effect.”

In its 2017 compliance report, DEC stated that it provided energy resources and compliance reporting services for Blue Ridge EMC, the City of Concord, the Town of Dallas, the Town of Forest City, the Town of Highlands, the City of Kings Mountain, and Rutherford EMC, as allowed by G.S. § 62-133.8(c)(2)(e).

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 7-9

The evidence supporting these findings of fact appears in DEC's 2017 REPS Compliance Report, in the testimony and exhibits of DEC witnesses Jennings and Williams, and in the affidavit of Public Staff witness Lucas. In addition, the Commission takes judicial notice of the information contained in the North Carolina Renewable Energy Tracking System ("NC-RETS"). DEC's 2017 REPS Compliance Report, as revised in DEC's filings of March 28, 2018 in this docket, was admitted into evidence as Revised Jennings Exhibit No. 1.

DEC witness Jennings testified that DEC submitted its 2017 REPS compliance report as Jennings Exhibit No. 1, as revised in DEC's filing on March 28, 2018 in this docket, and that the report provided the information required by Commission Rule R8-67(c) in the aggregate for DEC and the Wholesale Customers for which DEC has agreed to provide REPS compliance services. (T. at pp. 59, 90)

Witness Jennings further testified that DEC has submitted for retirement 3,627,191 RECs to meet its total requirement for 2017. She defined the "total requirement" as DEC's overall REPS requirement. Within this total, the Company has submitted for retirement 85,576 RECs to meet the Solar Set-Aside requirement, and 37,291 RECs, along with 20,076 SB 886 RECs (which count as 40,152 Poultry Waste RECs) to meet the Poultry Waste Set-Aside requirement. (T. at p. 60) The billing period for this Application covers two separate compliance reporting periods with different requirements for each period. In 2018, the Company estimates that it will be required to submit for retirement 5,951,836 RECs to meet the requirements of G.S. § 62-133.8(b), or its total requirement. Within this total, the Company is also required to retire the

following: 119,038 solar RECs, 41,664 swine waste RECs, and 318,866 poultry waste RECs to meet the requirements set out in G.S. 62-133.8(d), (e), and (f) respectively. In 2019, the Company estimates that it will be required to submit for retirement 6,102,936 RECs to meet its total requirement. Within this total, the Company projects that it will be required to retire approximately 122,062 solar RECs, 42,725 swine waste RECs, and 403,218 poultry waste to meet the requirements set out in G.S. 62-133.8(d), (e), and (f) respectively. (T. at p. 60)

Witness Jennings testified that DEC has met its Solar Set-Aside requirement for the test period by procuring and producing 85,576 solar RECs and that, pursuant to NC-RETS Operating Procedures, the Company has submitted these RECs for retirement by transferring these RECs from the Duke Energy Electric Power Supplier Account to the Duke Energy Compliance Sub-Account and the Sub-Accounts of its Wholesale Customers. (T. at pp. 63-64)

Witness Jennings further testified that the Company had complied with its General Requirement for 2017. Pursuant to NC-RETS Operating Procedures, the Company submitted for retirement 3,504,324 RECs to meet the General Requirement (DEC's total requirement, net of the Solar, Swine Waste and Poultry Waste Set-Aside requirements). Specifically, the RECs to be used for 2017 compliance have been transferred from the NC-RETS Duke Energy Electric Power Supplier account to the Duke Energy Compliance Sub-Account and the Sub-Accounts of the Wholesale Customers. (T. at p. 61)

In her direct testimony, Company witness Jennings testified that compliance with both the Poultry Waste Set-Aside requirement and the Swine Waste Set-Aside

requirement is dependent on the performance of energy developers on current contracts and new waste-to-energy projects scheduled to come online. Two poultry waste facilities that were operational in 2017 encountered operational issues and had to shut down to perform plant modifications. Both facilities are expected to be on-line in late 2018, but 2018 production will be lower than originally expected. Witness Jennings additionally reported that, as part of efforts to comply with the swine waste requirements, DEC entered into contracts to purchase directed biogas from swine waste in the Midwest for generating electric power in its Dan River combined cycle facility. DEC began to receive biogas from one of the Midwest projects beginning in the summer of 2017. However, the other Midwest project encountered extreme weather in the summer of 2017 that caused significant damage, leading the project to declare force majeure and terminate its contract with DEC. Witness Jennings further testified that the current swine waste projects have encountered difficulties in achieving the full REC output of their contracts due to issues including local opposition to siting of the facilities, the inability to secure firm and reliable sources of swine waste feedstock from waste producers in North Carolina, and technological challenges encountered in ramping up production. (T. at 67-68)

Public Staff witness Lucas recommended that the Commission approve DEC's 2017 REPS Compliance Report. (T. at p. 104) Specifically, he testified that for 2017 compliance, DEC needed to obtain a sufficient number of RECs and energy efficiency certificates ("EECs") derived from any eligible sources so that the total equaled 6% of the 2016 North Carolina retail electricity sales of itself and the Wholesale Customers. Witness Lucas additionally stated that DEC needed to pursue retirement of sufficient solar RECs to match 0.14% of retail sales in 2016 for itself and the Wholesale

Customers, and of its pro-rata share of the 170,000 poultry waste RECs required by G.S. § 62-133.8(f). The poultry waste REC requirement was determined by the Commission in its 2017 Delay Order. The 2017 Delay Order also delayed the swine waste requirement under G.S. § 62-133.8(e) for an additional year. (T. at pp. 103-04)

No party disputed that DEC had fully complied with the applicable REPS requirements, or argued that DEC's REPS Compliance Report for 2017 should not be approved.

Based on the evidence presented and the entire record herein, the Commission finds and concludes that DEC and the seven Wholesale Customers for which it is providing REPS compliance services have fully complied with the REPS requirements for 2017, as modified by the Commission's 2017 Delay Order, and that DEC's 2017 REPS Compliance Report should be approved. The Commission further concludes that the RECs and EECs in the related NC-RETS compliance sub-accounts should be permanently retired.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 10

The evidence supporting this finding of fact is found in the testimony of DEC witness Jennings and in the affidavit of Public Staff witness Lucas.

Witness Jennings described a proposed exchange of RECs with the North Carolina Electric Membership Cooperation ("NCEMC"). She testified that DEC has hydro RECs in its inventory that it cannot use for its own REPS compliance efforts because they were generated by specific hydro generating facilities owned by the Company. In its *Order Accepting Registration of Renewable Energy Facilities*, Docket No. E-7, Subs 886, 887, 888, 900, 903, and 904, issued July 31, 2009 ("July 31, 2009

Order”), and its *Order Accepting Registration of Renewable Energy Facilities*, Docket Nos. E-7, Subs 942, 943, 945 and 946, issued December 9, 2010, the Commission accepted the registration of these specific hydro facilities as renewable energy facilities, but not as *new* renewable energy facilities. The Commission so concluded because these utility-owned facilities did not meet the delivery requirement of G.S. § 62-133.8(a)(5)(c), which requires the delivery of electric power to an electric power supplier, such as DEC, by an entity other than the electric power supplier itself to qualify as a new renewable energy facility. (T. at pp. 70-71) Witness Jennings indicated that the Company has discussed with NCEMC exchanging a portion of these RECs for an equal number of General Requirement RECs in NCEMC’s inventory that DEC could use for REPS compliance. She noted that NCEMC could use these hydro RECs for compliance purposes because G.S. § 62-133.8(c)(2)(d) allows electric membership corporations (“EMCs”) to meet its REPS requirements through the purchase of RECs derived from renewable, as opposed to new renewable energy facilities. Witness Jennings testified that this exchange would benefit DEC’s customers, because it would allow DEC to meet part of its General Requirement through the RECs exchanged with NCEMC at no cost to DEC’s customers. Otherwise, DEC would have to purchase additional RECs from new renewable energy facilities. Additionally, NCEMC’s customers would be held harmless in the transaction as this exchange would simply replace RECs in NCEMC’s inventory with different RECs that NCEMC could use to meet its REPS compliance requirements. (T. at 71-72)

Witness Jennings further testified that the Company does not believe that G.S. § 62-133.8(c)(2)(c) limits NCEMC’s use of RECs generated by renewable energy facilities

for its own REPS compliance purposes because EMCs may meet their REPS requirements through the purchase of RECs from in-state or out-of-state renewable energy facilities. (T. at p. 73) Public Staff witness Lucas testified that the Public Staff did not object to DEC's interpretation of G.S. § 62-133.8 and recommended that the Commission allow the proposed exchange of RECs between DEC and NCEMC because it would benefit both parties and would not harm the customers of either electric power supplier. (T. at p. 105)

Based on the foregoing, the Commission finds and concludes that the proposed exchange of RECs between DEC and NCEMC is consistent with G.S. § 62-133.8. As the Commission concluded in its July 31, 2009 Order, EMCs may meet their REPS compliance requirements through several methods, including: (i) through the purchase of electric power from a renewable energy facility or hydroelectric power facility or (ii) through the purchase of RECs from in-state or out-of-state facilities. July 31, 2009 Order at p. 3. With respect to the purchase of electric power from a renewable energy facility or hydroelectric facility, G.S. § 62-133.8(c)(2)(c) provides that no more than thirty percent (30%) of an EMC's annual REPS compliance requirement may be met with hydroelectric power, including allocations by the Southeastern Power Administration. This 30% cap expressly applies to meeting REPS requirements through the purchase of electric power, however. It does not limit NCEMC's purchase of unbundled in-state RECs to comply with its REPS requirements. In this proposed exchange, NCEMC is acquiring unbundled in-state RECs only and is not purchasing the underlying electric power. Accordingly, the 30% cap on hydroelectric power purchases does not apply. Therefore, the Commission approves the proposed exchange of RECs between DEC and

NCEMC as reasonable, consistent with G.S. §62-133.8, and beneficial to both parties without imposing any harm on either party's customers.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 11

The evidence supporting this finding is procedural in nature, found in the testimony DEC witness Williams and the affidavits of Public Staff witnesses Johnson and Lucas, and is not contested.

Commission Rule R8-67(e)(3) provides that the test period for REPS rider proceedings shall be the same as that used by the utility in its fuel charge adjustment proceedings, which is specified in Commission Rule R8-55(c) for DEC to be the 12 months ending December 31 of each year. Therefore Company witness Williams initially testified that the test period or EMF period used for this proceeding was the twelve months beginning on January 1, 2017 and ending December 31, 2017. (T. at p. 16) Commission Rule R8-67(e)(5) provides that "[t]he REPS EMF rider will reflect the difference between reasonable and prudently incurred incremental costs and the revenues that were actually realized during the test period under the REPS rider then in effect" and that "[u]pon request of the electric public utility, the Commission shall also incorporate in this determination the experienced over-recovery or under-recovery of the incremental costs up to thirty (30) days prior to the date of the hearing, provided that the reasonableness and prudence of these costs shall be subject to review in the utility's next annual REPS cost recovery proceeding." Commission Rule R8-67(e)(4) also directs that the REPS and REPS EMF riders shall be in effect for a fixed period, which "shall coincide, to the extent practical, with the recovery period for the cost of fuel and fuel-related cost rider established pursuant to Rule R8-55." In its current fuel charge

adjustment proceeding, Docket No. E-7, Sub 1163, and in this proceeding, DEC proposed that its rate adjustments take effect on September 1, 2018, and remain in effect for a 12-month period. This period is referred to as the “billing period.”

The initial test period and the billing period proposed by DEC were not challenged by any party. In her Additional, Supplemental Testimony, however, DEC witness Williams requested to update the EMF period so that the Commission could incorporate DEC’s over-recovery of costs for the months January through April 2018 into its proposed EMF rider, resulting in an EMF period from January 1, 2017 through April 30, 2018 (“Updated EMF Period”). (Tr. at 48) Witness Williams explained that the over-recovery resulted from significantly lower actual poultry REC purchases than originally projected and incorporated into the REPS riders billed and resulting revenues collected during the Updated EMF Period. The Public Staff agreed with DEC’s requested Updated EMF period, but witness Lucas noted that the Public Staff had not been able to fully audit the additional expenses and revenues in the Updated EMF Period. Therefore, the Public Staff recommended that the test period for DEC’s REPS cost recovery rider filed in 2019 remain as January 1, 2018 through December 31, 2018 to allow for the Public Staff’s complete review of revenues and expenses for the first four months of 2018. (T. at pp. 107-09)

Based on the foregoing, the Commission concludes that, consistent with Commission Rule R8-67(e)(5), the Updated EMF Period for this proceeding is the sixteen months from January 1, 2017 through April 30, 2018. The Commission further concludes that, as requested by the Public Staff, the test period for DEC’s REPS cost

recovery rider filed in 2019 remain as January 1, 2018 through December 31, 2018 to allow for a complete review of the revenues and expenses of the entire test period.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 12

The evidence for this finding of fact can be found in the testimony and exhibits of DEC witnesses Jennings and Williams.

Witness Jennings sponsored Confidential Revised Jennings Exhibit No. 3 as an exhibit to her testimony, wherein she identified the “Research,” “Solar Rebate Program” and “Other Incremental” costs that the Company has incurred or projects to incur in association with REPS compliance. With respect to research costs, Revised Williams Exhibit No. 1 shows that the research costs are under the \$1 million per year cap established in G. S. § 62-133.8(h)(1)(b).

Consistent with the Commission’s orders in prior REPS proceedings, witness Jennings provided testimony and exhibits on the results and status of various studies, the costs of which DEC is including for recovery in its incremental REPS cost for the calendar year 2017 test period. Specifically, her testimony provided detailed information on the following research and development costs incurred by the Company associated with the REPS riders:

- CAPER, PV Synchronous Generator (“PVSG”) – In 2017, the Company worked with North Carolina State University (“NC State”) and Clemson University, through the Center for Advanced Power Engineering Research, on a project to develop and demonstrate a 40 kW PVSG system. The results of this project can be found in Jennings Exhibit No. 5. This project will continue in 2018.

- CAPER, Distributed Generation Valuation – In 2017, the Company worked with NC State and the University of North Carolina at Charlotte (“UNCC”) through CAPER, on a project to properly value the distributed generation in relation to its impacts on the grid, and to determine the best practices for the southeast region. The first phase of the project aims to review recently conducted studies on the value of distributed generation. The phase one results can be found in Jennings Exhibit No. 6. This project will continue in 2018.
- Closed Loop Biomass – The Company continues to support a closed-loop biomass research project to better understand yield potential for various woody crops, including Loblolly Pine, Hybrid Poplar, Hybrid Aspen, Sweetgum, Willow and Cottonwood trees. Crop production levels may take several years to reach full maturity. American Forest Management (“AFM”) provides project management support and periodic updates to the Company, as seen in Jennings Exhibit No. 7. In addition to its regular crop assessments, AFM started collecting woody biomass samples from various plots in 2017, which were provided to Mineral Labs so that the lab could perform Ultimate Analysis on each woody biomass sample. The results of these analyses as well as a sample report from Mineral Labs are shown in Jennings Exhibit No. 8.
- Coalition for Renewable Natural Gas – The Company joined the Coalition for Renewable Natural Gas in 2017 to add a valuable resource of knowledge and public policy advocacy in this growing sector of potential

animal waste supply. The Coalition for Renewable Natural Gas provides its members with exclusive whitepapers, support on model pipeline gas specifications and access to other members for discussions on current and future projects.

- Electric Power Research Institute (“EPRI”) – In 2017, the Company subscribed to the following EPRI programs and seeks to recover their costs via the REPS rider: Program 193 – Renewable Generation, which includes Program PS193C – Solar. EPRI designates such study results as proprietary or as trade secrets and licenses such results to EPRI members, including DEC. As such, the Company may not disclose the information publicly. Non-members may access these studies for a fee. Information regarding access to this information can be found at <http://www.epri.com/Pages/Default.aspx>.
- NC State University’s Future Renewable Electric Energy Delivery and Management (“FREEDM”) Systems Center – Duke Energy supports NC State’s FREEDM Center through annual membership dues. The FREEDM partnership provides Duke Energy with the ability to influence and focus research on materials, technology, and products that will enable the utility industry to transform the electric grid into a 2-way power flow system supporting distributed generation.
- Institute for Electrical and Electronics Engineers (“IEEE”) 1547 Conformity Assessment – The IEEE 1547 Conformity Assessment Steering Committee has been working to develop industry standard tools

and methodologies to assure consistent and comprehensive compliance prior to utility grid interconnection sign off. IEEE and the Company share a common goal to accelerate and broaden industry adoption through the development and publication of well-designed and managed conformity assessment and certification programs. This project was about establishment and execution of an IEEE 1547 Commissioning Test demonstration for solar installation within the eGRid laboratory located at Clemson University. The project formally commissioned the operation of a 50 kW inverter, established an operational test bed for more advanced interconnection evaluation. The results of this project can be found in Jennings Confidential Exhibit No. 9.

- Distributed Energy Resource – Islanding Detection and Control (“DER-IDC”) – There is growing consensus in the industry that as DER grows in its penetration levels, the effectiveness of anti-islanding schemes currently in use in inverters and protective relaying schemes will degrade, and that future schemes will likely need to involve some sort of communications. Accordingly, DEC has engaged in an initial study to look at wide-scale communications methods that could be used to solve this growing concern. DEC contracted with Northern Plains Power Technologies (“NPPT”), an engineering consulting firm, to study data collected from Duke Energy facilities and research potential algorithms and communications methods that would be effective for communications-based Islanding Detection and Control methods. In 2017, NPPT helped the

Company thoroughly evaluate the feasibility of the first desired communication technology called eLoran. There are further phases planned for this project in 2017. As part of the data collection effort, protection/control/monitoring equipment was purchased and installed at the Company's Marshall, McAlpine, and Rankin R&D sites. This equipment included several satellite clocks and a real-time automation controller. The Company also contracted with Xtensible Solutions, an information technology and services company, to develop the use-case requirements and data model for microgrids. The results of this feasibility study can be found in Jennings Confidential Exhibit No. 10. In addition, DEC contracted with Green Energy Corp, which developed the data translator for local access and filtering of streaming phasor measurement unit at distribution measurement equipment back to a phaser data concentrator in the back-office. A status report for this project can be found in Jennings Exhibit No. 11.

- Loyd Ray Farms – The Company partnered with Duke University to develop a pilot-scale, sixty-five kilowatt (“kW”) swine waste-to-energy facility, which initiated operation and began producing renewable energy in 2011. Jennings Exhibit No. 12 summarizes the project's progress through December 31, 2017.
- Marshall Solar Site Algorithm – In 2017, the Company continued to work with UNCC on a project to utilize the operational data to design and implement an autonomous active and reactive power dispatch algorithm

with PV farms and/or Battery Energy Storage system on any feeder considering DMS coordination. The results of this project can be found in Jennings Confidential Exhibit No. 13.

- Mini-DVAR Project – In 2016, the Company started a project to investigate a new technology manufactured by American Superconductor Corporation which makes a device called Mini-DVAR. This device can potentially be used for voltage stability/VAR support for renewable energy applications such as voltage compliance, grid reliability, efficiency, energy savings and grid integration of distributed PV. The project also included engineering design of a protection scheme with Schweitzer Engineering Laboratories, and the procurement of switch gear from ABB. In 2017, the Company completed the following tasks of the project: (1) power quality meter installation for base line data collection; (2) design and implementation of the direct transfer trip for the mini-DVAR device; (3) mini-DVAR device field installation and commissioning; and (4) test run of the mini-DVAR to verify it is fully functional. This project will continue in 2018.
- Rocky Mountain Institute (“RMI”) – The Company participates in eLab, a forum sponsored by RMI, composed of a number of North Carolina and nationally based entities, and organized to overcome barriers to economic deployment of distributed energy resources in the U.S. electric sector. Specifically, the Company seeks to gauge customer desires related to

distributed resources and provide ideas of potential long-term solutions for distributed energy resources and microgrids.

- Swine Extrusion/Poultry Mortality – The Animal and Poultry Waste Management Center (“APWMC”) at NC State University – In 2017, the Company began support of the various projects being undertaken by the APWMC. The initial work is centered on drying swine lagoon solids and poultry mortalities at a farm- based level to create a higher MMBtu fuel that can be safely and easily transported to a central plant for combustion. A detailed description of the project along with future testing plans can be found in Jennings Confidential Exhibit No. 14.

The Commission concludes that the research activities funded by DEC during the test period are renewable research and development costs recoverable under G.S. § 62-133.8(h)(1)(b) and that such research costs included in the test period are within the \$1 million annual limit provided in that statute. The Commission further concludes that the Company has complied with the requirement to file study results or information about how to access study results for research conducted with REPS rider finds. The Company shall continue to include that information in future REPS rider applications.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 13-16

The evidence for these findings of fact is found in DEC’s Application and in the testimony and exhibits of DEC witnesses Jennings and Williams, as well as in the affidavits of Public Staff witnesses Johnson and Lucas.

DEC witness Williams testified regarding the calculation of DEC’s avoided costs and its incremental costs of compliance with REPS requirements, based on incurred and

projected costs provided by witness Jennings. Consistent with Commission Rule R8-67(e)(2), which provides that the cost of an unbundled REC is an incremental cost with no avoided cost component, witness Williams included in incremental costs the total amount of costs incurred during the test period for unbundled REC purchases. 2nd Revised Williams Exhibit No. 1, page 1, identified total retail and wholesale incremental costs incurred during the test period as \$ 26,491,680 and Williams Exhibit No. 1, page 2 projected incremental costs for the billing period as \$ 29,409,151. Further, the projected costs of unbundled REC purchases discussed by witness Jennings during the billing period are included as estimated billing period incremental costs. (T. at pp.18-19)

Witness Williams testified that, consistent with Commission Rule R8-67(a)(2), DEC's approved avoided cost rates are set forth in Rate Schedule PP-N, Purchased Power Non-Hydroelectric, and Rate Schedule PP-H, Purchased Power Hydroelectric, and Schedule PP rate schedules (collectively, "Schedule PP"). For executed purchased power agreements, where the price of the REC and energy are bundled, the Company used annualized combined capacity and energy rates shown on the Company's Exhibit No. 3, filed in Docket No. E-100, Sub 106; Exhibit No. 3 in Docket No. E-100, Sub 117; Exhibit No. 3 in Docket No. E-100, Sub 127; Exhibit No. 3 in Docket No. E-100, Sub 136; Exhibit No. 3 in Docket No. E-100, Sub 140; or Attachment H in Docket No. E-100, Sub 148 (depending on the dates the contracts were executed). For those purchased power agreements with terms that did not correspond with the durational terms for which rates were established in the avoided cost proceeding (i.e., two, five, ten, or fifteen-year durations), DEC computed avoided cost rates for the particular term of the purchased power agreements using the same inputs and methodology used for the Schedule PP rates

approved in Docket No. E-100, Subs 106, 117, 127, 136, 140, and Sub 148, respectively. Witness Williams also stated that the estimated avoided cost components of energy and REC purchased power agreements effective during the prospective billing period were calculated in the same manner. (T. at pp. 29-30)

DEC's Solar Programs and Facilities

With respect to DEC's Solar DG program, witness Williams testified that DEC determined the avoided cost using a process similar to that described for a purchased power agreement with a non-standard duration. The inputs and methodology used for the Schedule PP rates approved in Docket No. E-100, Sub 117 were used to determine the annualized combined capacity and energy rates for the twenty-year term, corresponding to the expected life of the solar facilities. DEC similarly estimated its avoided cost and incremental cost for its new Solar PV facilities. (T. at pp. 30-31)

Regarding the Company's other owned solar facilities, orders approving the transfers of Certificates of Public Convenience and Necessity ("CPCN") were issued by the Commission on May 16, 2016 for both the Mocksville (Docket No. E-7, Sub 1098) and the Monroe (Docket No. E-7, Sub 1079) facilities, and the order approving the CPCN for construction of the Woodleaf Solar Facility was issued on June 16, 2016 ("DEC Solar PV Orders"). The 15 MW Mocksville Solar Facility was placed in service in December 2016, and the 60 MW Monroe Solar Facility was placed in service in April 2017. An annual revenue requirement, including capital and operations and maintenance costs, was calculated for each project for all years of the expected service life of the project. The present value of the total project revenue requirement was levelized over the project life to produce a level annual revenue requirement, which was compared to avoided cost to

determine any annual incremental cost subject to recovery through the REPS rider. The Woodleaf Solar Facility is expected to be in service by year-end 2018. The Company also calculated an estimated annual levelized revenue requirement for the Woodleaf Solar Facility applicable to the billing period. (T. at pp. 20-21)

The avoided cost for these projects is determined in similar fashion to the method used to determine avoided cost for the Company's Solar DG program. The total annual revenue requirements per megawatt hour ("MWh") for the facilities, computed based on updated tax benefit assumptions and actual completed project costs as available, were greater than the applicable avoided costs per MWh, as was the case when the projects were submitted for approval in the CPCN proceedings. The Commission in its DEC Solar PV Orders limited cost recovery for these projects in the Company's REPS riders to the equivalent of the standard REC offer price that DEC was offering to qualifying facilities at the time the purchase agreements were executed for the facilities. The current annual levelized total revenue requirement per MWh for each facility, computed based on updated tax benefit assumptions and actual completed project cost, as available, is greater than the applicable levelized avoided cost per MWh, as was the case when each project was submitted for approval in the applicable CPCN proceeding. Company witness Williams testified that the Company included for cost recovery in this REPS rider only the percentage of annual levelized cost equivalent to the standard REC offer price as approved by the Commission in its DEC Solar PV Orders. (T. at p. 22)

The DEC Solar PV Orders also required in the appropriate REPS rider and general rate case proceedings, that DEC itemize the actual monetization of all the

following tax benefits included in the Company's revenue requirement analysis of each facility:

- (a) the federal Section 199 deduction;
- (b) the federal Investment Tax Credit ("ITC") of 30% of the cost of eligible property;
- (c) the five-year Modified Accelerated Cost Recovery System ("MACRS") tax depreciation; and
- (d) a property tax abatement of 80% on solar property.

Company witness Williams testified that the Company analyzed the monetization of the estimated tax benefits associated with the DEC Solar PV facilities to comply with the conditions in the DEC Solar PV Orders. For the Mocksville and Monroe Solar Facilities, the Company updated its original models of estimated annual revenue requirements to reflect its actual experience to date and estimated future timing of the realization of tax benefits. She explained that, in performing these updates, the originally estimated project costs were retained and the tax benefit assumptions were updated to isolate the impact of the revenue requirements of the change in tax benefits achieved or expected to be achieved. Because the Woodleaf Solar Facility is not yet under construction, a complete analysis of tax benefit assumptions specific to that project was not available. Therefore, according to witness Williams, the Company only included a forecast of levelized cost limited to the approved avoided cost plus the incremental cost calculated at the cap specified by the Commission in its DEC Solar PV Orders. (T. at p. 24)

Company Witness Williams also discussed the impacts of the Federal Tax Cuts and Jobs Act (the “Tax Act”), which was enacted on December 22, 2017, on the revenue requirement calculations for the DEC Solar PV Facilities. The Tax Act reduced the corporate federal income tax rate to 21% from 35% and eliminated the federal Section 199 manufacturing deduction, both of which affected the revenue requirement calculations for the DEC Solar PV Facilities. With respect to the Mocksville and Monroe Solar Facilities, the Company originally assumed that they would qualify for five-year MACRS tax depreciation. Witness Williams testified that at the time the applications for CPCNs for the Monroe and Mocksville Solar Facilities were made, federal bonus depreciation was not available for these solar facilities. She further stated that in late 2015, however, Congress extended bonus depreciation such that both DEC-owned solar projects qualified for it. Thus, she explained that the Company expects to take the five-year MACRS depreciation on an adjusted basis of the solar asset after first taking the 50% bonus depreciation. Taking the bonus depreciation in conjunction with the five-year MACRS depreciation results in a decrease in total project cost per MWh. Witness Williams testified that realizing the tax benefit of the bonus depreciation, however, results in creating tax net operating losses, which in turn delays the Company’s ability to monetize ITC and alters the basis on which MACRS is calculated. As she explained in the previous DEC REPS recovery proceeding, separately identifying the monetary effect of any delay in realizing any of the other tax benefits is not useful because the delay is linked to and results from the ability to utilize favorable bonus depreciation. (T. at pp. 25-26)

Witness Williams further explained that beginning in 2018, the Tax Act eliminates the Section 199 tax deduction, and therefore the associated reduction is removed from the composite tax rate utilized in the revenue requirement calculations. Federal ITC benefits were originally assumed to be realized in 2018 for the Mocksville Solar Facility and in 2021 for the Monroe Solar Facility, but DEC now expects to experience a delay in realizing the federal ITC benefits because it anticipates lacking sufficient taxable income against which it can take the tax credit. The Company's ability to take bonus depreciation related to many of its assets placed in service prior to the deadline established by the Tax Act, combined with the updated forecast timing of utilization of the other tax credits, contribute to the estimated lack of taxable income for utilization of the ITC. Finally, witness Williams testified that the Company expects to realize the 80% property tax abatement as originally assumed in its estimated revenue requirements analysis. (T. at pp. 25-27)

Witness Williams also testified that the reduction in the corporate federal income tax rate from 35% to 21% affected the calculation of deferred taxes and the rates used to calculate the return on rate base as well as the levelization of the annual revenue requirement. These effects are reflected in the revenue requirement calculations beginning in year 2018. Furthermore, the accumulated deferred income tax ("ADIT") balances as of year-end 2017 are reduced in the revenue requirement calculations by an estimate of the excess associated with the reduction in the federal income tax; the revenue requirement calculations beginning in year 2018 incorporate the adjusted ADIT balance. (T. at p. 27)

Other Incremental and Solar Rebate Program Costs

In addition to costs incurred or projected to be incurred for bundled or unbundled RECs, 2nd Revised and Revised Williams Exhibit No. 1, pages 1-2, identified the “Other Incremental,” “Solar Rebate Program,” and “Research” costs that DEC has incurred or projects to incur in association with REPS compliance. Likewise, Revised Jennings Confidential Exhibit Nos. 2 and 3 show “Other Incremental Cost,” “Solar Rebate Program Costs and “Research Cost” related to REPS compliance. Witness Jennings testified that “Other Incremental Costs” include labor costs associated with REPS compliance activities and non-labor costs associated with administration of REPS compliance. (T. at p. 74) Jennings Confidential Exhibit No. 3 and Revised Confidential Exhibit No. 3 lists the labor costs by activity, as directed by the Commission in its August 16, 2016, *Order Approving REPS Rider and REPS EMF Rider and 2015 REPS Compliance* in Docket No. E-7, Sub 1106, and witness Jennings confirmed that all internal interconnection-related labor costs and non-labor costs have not been included for recovery in this filing, per the Commission’s Order in Docket No. E-2, Sub 1109. (T. at p. 79) Witness Williams included the other incremental and research costs that were incurred in 2017 in the EMF calculation. She explained that these costs are estimated for the billing period and included in the proposed REPS rider. She also testified that an amount equal to the annual amortization of Solar Rebate Program costs incurred pursuant to G.S. § 62-155(f) applicable to the billing period is also included for recovery in the proposed REPS rider. (T. at p. 19)

Witness Jennings provided additional detail on the inclusion of Solar Rebate Program costs for recovery in the proposed REPS rider. As required by G.S. § 62-155(f),

which was enacted as part of House Bill 589, DEC filed an application for approval of its Solar Rebate Program in Docket Nos. E-7, Sub 1166 and E-2, Sub 1167.¹ Through the Solar Rebate Program, DEC offers reasonable incentives to residential and nonresidential customers for the installation of small customer owned or leased solar energy facilities participating in the Company's net metering tariff. Witness Jennings explained that, consistent with G.S. § 62-155(f) and § 62-133.8(h), the Company had included labor and non-labor costs projected to be incurred in the billing period related to implementation of the Solar Rebate Program. Jennings Confidential Exhibit No. 3 and Revised Confidential Exhibit No. 3 detail these costs, which include the annual amortization of incentives paid to customers and program administration costs, including labor, information technology, and marketing costs. (T. at pp. 76-77)

DEC witness Jennings also reported that DEC sold poultry waste RECs during the test period to other electric suppliers in North Carolina to enable the state's electric power suppliers to comply with the aggregate Poultry Waste Set-Aside requirement. Witness Jennings confirmed that the sales did not negatively impact compliance and that the proceeds were credited back to the Company's retail and wholesale REPS customers. (T. at p. 70)

Public Staff witness Johnson also testified that after its review of the Company's filings and numerous responses to both written and verbal data requests, the Public Staff had "a high confidence level" that the Company had removed all interconnection-related labor costs from its request for recovery in accordance with Company guidelines and that

¹ The Commission takes judicial notice of its approval of the Solar Rebate Program in its April 3, 2018 *Order Modifying and Approving Riders Implementing its Solar Rebate Program* in Docket Nos. E-7, Sub 1166 and E-2 Sub 1167. The Commission takes further judicial notice of the Solar Rebate Program's commencement on July 9, 2018.

the Company's efforts to remove interconnection-related costs were reasonable. (T. at pp. 97-98)

Conclusions

Based on the above testimony and exhibits, and the entire record in this proceeding, the Commission concludes that DEC appropriately calculated its avoided costs and incremental REPS compliance costs for the test period and the billing period. Public Staff witnesses Johnson and Lucas both confirmed that, as part of its investigation, the Public Staff had scrutinized inclusion of the costs for REPS compliance in DEC's proposed REPS rider and did not take issue with any of the costs DEC seeks to recover. No party disputed DEC's methodology for calculating its avoided costs, costs incurred during the test period, or costs projected to be incurred during the billing period, or for accounting for its sales of RECs.

The Commission notes that, consistent with G.S. § 62-155(f), DEC has for the first time included its costs associated with its Solar Rebate Program for recovery through the REPS rider. G.S. § 62-155(f) authorizes DEC to

recover all reasonable and prudent costs of incentives provided to customers and program administrative costs by amortizing the total program incentives distributed during a calendar year and administrative costs over a 20-year period, including a return component adjusted for income taxes at the utility's overall weighted average cost of capital established in its most recent general rate case, which shall be included in the costs recoverable by the public utility pursuant to G.S. § 62-133.8(h).

Additionally, G.S. § 62-133.8(h), as amended by House Bill 589, provides that an electric power supplier's cost recovery and customer charges under the REPS rider may include incremental costs incurred to "provide incentives to customers, including program costs, incurred pursuant to G.S. § 62-155(f)." Therefore, based on the above and the entire

record on this proceeding, the Commission finds and concludes that DEC's inclusion of its Solar Rebate Program costs for recovery through the billing period is consistent with G.S. § 62-155(f) and § 62-133.8(h).

Additionally, the Commission concludes that DEC's sale of poultry RECs appropriately offset the costs incurred in the EMF period. Accordingly, the Commission concludes that for purposes of establishing the REPS EMF rider in this proceeding, DEC's costs for REPS compliance during the test period were \$26,491,680, including the costs incurred for its Wholesale Customers, and these costs were reasonably and prudently incurred. The Company's appropriately projected incremental costs for REPS compliance for the billing period total \$29,409,151 including the costs incurred for its Wholesale Customers.

The Commission further finds and concludes that DEC appropriately calculated the costs of its Solar DG program and DEC's other owned solar projects for inclusion in the REPS rider. The calculations are consistent with the Commission's past Orders approving the CPCN transfers and approving DEC's REPS cost recovery.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 17-22

The evidence supporting these findings of fact appears in DEC's Application, in the testimony and exhibits of DEC witnesses Jennings and Williams, and in the affidavits of Public Staff witnesses Johnson and Lucas.

2nd Revised Williams Exhibit No. 2 shows total North Carolina retail test period over-collections (including interest) of \$13,250,561 for the residential class, \$7,730,438 for the general service class, and \$1,051,822 for the industrial class. 2nd Revised Williams Exhibit No. 4 shows additional credits for contract receipts by customer class of

\$568,919 for residential, \$412,380 for general service, and \$25,510 for industrial. Total over-collections and contract-related credits by class for the EMF period are \$13,819,480 for residential, \$8,142,818 for general service, and \$1,077,332 for industrial. As reflected on 2nd Revised Williams Exhibit No. 4, witness Williams calculated proposed North Carolina retail monthly per-account REPS EMF credits (excluding regulatory fee) of \$(0.67) for residential accounts, \$(2.79) for general service accounts, and \$(19.04) for industrial accounts. Also on 2nd Revised Williams Exhibit No. 4, she calculated the projected North Carolina retail REPS costs for the billing period of \$15,315,696 for the residential class, \$11,167,611 for the general service class, and \$713,415 for the industrial class. 2nd Revised Williams Exhibit No. 4 shows that the proposed monthly prospective REPS riders per customer account, excluding the regulatory fee, to be collected during the billing period are \$0.74 for residential accounts, \$3.82 for general service accounts, and \$12.61 for industrial accounts. The combined monthly REPS and REPS EMF rider charges per customer account, excluding regulatory fee, to be collected during the billing period are thus \$0.07 for residential accounts, \$1.03 for general service accounts, and \$(6.43) for industrial accounts. Including the regulatory fee, the combined monthly REPS and REPS EMF rider charges per customer account to be collected during the billing period are \$0.07 for residential accounts, \$1.03 for general service accounts, and \$(6.44) for industrial accounts. As further illustrated on 2nd Revised Williams Exhibit No. 4, the Company's REPS incremental cost rider to be charged to each customer account for the billing period is within the annual cost cap established for each customer class in G.S. § 62-133.8(h)(4).

Public Staff witness Johnson stated in her affidavit that as a result of its investigation, the Public Staff recommended that the Company's proposed annual REPS EMF increment/(decrement) amounts and monthly EMF riders for each customer class be approved. Witness Johnson also stated that, excluding the regulatory fee, the annual decrement REPS EMF riders are \$(8.06), \$(33.44) and \$(228.49) and the monthly decrement REPS EMF riders are \$(0.67), \$(2.79), and \$(19.04), per retail customer account, for residential, general service, and industrial customers, respectively. (T. at pp. 96-97)

Public Staff witness Lucas stated that the Public Staff had reviewed the costs that produced the proposed, revised rates and that it took no issue with them. He recommended that the Company's proposed prospective monthly REPS rider amounts per customer account, excluding regulatory fee, of \$0.74 for residential accounts, \$3.82 for general service accounts, and \$12.61 for industrial accounts be approved. (T. at p. 108)

The Commission concludes that DEC's calculation of its REPS and REPS EMF riders is reasonable and appropriate. Accordingly, the Commission finds that DEC's test period REPS costs and appropriate monthly REPS EMF riders are as set out on Revised Williams Exhibit No. 4. The Commission finds that DEC's projected REPS costs for the billing period and the appropriate monthly REPS riders are as shown on Revised Williams Exhibit No. 4 as well. Finally, the Commission finds that these amounts are well below the respective annual per-account cost caps that will be effective in 2017 of \$34.00, \$150.00, and \$1,000.00, as established in G.S. § 62-133.8(h)(4).

IT IS, THEREFORE, ORDERED as follows:

1. That DEC shall establish a REPS rider as described herein, in the amounts approved herein, and that this rider shall remain in effect for a 12-month period beginning on September 1, 2018 and expiring on August 31, 2019;

2. That DEC shall establish an EMF rider as described herein, in the amounts approved herein, and that this rider shall remain in effect for a 12-month period beginning on September 1, 2018 and expiring on August 31, 2019;

3. That DEC shall file the appropriate rate schedules and riders with the Commission in order to implement the provisions of this Order as soon as practicable, but not later than ten (10) days after the date that the Commission issues orders in both this docket and in Docket No. E-7, Sub 1163;

4. That DEC shall work with the Public Staff to prepare a joint notice to customers of the rate changes ordered by the Commission in this docket, as well as in Docket No. E-7, Sub 1163, and the Company shall file such notice for Commission approval as soon as practicable, but not later than ten (10) days after the Commission issues orders in both dockets;

5. That DEC's 2017 REPS compliance report is hereby approved and the RECs in DEC's 2017 compliance sub-accounts in NC-RETS shall be retired;

6. That DEC shall file in all future REPS rider applications the results of studies the costs of which were or are proposed to be recovered via its REPS EMF and rider and, for those studies that are subject to confidentiality agreements, information regarding whether and how parties can access the results of those studies; and

7. That DEC shall continue to file a worksheet explaining the discrete costs that DEC includes as “other incremental costs” in all future REPS Rider proceedings.

ISSUED BY ORDER OF THE COMMISSION.

This the __ day of _____, 2018.

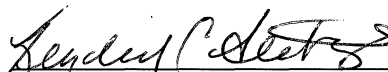
NORTH CAROLINA UTILITIES COMMISSION

M. Lynn Jarvis, Chief Clerk

CERTIFICATE OF SERVICE

I certify that a copy of Duke Energy Carolinas, LLC's and the Public Staff's Joint Proposed Order, in Docket No. E-7, Sub 1162, has been served on all parties of record either by electronic mail, hand delivery or by depositing a copy in the United States mail, postage prepaid.

This the 20th day of July, 2018.



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