

**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 ) ORDER APPROVING REPS AND  
Efficiency Portfolio Standard Cost Recovery ) REPS EMF RIDERS AND 2017 REPS  
Rider Pursuant to N.C.G.S. § 62-133.8 and ) COMPLIANCE REPORT  
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., Commissioners Jerry C. Dockham, James G. Patterson, and  
Lyons Gray

APPEARANCES:

For Duke Energy Carolinas, LLC:

Kendrick C. Fentress, Associate General Counsel, Duke Energy  
Corporation, 410 South Wilmington Street, NCRH 20/P.O. Box 2551,  
Raleigh, North Carolina 27601

Robert W. Kaylor, Law Office of Robert W. Kaylor, P.A., 353 E. Six Forks  
Road, Suite 260, Raleigh, North Carolina 27609

For Carolina Utility Customers Association, Inc.:

Robert F. Page, Crisp, Page & Currin, LLC, 4010 Barrett Drive, Suite 205,  
Raleigh, North Carolina 27609

For North Carolina Sustainable Energy Association:

Peter H. Ledford, General Counsel, North Carolina Sustainable Energy  
Association, 4800 Six Forks Road, Suite 300, Raleigh, North Carolina  
27609

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

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

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

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

For Carolina Industrial Group for Fair Utility Rates III:

Warren Hicks, Attorney, Bailey & Dixon, LLP, P.O. Box 1351, Raleigh, North Carolina, 27602

For the Using and Consuming Public:

Robert B. Josey, Jr., Staff Attorney, Public Staff-North Carolina Utilities Commission, 4326 Mail Service Center, Raleigh, NC, 27699

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.G.S. § 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.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 which set this matter for hearing, established deadlines for the submission of intervention petitions, intervenor testimony, and DEC's rebuttal testimony, required the provision of appropriate public notice, and mandated compliance with certain discovery guidelines.

The following parties filed petitions and were allowed to intervene in this proceeding: North Carolina Sustainable Energy Association, Carolina Utility Customers Association, Inc., Rutherford Electric Membership Corporation (Rutherford EMC), and Blue Ridge Electric Membership Corporation (Blue Ridge EMC). The intervention and participation by the Public Staff are recognized pursuant to N.C.G.S. § 62-15(d) and Commission Rule R1-19(e).

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, which the Commission granted by an Order issued June 1, 2018.

On June 4, 2018, DEC filed the required affidavits of publication, demonstrating that the public notice of the hearing was published as required by the Commission's March 29, 2018 Order.

This matter came on for hearing as scheduled on June 5, 2018. DEC moved the introduction of the pre-filed testimony and exhibits of DEC witnesses Jennings and Williams, and the Public Staff moved the introduction of the pre-filed affidavits of its witnesses Johnson and Lucas. All pre-filed testimony, exhibits, and affidavits from the DEC and Public Staff witnesses were received into evidence.

Based upon the foregoing, including the testimony, exhibits, and affidavits of the parties' witnesses, the records in the North Carolina Renewable Energy Tracking System (NC-RETS) and the entire record in this proceeding, the Commission 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 also an electric power supplier as defined in N.C.G.S. § 62-133.8(a)(3). DEC is lawfully before this Commission based upon its application filed pursuant to N.C.G.S. § 62-133.8 and Commission Rule R8-67.

2. For calendar year 2017, the Company was required to meet 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 have been supplied by solar energy resources.

3. Beginning in 2012, N.C.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 by one year the future increases in the Poultry Waste Set-Aside Requirements.

4. Section 62-133.8(h) of the North Carolina General Statutes authorizes an electric power supplier to recover the "incremental costs" of compliance with the REPS requirements through an annual REPS rider. The "incremental costs," as defined in N.C.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 N.C.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 REPS compliance services, including the procurement of RECs, to the following electric power suppliers, pursuant to N.C.G.S. § 62-133.8(c)(2)(e): 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 (collectively the Wholesale Customers).

7. DEC has complied with the 2017 solar set-aside requirements, for itself and the Wholesale Customers for which DEC is providing compliance services, through the procurement or generation of 85,576 RECs from solar electric facilities and metered solar thermal energy facilities. DEC has also complied with the 2017 Poultry Waste Set-Aside requirements, for itself and the Wholesale Customers for which DEC is providing compliance services, through the procurement or generation of 77,443 RECs from poultry waste-to-energy facilities, including 20,076 Senate Bill 886 RECs, which are credited as 40,152 poultry waste RECs pursuant to S.L. 2010-195 (Senate Bill 886).

8. DEC and the seven electric power suppliers for which DEC is providing compliance services met their 2017 REPS requirements, including the set-aside requirements as modified by the Commission's Orders issued in Docket No. E-100, Sub 113.

9. DEC is uncertain whether it will be able to comply with the 2018 swine waste set-aside requirements or the 2018 poultry waste set-aside requirements.

10. DEC has RECs in its inventory that were earned by hydroelectric power facilities that are owned by DEC. DEC cannot use these RECs to meet its REPS requirements because DEC's hydroelectric power facilities are renewable energy facilities, but not new renewable energy facilities. DEC's proposal to exchange these RECs for RECs held in the inventory of the North Carolina Electric Membership Corporation (NCEMC) is reasonable and serves the public interest.

11. For purposes of DEC's annual rider established pursuant to N.C.G.S. § 62-133.8(h), the test period for this proceeding is the 16-month period beginning January 1, 2017, and ending April 30, 2018. The billing period for this proceeding is the 12-month period beginning September 1, 2018 and ending August 31, 2019.

12. The research activities funded by DEC during the test period are incremental costs reasonably and prudently incurred by DEC to fund research that encourages the development of renewable energy, energy efficiency, or improved air quality, and are within the annual \$1-million limit established pursuant to N.C.G.S. 62-133.8(h)(1)(b).

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 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 Orders: (1) Order Granting Certificate of Public Convenience and Necessity with Conditions, Docket No. E-7, Sub 856 (issued December 31, 2008), (2) Order on Reconsideration, Docket No. E-7, Sub 856 (issued May 8, 2009); (3) Order Transferring Certificate of Public Convenience and Necessity, Docket No. E-7, Sub 1079

(issued May 16, 2016); and (4) Order Transferring Certificate of Public Convenience and Necessity, Docket No. E-7, Sub 1098 (issued May 16, 2016).

16. It is appropriate to approve DEC's request to recover other incremental costs pursuant to N.C.G.S. § 62-133.8(h)(1)(b) as incremental costs reasonably and prudently incurred to comply with the REPS requirements.

17. DEC complied with Commission's Order in Docket No. E-7, Sub 1106 by filing in this proceeding a worksheet detailing its interconnection cost allocation process related to labor and other costs. It is appropriate to require DEC to continue to file a worksheet explaining the discrete costs that DEC includes as "other incremental costs" in all future REPS Rider proceedings.

18. DEC's test period REPS expense (over-) or under-collections were an (over-) collection, 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, excluding the North Carolina regulatory fee (regulatory fee). The Company appropriately credited to customers' accounts the amounts received from REC suppliers during the test period related to contract amendments, penalties, and other conditions of the supply agreements as follows: \$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, excluding the regulatory fee.

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

20. 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.

21. 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.

22. 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.

23. 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 limits established for each class in N.C.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.

Section 62-133.8(b)(1) of the North Carolina General Statutes 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 EE resources which are listed in N.C.G.S. § 62-133.8(b)(2) as follows: (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 produced from in-State or out-of-state new renewable energy facilities; (f) using electric power that is supplied by a new renewable energy facility or saved due to the implementation of an EE 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) implementing electricity demand reduction measures. Each of these measures is subject to additional limitations and conditions. For 2017, DEC must have met a total REPS requirement equal to 6% of its previous year's North Carolina retail electric sales by a combination of these measures.

Section 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 was 0.14%.

Section 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. 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. Pursuant to the Commission's Order on Pro-Rata Allocation of Aggregate Swine and Poultry Waste Set-Aside Requirements and Motion for Clarification also 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 requirements to remain at the same level as the 2016 requirement (an aggregate of 170,000 megawatt -hours of electricity generated via poultry waste divided amongst the electric power suppliers), and delayed by one year the scheduled increases in the requirement (the requirement is scheduled to increase to 700,000 megawatt-hours in the aggregate for all electric power suppliers).

Section 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 N.C.G.S. § 62-133.8 through an annual rider. Section 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 N.C.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 has 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 N.C.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 is found 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.



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 requirements, 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 requirements. 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 N.C.G.S. § 62-133.8(b), or its total requirement. Within this total, the Company is also required to retire the following to comply with the requirements of N.C.G.S. § 62-133.8(d), (e) and (f), respectively: 119,038 solar RECs, 41,664 swine waste RECs, and 318,866 poultry waste RECs. In 2019, the Company estimates that it will be required to submit for retirement a total of 6,102,936 RECs to meet its total REPS requirements. 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 RECs to meet the requirements set out in N.C.G.S. § 62-133.8(d), (e), and (f), respectively.

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 them from the Duke Energy Electric Power Supplier Account to the Duke Energy Compliance Sub-Account and the Sub-Accounts of its Wholesale Customers.

Witness Jennings further testified that the Company has complied with its general REPS requirement for 2017. Pursuant to NC-RETS Operating Procedures, the Company submitted for retirement 3,504,324 RECs to meet the general REPS 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.

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 at 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.

Public Staff witness Lucas recommended that the Commission approve DEC's 2017 REPS compliance report. 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 total 2016 North Carolina retail electricity sales made by DEC and the Wholesale Customers. Witness Lucas additionally stated that DEC needed to obtain sufficient solar RECs to equal 0.14% of the total 2016 North Carolina retail electricity sales made by DEC and the Wholesale Customers, and to obtain sufficient RECs equal to DEC and the Wholesale Customers' pro-rata share of the 170,000 poultry waste RECs required by N.C.G.S. § 62-133.8(f), and as modified pursuant to the Commission's 2017 Delay Order. The 2017 Delay Order also delayed the 2017 swine waste set-aside requirements under N.C.G.S. § 62-133.8(e) for an additional year.

No party disputed that DEC had fully complied with the applicable REPS requirements, or argued that DEC's REPS compliance report should not be approved.

Based on the foregoing and the entire record herein, the Commission finds that DEC and the seven Wholesale Customers for which it is providing REPS compliance services have complied with the REPS requirements for 2017, as modified by the Commission's 2017 Delay Order. Therefore, the Commission concludes that DEC's 2017 REPS compliance report should be approved, and that the RECs and EECs in the related NC-RETS compliance sub-accounts for 2017 should be permanently retired. Finally, the Commission finds that DEC is uncertain whether it will be able to comply with the poultry waste and swine waste set-aside requirements for 2018 and that the Company is committed to satisfying these requirements by continuing to pursue procurement of these resources in a reasonable and prudent manner.

#### **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 testified that DEC has RECs in its inventory that it cannot use for its own REPS compliance because the RECs were earned by hydroelectric power facilities owned by DEC that are renewable energy facilities, not new renewable energy facilities.<sup>1</sup> Witness Jennings further testified that DEC has discussed with NCEMC exchanging a portion of these RECs for an equal number of RECs in NCEMC's inventory that DEC could use for its REPS compliance. She noted that, unlike DEC, NCEMC could

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<sup>1</sup> See 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 Order Accepting Registration of Renewable Energy Facilities, Docket Nos. E-7, Subs 942, 943, 945 and 946 (issued December 9, 2010).

use the RECs earned by the hydroelectric power facilities for its REPS compliance because N.C.G.S. § 62-133.8(c)(2)(d) allows EMCs and municipalities to meet their REPS requirements through the purchase of RECs derived from renewable energy facilities (as opposed to new renewable energy facilities). Witness Jennings further testified that this exchange would benefit DEC's customers because it would allow DEC to meet part of its general REPS requirements through the RECs exchanged with NCEMC at no cost to DEC's customers rather than purchase additional RECs from new renewable energy facilities. In addition, 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.

Public Staff witness Lucas testified that the Public Staff recommends 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.

Based on the foregoing and the entire record herein, the Commission finds that the proposed exchange of RECs between DEC and NCEMC is reasonable and serves the public interest. Therefore, the Commission concludes that the proposed exchange of RECs should be approved, and that DEC and NCEMC should be authorized to implement the proposed exchange.

#### **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. 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." 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. Commission Rule R8-67(e)(5) further provides" 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.

In her Additional Supplemental Testimony, DEC witness Williams requested to update the EMF period so that DEC's over-recovery of costs experienced in the months of January through April, 2018, can be incorporated into DEC's proposed EMF rider. This would result in an EMF period from January 1, 2017 through April 30, 2018 (Updated EMF Period). 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.

In his affidavit, Public Staff witness Lucas stated that the Public Staff has reviewed DEC's proposed Updated EMF Period and the costs incurred during that period. He further stated that the Public Staff agrees with DEC's requested Updated EMF period, but noted that the Public Staff had not been able to fully audit the additional expenses and revenues included in the Updated EMF Period. Therefore, he 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.

Based on the foregoing and the entire record herein, the Commission finds that DEC's Updated EMF Period is appropriate for use in this proceeding. Therefore, the Commission finds that the test period for use in this proceeding is the 16-month period beginning January 1, 2017, and ending April 30, 2018. Further, as recommended by the Public Staff, the Commission finds that it is appropriate to make clear that the Updated EMF Period authorized by this Order does not alter the test period to be used in DEC's application for REPS cost recovery that will be filed in 2019, which shall remain as the period January 1, 2018 through December 31, 2018, allowing for a complete review of the revenues and expenses incurred during that test period.

## **EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 12**

The evidence supporting this finding of fact is 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, witness Williams demonstrated that the research costs are under the \$1 million per year cap established in N.C.G.S. § 62-133.8(h)(1)(b). Revised Williams Exhibit No. 1.

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 finds that the costs incurred to fund the foregoing research activities during the test period are costs reasonably and prudently incurred to fund research that encourages the development of renewable energy efficiency, or improved air quality, and that these costs are incremental costs recoverable pursuant to N.C.G.S. § 62-133.8(h)(1)(b). The Commission further finds that the total costs incurred to fund these research activities during the test period are within the \$1 million annual limit provided in N.C.G.S. § 62-133.8(h)(1)(b). In addition, the Commission finds 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 funds and that it is appropriate to require DEC to continue to include that information in future REPS rider applications. Therefore, the Commission concludes that DEC should be allowed to recover these incremental costs through the REPS rider charges authorized by this order.

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

The evidence supporting these findings of fact is found 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. Witness Williams identified the total retail and wholesale incremental costs incurred



during the test period as \$ 26,491,680, 2<sup>nd</sup> Revised Williams Exhibit No. 1, p. 1, and the projected incremental costs for the billing period as \$ 29,409,151. Williams Exhibit No. 1, p. 2. Further, the projected costs of unbundled REC purchases discussed by witness Jennings during the billing period are included as estimated billing period incremental costs.

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.

#### 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.

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.

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.

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 original 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.

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.

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.

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.

### Other Incremental and Solar Rebate Program Costs

In addition to costs incurred or projected to be incurred for bundled or unbundled RECs, witness Williams identified the “Other Incremental,” “Solar Rebate Program,” and “Research” costs that DEC has incurred or projects to incur in association with REPS compliance. 2<sup>nd</sup> Revised and Revised Williams Exhibit No. 1, p. 1-2. Likewise, witness Jennings identified “Other Incremental Cost,” “Solar Rebate Program Costs and “Research Cost” related to REPS compliance. Revised Jennings Confidential Exhibit Nos. 2 and 3. 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. Witness Jennings also listed 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. Jennings Confidential Exhibit No. 3 and Revised Confidential Exhibit No. 3. 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 N.C.G.S. § 62-155(f) applicable to the billing period is also included for recovery in the proposed REPS rider.

Witness Jennings provided additional detail on the inclusion of Solar Rebate Program costs for recovery in the proposed REPS rider. As required by N.C.G.S. § 62-155(f), DEC filed an application for approval of its Solar Rebate Program in Docket Nos. E-7, Sub 1166 and E-2, Sub 1167. On April 3, 2018, in Docket Nos. E-7, Sub 1166 and E-2 Sub 1167, the Commission issued an Order Modifying and Approving the Solar Rebate Program. 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 N.C.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. Witness Jennings detailed these costs, which include the annual amortization of incentives paid to customers and program administration costs, including labor, information technology, and marketing costs. Jennings Confidential Exhibit No. 3 and Revised Confidential Exhibit No. 3.

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.

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 the Company's efforts to remove interconnection-related costs were reasonable.

### Conclusions

Based on the foregoing and the entire record in this proceeding, the Commission finds 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 reviewed the REPS compliance costs included in DEC's proposed REPS rider, and recommended that the Commission approve the proposed rider amounts. No party disputed DEC's methodology for calculating its avoided costs or its incremental costs incurred during the test period or projected to be incurred during the billing period, or DEC's accounting for its sales of RECs.

The Commission notes that this is the first REPS rider proceeding in which DEC has included costs associated with its Solar Rebate Program for recovery through the REPS rider. Section 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 N.C.G.S. § 62-133.8(h). Additionally, N.C.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 N.C.G.S. § 62-155(f)." Therefore, the Commission finds that DEC's inclusion of its Solar Rebate Program costs for recovery through the billing period is appropriate in this proceeding.

In addition, the Commission finds that DEC's sale of poultry RECs appropriately offset costs incurred during the Updated EMF Period. Accordingly, the Commission finds that, for purposes of establishing the REPS EMF rider in this proceeding, DEC's reasonably and prudently incurred costs for REPS compliance during the test period were \$26,491,680, including the costs incurred for its Wholesale Customers. Further, the Commission finds that the Company appropriately projected incremental costs for REPS compliance during the billing period totaling \$29,409,151, including the incremental costs projected to be incurred for the Wholesale Customers. Finally, the Commission finds that DEC appropriately calculated the costs of its Solar DG program and DEC's other owned solar projects for inclusion in the REPS rider. Therefore, the Commission concludes that, for the purposes of establishing the REPS rider charges in this proceeding, DEC should be authorized to recover the foregoing expenses as incremental costs reasonably and prudently incurred to comply with the REPS requirements.

## **EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 17-23**

The evidence supporting these findings of fact is found in the testimony and exhibits of DEC witnesses Jennings and Williams, and in the affidavits of Public Staff witnesses Johnson and Lucas.

DEC Witness Williams demonstrated that DEC's 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. 2<sup>nd</sup> Revised Williams Exhibit No. 2. Witness Williams further demonstrated that additional credits for contract receipts by customer class are \$568,919 for residential, \$412,380 for general service, and \$25,510 for industrial. 2<sup>nd</sup> Revised Williams Exhibit No. 4. 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. Witness Williams calculated the proposed North Carolina retail monthly per-account REPS EMF credits (excluding regulatory fee) as \$(0.67) for residential accounts, \$(2.79) for general service accounts, and \$(19.04) for industrial accounts. 2<sup>nd</sup> Revised Williams Exhibit No. 4. She also testified that 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. See 2<sup>nd</sup> Revised Williams Exhibit No. 4. Witness Williams demonstrated 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. 2<sup>nd</sup> Revised Williams Exhibit No. 4. 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. Company witness Williams also demonstrated that 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 N.C.G.S. § 62-133.8(h)(4). 2<sup>nd</sup> Revised Williams Exhibit No. 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.

Public Staff witness Lucas stated in his affidavit that the Public Staff had reviewed the costs that are included in the proposed, revised rates and that the Public Staff took no issue with them. He recommended that the Commission approve DEC's proposed prospective monthly, per customer account REPS rider amounts in the following amounts:

\$0.74 for residential accounts, \$3.82 for general service accounts, and \$12.61 for industrial accounts, excluding regulatory fee.

Based upon the foregoing and the entire record herein, the Commission finds that DEC's calculations of its over collection during the test period, its incremental costs projected to be incurred during the billing period, and the resulting REPS and REPS EMF rider charges for each customer class are reasonable and appropriate. The Commission further finds that the REPS and REPS EMF rider charges are below the following annual per-account limits established in N.C.G.S. § 62-133.8(h)(4): \$27.00 for residential, \$150.00 for general service/commercial, and \$1,000.00 for industrial. Finally, the Commission finds that the total incremental costs authorized to be recovered from DEC's customers in this proceeding are below the annual limit established in N.C.G.S. 62-133.8(h)(3) and (4). Therefore, the Commission concludes that DEC should be authorized to recover the total incremental costs incurred during the test period and projected to be incurred during the billing period, through the REPS and REPS EMF rider charges in the amounts described herein.

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 REPS 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 of the date of this order;
5. That DEC's 2017 REPS compliance report shall be, and hereby is, approved, and the RECs in DEC's 2017 compliance sub-accounts in NC-RETS and those of the Wholesale Customers 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 through the REPS EMF rider and REPS rider charges 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 17th day of August, 2018.

NORTH CAROLINA UTILITIES COMMISSION

A handwritten signature in black ink, appearing to read "Linnetta Threatt", with a long horizontal flourish extending to the right.

Linnetta Threatt, Deputy Clerk