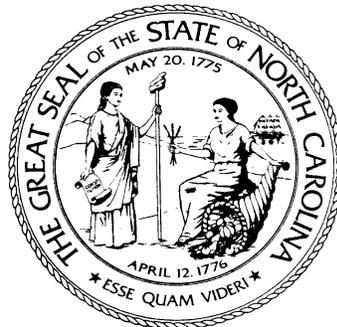


**ANNUAL REPORT REGARDING  
RENEWABLE ENERGY AND ENERGY EFFICIENCY  
PORTFOLIO STANDARD IN NORTH CAROLINA  
REQUIRED PURSUANT TO N.C.G.S. § 62-133.8(j)**

**DATE DUE:           OCTOBER 1, 2018**

**SUBMITTED:        OCTOBER 1, 2018**

**RECEIVED BY  
THE GOVERNOR OF NORTH CAROLINA,  
THE ENVIRONMENTAL REVIEW COMMISSION,  
THE JOINT LEGISLATIVE OVERSIGHT COMMITTEE  
ON AGRICULTURE AND NATURAL AND ECONOMIC  
RESOURCES, THE SENATE APPROPRIATIONS  
COMMITTEE ON AGRICULTURE, NATURAL, AND  
ECONOMIC RESOURCES, AND THE CHAIRS OF THE  
HOUSE OF REPRESENTATIVES APPROPRIATIONS  
COMMITTEE ON AGRICULTURE AND NATURAL AND  
ECONOMIC RESOURCES**



**SUBMITTED BY  
THE NORTH CAROLINA UTILITIES COMMISSION**

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# EXECUTIVE SUMMARY

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In August 2007, North Carolina enacted comprehensive energy legislation, Session Law 2007-397 (Senate Bill 3), which, among other things, established a Renewable Energy and Energy Efficiency Portfolio Standard (REPS), the first renewable energy portfolio standard in the Southeast. Under the REPS, all electric power suppliers in North Carolina must meet an increasing amount of their retail customers' energy needs by a combination of renewable energy resources (such as solar, wind, hydropower, geothermal and biomass) and reduced energy consumption. Pursuant to N.C.G.S. § 62-133.8(j), the Commission is required to report by October 1 of each year to the Governor, the Environmental Review Commission, and the Joint Legislative Oversight Committee on Agriculture and Natural and Economic Resources, the Senate Appropriations Committee on Agriculture, Natural, and Economic Resources, and the chairs of the House of Representatives Appropriations Committee on Agriculture and Natural and Economic Resources on the activities taken by the Commission to implement, and by electric power suppliers to comply with, the REPS requirement.

## **Electric Power Supplier Compliance**

The REPS requires electric power suppliers, beginning in 2012, to meet an increasing percentage of their retail customers' energy needs by a combination of renewable energy resources and energy reductions from the implementation of energy efficiency (EE) and demand-side management (DSM) measures. In addition, as of 2010, each electric power supplier must meet a certain percentage of its retail electric sales with solar RECs from certain solar facilities. Finally, starting in 2012, each electric power supplier must meet a certain percentage of its retail electric sales from swine waste resources and a specified amount of electricity provided must be derived from poultry waste resources.

### *Monitoring compliance with REPS requirements*

The Commission monitors compliance with the REPS requirements through the annual filing by each electric power supplier of a REPS compliance plan and a REPS compliance report. Pursuant to Commission Rule R8-67(b), on or before September 1 of each year, each electric power supplier is required to file with the Commission a REPS compliance plan providing specific information regarding its plan for complying with the REPS requirement of Senate Bill 3. Pursuant to Commission Rule R8-67(c), each electric power supplier is required to annually file with the Commission a REPS compliance report. The REPS compliance plan is a forward-looking forecast of an electric power supplier's REPS requirement and its plan for meeting that requirement. The REPS compliance report is an annual look back at the RECs earned or purchased and energy savings actually realized during the prior calendar year, and the electric power supplier's compliance in meeting its REPS requirement.

Since the Commission's 2017 report, the Commission has issued orders approving the REPS compliance reports filed by DEP, DEC, and Dominion based upon the Commission's determination that each of these utilities met their respective REPS compliance obligations. In addition, the Commission has accepted the REPS compliance plans filed by DEP, DEC, and Dominion as a part of the Commission's review of each utility's integrated resource planning (IRP) reports. Since the Commission's 2017 report, the Commission has also issued an order approving the REPS compliance reports and REPS compliance plans filed by all the other electric service providers, with the exception of Halifax Electric Membership Corporation and Fayetteville Public Works Commission.

### *Cost recovery rider*

Section 62-133.8(h) of the North Carolina General Statutes authorizes each electric power supplier to establish an annual rider up to an annual cap to recover the incremental costs incurred to comply with the REPS requirement and to fund certain research. Commission Rule R8-67(e) establishes a procedure under which the Commission will consider approval of a REPS rider for each electric public utility. The REPS rider operates in a manner similar to that employed in connection with the fuel charge adjustment rider authorized in N.C.G.S. § 62-133.2 and is subject to an annual true-up.

Since the Commission's 2017 report, the Commission has issued orders approving REPS cost recovery rider charges for DEP, DEC, and Dominion based upon the Commission's determination that the incremental costs to comply with the REPS requirements and to fund research were reasonably and prudently incurred and below the statutory spending limit, and that the rider charges were less than the limits established in N.C.G.S. § 62-133.8(h)(4).

## **2018 Legislation**

In 2018, the General Assembly did not pass any legislation amending the REPS.

## **Commission Implementation**

### *Rulemaking Proceeding*

Immediately after Senate Bill 3 was signed into law, the Commission initiated a proceeding in Docket No. E-100, Sub 113, to adopt rules to implement the REPS and other provisions of the new law. On February 29, 2008, the Commission issued an Order adopting final rules implementing Senate Bill 3.

Since issuing this Order, the Commission has issued a number of orders interpreting various REPS provisions, including the following Orders issued since the 2017 report to the General Assembly:

- On October 16, 2017, the Commission issued an Order Modifying the Swine and Poultry Waste Set-Aside Requirements and Providing Other Relief. The Order concluded that the electric suppliers made a reasonable effort to comply with the swine and poultry waste set-aside REPS requirements in 2017, but would not be able to comply. As to the swine waste set-aside requirement, the Commission noted that despite allowing electric power suppliers to bank RECs for three years, the cumulative effect of this banking has yet to result in the ability to comply with the initial swine waste set-aside. Therefore, the Commission concluded that it is in the public interest to delay the entire requirement of N.C.G.S. § 62-133.8(e) for one year and allow electric power suppliers to continue to bank RECs for swine waste set-aside requirement compliance in future years. As to the poultry waste set-aside requirement, the Commission noted that compliance has been hindered by the fact that the technology of power production from poultry waste continues to be in its early stages of development. No party presented evidence that the aggregate 2017 poultry waste set-aside could be met, however, the Public Staff, DEC and DEP stated that, due to the availability of RECs pursuant to Section 4 of S.L. 2010-195, as amended by S.L. 2011-279 (Senate Bill 886), the 2015 level of the poultry waste set-aside could be maintained. Therefore, the Commission concluded that the poultry waste set-aside requirement should be modified by adding an additional year (2017) of compliance at the 170,000 MWh threshold, prior to escalating the requirement to 700,000 MWh.

The Order<sup>1</sup> resulted in the following updated compliance schedules for the swine waste and poultry waste set-asides REPS requirements:

<u>Calendar Year</u> <u>Resources</u>	<u>Requirement for Swine Waste</u>
2018-2019	0.07%
2020-2022	0.14%
2023 and thereafter	0.20%

<u>Calendar Year</u> <u>Resources</u>	<u>Requirement for Poultry Waste</u>
2016	170,000 MWh
2017	170,000 MWh
2018	700,000 MWh
2019 and thereafter	900,000 MWh

On September 7, 2017, in Docket No. E-100, Sub 113, DEP, DEC, Dominion, North Carolina Electric Membership Corporation (NCEMC), Fayetteville Public Works Commission (FPWC), EnergyUnited, Halifax, TVA, the Town of Windsor, NCMPA1, and NCEMPA, filed a motion to modify the requirements of the 2018 swine and poultry waste set-aside requirements and to delay future increases in those requirements by one year. The Commission has requested comments on the matter and it is pending before the Commission.

### *Renewable energy facilities*

Senate Bill 3 defines certain electric generating facilities as “renewable energy facilities” or “new renewable energy facilities.” Renewable energy certificates (RECs) associated with electric or thermal power generated at such facilities may be used by electric power suppliers to comply with the REPS requirement as provided in N.C.G.S. § 62-133.8(b) and (c).

In its rulemaking proceeding, the Commission adopted rules providing for certification or report of proposed construction and registration of renewable energy facilities and new renewable energy facilities. As of September 1, 2018, the Commission has accepted registration statements filed by 1157 facilities. A list of these facilities, along with other information, may be found on the Commission’s website at: <http://www.ncuc.net/reps/reps.htm>.

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<sup>1</sup> On December 15, 2017, in Docket No. E-100, Sub 113, the Commission issued an order revising the schedule for the swine and poultry waste set-aside requirements consistent with the Commission’s October 17 Order.

On June 19, 2018, in Docket No. G-9, Sub 698, the Commission issued an Order approving a revised version of Piedmont Natural Gas Company, Inc.'s proposed Appendix F, which sets forth the terms and conditions under which Piedmont will accept "alternative gas" into its system and deliver or redeliver it to Piedmont's customers. Alternative gas is defined, in summary, as gas capable of combustion in customer appliances or facilities which is similar in heat content and chemical characteristics to natural gas that is produced from traditional underground well sources. Under the revised Appendix F, and the related interconnection agreements between Piedmont and Optima KV, LLC, and between Piedmont and C2e Renewables NC, Piedmont would receive alternate gas from swine waste to energy projects as part of a three-year pilot program. In approving the pilot program, the Commission also required more detailed reporting from Piedmont to inform the Commission's future consideration of the issues involved. In addition, the Commission recognized the advantages to the State of making use of alternative gas, including providing a cost-effective and environmentally sound way for North Carolina swine and poultry producers to manage animal waste and providing the opportunity for electric power suppliers to comply with the swine and poultry waste set aside requirements under the REPS. After the Commission issued its order, Piedmont and the North Carolina Pork Council sought clarification and reconsideration. As of the drafting of this report, this matter was pending before the Commission.

In addition, since the 2017 report, the Commission has issued a number of orders addressing issues related to the registrations of a renewable energy facility or new renewable energy facility, including the following:

- On October 25, 2017, the Commission issued an Order revoking the registrations of 59 facilities registered with the Commission as renewable energy facilities or as new renewable energy facilities. The owners of the 59 facilities did not complete their annual certifications on or before October 1, 2017, as required by the Commission's August 25, 2016 Order, nor had an annual certification been completed for these facilities as of the date of the Order. The Order states that should the owner of a facility whose registration has been revoked wish to have the energy output from its facility become eligible for compliance with the REPS, the owner must again register the facility with the Commission.
- On March 29, 2018, the Commission issued an Order adopting various administrative, technical, and conforming amendments to the Commission's rules as part of the Commission's implementation of Part X of Session Law 2017-192. In addition, the Commission adopted forms that will be required to be used in making certain filings related

to registrations of renewable energy facilities or new renewable energy facilities.

- On August 7, 2018, the Commission issued an Order giving notice of its intent to revoke the registration of 8 renewable energy facilities and 129 new renewable energy facilities because their owners had not completed or filed the annual certifications required each April 1, as detailed in Commission Rule R8-66(b). Facility owners were given until October 1, 2018, to file their annual certifications belatedly. Owners that do not complete the annual certifications face their facility's registrations being revoked pursuant to Commission Rule R8-66(f). This matter is pending before the Commission.

### *North Carolina Renewable Energy Tracking System (NC-RETS)*

Pursuant to N.C.G.S. § 62-133.8(k), enacted in 2009, the Commission was required to develop, implement, and maintain an online REC tracking system no later than July 1, 2010, in order to verify the compliance of electric power suppliers with the REPS requirements.

On February 2, 2010, after evaluating the bids received in response to a request for proposals (RFP), the Commission signed a Memorandum of Agreement (MOA) with APX, Inc. (APX), to develop and administer an online REC tracking system for North Carolina, NC-RETS. APX successfully launched NC-RETS on July 1, 2010, and by letter dated September 3, 2010, the Commission accepted the system and authorized APX to begin billing users pursuant to the MOA. The original MOA with APX expired on December 31, 2013. Based on the feedback received from the stakeholders, the Commission extended the MOA with APX through December 31, 2017, and subsequently extended the MOA through December 31, 2020.

RECs have been successfully created by, and imported into, NC-RETS, and the electric power suppliers have used the system to demonstrate compliance with the 2010-2017 REPS solar set-aside requirements, the 2017 poultry waste set-aside requirement, and the 2012-2017 REPS general requirements. Lastly, the Commission has established an on-going NC-RETS stakeholder group, providing a forum for resolution of issues and discussion of system improvements.

### *Environmental impacts*

Pursuant to N.C.G.S. § 62-133.8(j), the Commission is directed to consult with the North Carolina Department of Environmental Quality (DEQ) in preparing its report and to include any public comments received regarding direct, secondary, and cumulative environmental impacts of the implementation of the REPS requirements of Senate Bill 3. The Commission has not identified, nor has

it received from the public or DEQ, any public comments regarding direct, secondary, and cumulative environmental impacts of the implementation of the REPS provision of Senate Bill 3. DEQ, in response to the Commission's request, notes impacts on North Carolina's air, water, and land quality. DEQ's full response is attached to this report as a part of Appendix 1.

### Wholesale Providers Meeting REPS Requirements

As noted below, DEP will no longer provide REPS compliance services after its power supply contracts with the towns of Black Creek, Lucama, Sharpsburg, Stantonsburg, and Winterville expired at the end of 2017. DEC continues to meet the REPS requirements for Rutherford EMC; Blue Ridge EMC; the cities of Concord and Kings Mountain; and the towns of Dallas, Forest City, and Highlands. However, as also noted below, DEC's contracts with Concord and Kings Mountain expire at the end of 2018, at which time DEC will cease providing REPS compliance services for these municipalities. Dominion has agreed to meet the REPS requirements for the Town of Windsor. The towns of Macclesfield, Pinetops, and Walstonburg have previously filed letters stating that the City of Wilson, as their wholesale provider, has agreed to include their loads with its own for reporting to NCEMPA for REPS compliance. Oak City has indicated that Edgecombe-Martin County EMC, its wholesale provider, has agreed to include its loads with its own for reporting to GreenCo for REPS compliance.

## **Conclusions**

All of the electric power suppliers have met or appear to have met the 2012-2017 general REPS requirements and appear on track to meet the 2018 general REPS requirements. All of the electric power suppliers have met the 2012-2017 solar set-aside requirements and appear to be on track to meet the 2018 solar set-aside requirement. The Commission granted a joint motion to delay implementation of the 2017 swine waste set-aside requirement, delaying implementation of that section of the REPS by one additional year. In addition, the electric power suppliers appear to have met the poultry waste set-aside requirement in 2017. Despite this, most electric power suppliers do not appear to be on track to meet the swine and poultry waste set-aside requirements for 2018 and have requested a modification in these requirements for 2018, and a delay in future increases in these requirements. That matter is pending before the Commission.

# BACKGROUND

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In August 2007, North Carolina enacted comprehensive energy legislation, Session Law 2007-397 (Senate Bill 3), which, among other things, established a Renewable Energy and Energy Efficiency Portfolio Standard (REPS), the first renewable energy portfolio standard in the Southeast. Under the REPS, all electric power suppliers in North Carolina must meet an increasing amount of their retail customers' energy needs by a combination of renewable energy resources (such as solar, wind, hydropower, geothermal and biomass) and reduced energy consumption. Beginning at 3% of retail electricity sales in 2012, the REPS requirement ultimately increases to 10% of retail sales beginning in 2018 for the State's EMCs and municipally-owned electric providers and 12.5% of retail sales beginning in 2021 for the State's electric public utilities.

In N.C.G.S. § 62-133.8(j), the General Assembly required the Commission to make the following annual report:

No later than October 1 of each year, the Commission shall submit a report on the activities taken by the Commission to implement, and by electric power suppliers to comply with, the requirements of this section to the Governor, the Environmental Review Commission, and the Joint Legislative Oversight Committee on Agriculture, Natural, and Economic Resources, the Senate Appropriations Committee on Agriculture, Natural, and Economic Resources, and the chairs of the House of Representatives Appropriations Committee on Agriculture and Natural and Economic Resources. The report shall include any public comments received regarding direct, secondary, and cumulative environmental impacts of the implementation of the requirements of this section. In developing the report, the Commission shall consult with the Department of Environment and Natural Resources.<sup>2</sup>

On October 1, 2008, the Commission made its first annual report pursuant to N.C.G.S. § 62-133.8(j),<sup>3</sup> and last year, on October 1, 2017, the Commission made its

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<sup>2</sup> N.C.G.S. § 62-133.8(j) was amended by Session Law 2011-291 to require that the annual REPS Report be submitted to the Joint Legislative Commission on Governmental Operations, rather than the Joint Legislative Utility Review Committee, and further amended by Session Law 2017-57 to require that the annual REPS Report be submitted to the Joint Legislative Oversight Committee on Agriculture and Natural and Economic Resources, the Senate Appropriations Committee on Agriculture, Natural, and Economic Resources, and the chairs of the House of Representatives Appropriations Committee on Agriculture and Natural and Economic Resources.

<sup>3</sup> Annual Report of the North Carolina Utilities Commission to the Governor of North Carolina, the Environmental Review Commission and the Joint Legislative Utility Review Committee Regarding Energy and EE Portfolio Standard, October 1, 2008 (2008 REPS Report).

tenth annual report.<sup>4</sup> The remaining sections of this report detail, as required by the General Assembly, developments related to Senate Bill 3, activities undertaken by the Commission during the past year to implement Senate Bill 3, and actions by the electric power suppliers to comply with N.C.G.S. § 62-133.8, the REPS provisions of Senate Bill 3.

## 2018 LEGISLATION

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In 2018, the General Assembly did not pass any legislation amending the REPS.

## COMMISSION IMPLEMENTATION

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### Rulemaking Proceeding

As detailed in the Commission's 2008 REPS Report, after Senate Bill 3 was signed into law the Commission initiated a proceeding in Docket No. E-100, Sub 113, to adopt rules to implement the REPS and other provisions of the new law. On February 29, 2008, the Commission issued an Order adopting final rules implementing Senate Bill 3. The rules, in part, require each electric power supplier to file an annual REPS compliance plan and an annual REPS compliance report to demonstrate, respectively, reasonable plans for, and actual compliance with, the REPS requirement.

In its 2017 REPS Report, the Commission notes that it had issued a number of orders interpreting various provisions of the REPS statute, in which it made the following conclusions:

- Tennessee Valley Authority's (TVA) distributors making retail sales in North Carolina and electric membership corporations (EMCs) headquartered outside of North Carolina that serve retail electric customers within the State must comply with the REPS requirement of Senate Bill 3, but the university-owned electric suppliers, Western Carolina University and New River Light & Power Company, are not subject to the REPS requirement.

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<sup>4</sup> Annual Report of the North Carolina Utilities Commission to the Governor of North Carolina, the Environmental Review Commission and the Joint Legislative Oversight Committee on Agriculture and Natural and Economic Resources, the Senate Appropriations Committee on Agriculture, Natural, and Economic Resources, and the chairs of the House of Representatives Appropriations Committee on Agriculture and Natural and Economic Resources Regarding Renewable Energy and Energy Efficiency Portfolio Standard, October 1, 2017 (2017 REPS Report).

- Each electric power supplier's REPS requirement, both the set-aside requirements and the overall REPS requirements, should be based on its prior year's actual North Carolina retail sales.
- An electric public utility cannot use existing utility-owned hydroelectric generation for REPS compliance, but may use power generated from new small (10 MW or less) increments of utility-owned hydroelectric generating capacity.
- The solar, swine waste and poultry waste set-aside requirements should have priority over the general REPS requirement where both cannot be met without exceeding the per-account cost cap established in N.C.G.S. § 62-133.8(h).
- The set-aside requirements may be met through the generation of power, purchase of power, or purchase of unbundled renewable energy credits (RECs).
- The 25% limitation on the use of out-of-state RECs applies to the general REPS requirement and each of the individual set-aside provisions.
- The electric power suppliers are charged with collectively meeting the aggregate swine waste and poultry waste set-aside requirements and may agree among themselves how to collectively satisfy those requirements.
- RECs associated with the electric power generated at a biomass-fueled combined heat and power (CHP) facility located in South Carolina and purchased by an electric public utility in North Carolina would be considered as in-state pursuant to N.C.G.S. § 62-133.8(b)(2)(d), but RECs associated with out-of-state renewable generation not delivered to and purchased by an electric public utility in North Carolina and RECs associated with out-of-state thermal energy would not be considered to be in-state RECs pursuant to N.C.G.S. § 62-133.8(b)(2)(d).
- Only RECs associated with the percentage of electric generation that results from methane gas that was actually produced by poultry waste or swine waste may be credited toward meeting the swine waste and poultry waste set-aside requirements. Thus, not all of the methane gas produced by the anaerobic digestion of swine or poultry waste, as well as "other organic biodegradable material," would qualify toward the set-aside requirements because the other material described as mixed with the poultry waste or swine waste is responsible for some percentage of the resulting methane gas.
- Issuance of a joint request for proposals (RFP) is a reasonable means for the petitioners to work together collectively to meet the swine waste set-aside requirement.

- A Pro Rata Mechanism (PRM) is a reasonable and appropriate means for the State's electric power suppliers to meet the aggregate swine waste and poultry waste set-aside requirements of N.C.G.S. § 62-133.8(e) and (f). As it had earlier done with regard to the aggregate swine waste set-aside requirement, the Commission approved the joint procurement of RECs from energy produced by poultry waste, the sharing of poultry waste generation bids among electric suppliers, and other collaborative efforts as a reasonable means for the State's electric suppliers to work together to meet the poultry waste set-aside requirement.
- The term "allocations made by the Southeastern Power Administration" (SEPA), is used as a term of art in N.C.G.S. § 62-133.8(c)(2)(c). Therefore, a municipal electric power supplier or EMC will be permitted to use the total annual amount of energy supplied by SEPA to that municipality or EMC to comply with its respective REPS requirement, subject to the 30% limitation provided in N.C.G.S. § 62-133.8(c)(2)(c).
- RECs associated with the thermal energy output of a CHP facility which uses poultry waste as a fuel should not be eligible for use to meet the poultry waste set-aside requirement under N.C.G.S. § 62-133.8(f) The Commission reasoned that the legislature's inclusion of the phrases "or an equivalent amount of energy" and "new metered solar thermal energy facilities" in subsection (d), coupled with the lack of similar express language in subsection (f), demonstrated a clear legislative intent to allow solar thermal RECs to meet the solar set-aside requirement, but not to allow thermal RECs to meet the poultry waste set-aside requirement.
- An electric public utility can recover through its fuel cost rider the total delivered cost of the purchase of energy generated by a swine or poultry waste-to-energy facility where the RECs associated with the production of the energy are purchased by another North Carolina electric power supplier to comply with the REPS statewide aggregate swine waste and poultry waste set-aside requirements.
- Amendments to NC-RETS Operating Procedures, Rules R8-64 through R8-69, and an application form for use by owners of renewable energy facilities in obtaining registration of a facility under Rule R8-66 should be adopted. The amendments to Rules R8-64 through R8-69 clarify and streamline the application procedures, registration, record keeping, and other requirements for renewable energy facilities.
- Commission Rules R8-67(b), R8-67(c), and R8-67(h) should be amended by adding a requirement that REPS compliance plans contain a list of planned and implemented demand-side management (DSM) measures and include a measurement and verification (M&V) plan if one is not already filed with the Commission. Additionally, the amendment added reporting requirements to the

REPS Compliance Reports for EMCs regarding EE and implementation of M&V plans. The Order also required all electric power suppliers to review the number of energy efficiency (EE) certificates they have reported to date and submit any changes necessitated by the Order.

- That Commission Rules R8-61, R8-63, and R8-64 should be amended by adding to the previously existing requirement that an application for a certificate of public convenience and necessity (CPCN) contain a map and location of the facility. The amendments require additional information including: 1) the proposed site layout relative to the map; 2) all major equipment, including the generator, fuel handling equipment, plant distribution system, and start up equipment; 3) the site boundary; 4) planned and existing pipelines, planned and existing roads, planned and existing water supplies, and planned and existing electric facilities.
- That the electric power suppliers made a reasonable effort to comply with the swine waste and poultry waste set-aside REPS requirements in 2012, but will not be able to comply. The Order concluded that it was in the public interest to eliminate the swine waste set-aside requirement in 2012, and to delay the implementation of the poultry waste set-aside requirement by one year until 2013. In addition to modifying the compliance schedules for the swine waste and poultry waste set-aside REPS requirements, the Order also required that DEC and DEP file tri-annual progress reports on their compliance with, and efforts to comply with, the swine waste and poultry waste set-aside requirements.
- The electric power suppliers made a reasonable effort to comply with the swine waste and poultry waste set-aside REPS requirements in 2013, but will not be able to comply. The Order concluded that it was in the public interest to delay the implementation of the swine and poultry waste set-aside requirements by one year until 2014. Finally, the Order concluded that the triannual progress reporting requirement established in the Commission's 2012 Delay Order should also apply to Dominion, GreenCo, FPWC, EnergyUnited, Halifax, NCEMPA and NCMPA1.
- Proceeds from REC sales should be credited to customers if the RECs were purchased with REPS rider proceeds, or if the RECs were produced via a generating facility that was paid for by customers. Further, the Commission determined that, since it cannot anticipate every scenario, it will review REC sales on a case-by-case basis in REPS rider proceedings and general rate cases, as the issues arise. The Commission further determined that the electric public utility will have the burden of proving that each REC sale was in the best interest of its customers and should file complete information regarding the original purchase price, resale price, the cost of replacement RECs and any incremental administrative costs or brokerage fees incurred pursuant to the transaction.

- The electric power suppliers made a reasonable effort to comply with the swine waste set-aside REPS requirement in 2014, but will not be able to comply. The Commission's determination was based on the tri-annual reports submitted by the electric power suppliers in Docket No. E-100, Sub 113A, the Petitioners' motion, and the intervenors' comments. The Commission found that, among the reasons the electric power suppliers would not be able to comply, is that the technology is in early stages of development. Additionally, the Order directed the Public Staff to conduct two stakeholder meetings in 2015 to discuss potential obstacles to achieving the swine and poultry waste requirements and options for addressing them. Finally, the Order concluded that the triannual progress reporting requirement established in the Commission's 2012 Delay Order and expanded in the Commission's 2013 Delay Order should continue until the Commission finds that they are no longer necessary. The Order resulted in updated compliance schedules for the swine waste set-aside REPS requirement.
  
- On June 3, 2014, the Commission issued an Order Requesting Comments regarding the potential changes to Rules R8-64 and R8-65, as well as the reporting requirements in Docket No. E-100, Subs 101, 83, and 41B (June Order). In the June Order, the Commission took note that, over the past few years, a large number of facilities, particularly solar photovoltaic, have been filing applications for CPCNs. However, it is currently unclear whether certificate holders for solar facilities are complying with this construction progress report requirement. Further, due to the fact that there is no requirement for notice of completion, the Commission cannot easily discern how many facilities are actually being built. The June Order requested that interested parties file comments by June 30, 2014, and that reply comments be filed by July 21, 2014.
  
- It would be appropriate to streamline current reporting requirements to provide a more coherent and complete picture of the status of non-utility generators within North Carolina. The Commission's order states that a consolidated report would be beneficial to all parties. The Order required DEC, DEP and Dominion to file by March 31, of each year, beginning March 31, 2015, three lists with the following information:
  - a. An Interconnection Application List of all applications in the utility's interconnection queue that provides the owner's name, Commission Docket No., AC capacity (kW), fuel type(s), application date, county and interconnection application status;
  - b. An Interconnection List of all generators interconnected with the utility's system in North Carolina that provides the owner's name, Commission Docket No., AC capacity (kW), fuel type(s), power delivery date, county and whether the facility is net metering; and

c. A Purchased Power Agreement List of all facilities with which the utility has a purchased power agreement (or application) that provides the owner's name, Commission Docket No., AC capacity (kW), fuel type(s), energized date, tariff name(s), term (years), county and PPA application status. Concurrently, the Order repealed the reporting requirement contained in Commission Rule R8-64(e).

- On December 1, 2015, the Commission issued an Order Modifying the Swine and Poultry Waste Set-Aside Requirements and Providing Other Relief. The Order concluded that the electric suppliers made a reasonable effort to comply with the swine and poultry waste set-aside REPS requirements in 2015, but would not be able to comply. As to the swine waste set-aside requirement, the Commission notes that despite allowing electric power suppliers to bank RECs for three years, the cumulative effect of this banking has yet to result in the ability to comply with the initial swine waste set-aside. Therefore, the Commission concluded that it is in the public interest to delay the entire requirement of N.C.G.S. § 62-133.8(e) for one year and allow electric power suppliers to continue to bank RECs for swine waste set-aside requirement compliance in future years. As to the poultry waste set-aside requirement, the Commission notes that compliance has been hindered by the fact that the technology of power production from poultry waste continues to be in its early stages of development. No party presented evidence that the aggregate 2015 poultry waste set-aside could be met, however, the Public Staff, DEC and DEP state that, due to the availability of RECs pursuant to Section 4 of S.L. 2010-195, as amended by S.L. 2011-279 (Senate Bill 886), the 2014 level of the poultry waste set-aside could be maintained. Therefore, the Commission concluded that the poultry waste set-aside requirement should be modified by adding an additional year (2015) of compliance at the 170,000 MWh threshold, prior to escalating the requirement to 700,000 MWh.
- On December 15, 2015, the Commission issued an Order Establishing 2015 Poultry Waste Set-Aside Requirement Allocation. The Commission recognized that the pendency of the matter regarding the allocation of the aggregate poultry waste set-aside requirement for 2015 created uncertainty for electric power suppliers. Therefore, the Commission found good cause to clarify the allocation of the aggregate poultry waste set-aside requirement for compliance year 2015. The Order established that the 2014 retail sales data reported to NC-RETS by electric power suppliers and utility compliance aggregators, shall be used to allocate, on a pro-rata basis, the 170,000 MWh aggregate poultry waste set-aside requirement for 2015.
- On April 18, 2016, in Docket No. E-100, Sub 113, the Commission issued an Order Establishing Method of Allocating the Aggregate Poultry Waste Resource Set-Aside Requirement concluding that, starting with the 2016 compliance year, the aggregate poultry waste set-aside obligation shall be allocated among the electric power suppliers by averaging three years of

historic retail sales (2013, 2014, and 2015), with the resulting allocation held constant for three years (2016, 2017, and 2018).

- On June 6, 2016, in Docket No. E-100, Sub 113, the Commission issued an Order on NCSEA's Request, concluding that a topping cycle combined heat and power system does not constitute an energy efficiency measure under N.C.G.S. § 62-133.8(a)(4), except to the extent that the secondary component, the waste heat component, is used. NCSEA appealed the Commission's decision to the North Carolina Court of Appeals, which reversed the Commission decision finding that the statute (N.C.G.S. § 62-133.8) is unambiguous and that it allows the entire CHP system to be considered an energy efficiency measure. See State ex. rel. Util' Comm. v. North Carolina Sustainable Energy Association, No. COA16-1067, filed August 1, 2017.
- On August 5, 2016, in Docket No. E-100, Sub 113, the Commission Issued an Order Establishing the 2016, 2017, and 2018 Poultry Waste Set-Aside Requirement Allocation. The Order established that the aggregate poultry waste set-aside requirement for 2016, 2017, and 2018 shall be allocated among the electric power suppliers and utility compliance aggregators based on the load ratio share calculations filed by the NC-RETS administrator in Docket No. E-100, Sub 113 on July 11, 2016 and the methodology previously adopted by the Commission. The resulting requirements will be held constant for three years, and the allocation process will be repeated in 2018 in order to set the allocation requirements for compliance years 2019, 2020, and 2021.
- On August 11, 2016, the Commission issued an Order Modifying the Swine and Poultry Waste Set-Aside Requirements and Providing Other Relief. The Order concluded that the electric suppliers made a reasonable effort to comply with the swine and poultry waste set-aside REPS requirements in 2016, but would not be able to comply. As to the swine waste set-aside requirement, the Commission notes that despite allowing electric power suppliers to bank RECs for three years, the cumulative effect of this banking has yet to result in the ability to comply with the initial swine waste set-aside. Therefore, the Commission concluded that it is in the public interest to delay the entire requirement of N.C.G.S. § 62-133.8(e) for one year and allow electric power suppliers to continue to bank RECs for swine waste set-aside requirement compliance in future years. As to the poultry waste set-aside requirement, the Commission notes that compliance has been hindered by the fact that the technology of power production from poultry waste continues to be in its early stages of development. No party presented evidence that the aggregate 2016 poultry waste set-aside could be met, however, the Public Staff, DEC and DEP state that, due to the availability of RECs pursuant to Section 4 of S.L. 2010-195, as amended by S.L. 2011-279 (Senate Bill 886), the 2015 level of the poultry waste set-aside could be maintained. Therefore, the Commission concluded that the poultry waste set-aside requirement should be modified by

adding an additional year (2015) of compliance at the 170,000 MWh threshold, prior to escalating the requirement to 700,000 MWh.

Since the October 1, 2017 report was submitted, the Commission has issued a limited number of additional Orders interpreting various provisions of the REPS statute and seeking additional information to aid the Commission in future interpretations. The following Order is of particular interest:

***Order Modifying the Swine and Poultry Waste Set-Aside Requirements and Providing Other Relief, Docket No. E-100, Sub 113 (October 16, 2017)***

On October 16, 2017, DEC, DEP, Dominion, GreenCo, FPWC, EnergyUnited, Halifax, TVA, Waynesville, NCEMPA, and NCMPA1 (Joint Movants) filed a joint motion to modify and delay the 2017 swine and poultry waste set-aside requirements of N.C.G.S. § 62-133.8(e) and (f), respectively. Joint Movants requested that the Commission relieve them of compliance with the swine and poultry waste set-aside requirements by delaying their need to comply with these requirements by one year until 2018. The Joint Movants state that they have individually and collectively made reasonable efforts to comply with the REPS swine and poultry waste resource provisions. On August 31, 2017, the Commission issued an Order Requesting Comments. Between September 21, 2017 and September 29, 2017, the North Carolina Poultry Federation (NCPF), the North Carolina Pork Council (NCPC), and the Public Staff filed comments on Joint Movants' motion.

On October 16, 2017, the Commission issued an Order Modifying the Swine and Poultry Waste Set-Aside Requirements and Providing Other Relief. The Order concluded that the electric suppliers made a reasonable effort to comply with the swine and poultry waste set-aside REPS requirements in 2017, but would not be able to comply. As to the swine waste set-aside requirement, the Commission noted that despite allowing electric power suppliers to bank RECs for three years, the cumulative effect of this banking has yet to result in the ability to comply with the initial swine waste set-aside. Therefore, the Commission concluded that it is in the public interest to delay the entire requirement of N.C.G.S. § 62-133.8(e) for one year and allow electric power suppliers to continue to bank RECs for swine waste set-aside requirement compliance in future years. As to the poultry waste set-aside requirement, the Commission noted that compliance has been hindered by the fact that the technology of power production from poultry waste continues to be in its early stages of development. No party presented evidence that the aggregate 2017 poultry waste set-aside could be met, however, the Public Staff, DEC and DEP state that, due to the availability of RECs pursuant to Section 4 of S.L. 2010-195, as amended by S.L. 2011-279 (Senate Bill 886), the 2016 level of the poultry waste set-aside could be maintained. Therefore, the Commission concluded that the poultry waste set-aside requirement should be modified by adding an additional year (2017) of compliance at the 170,000 MWh threshold, prior to escalating the requirement to 700,000 MWh.

The Order<sup>5</sup> resulted in the following updated compliance schedules for the swine waste and poultry waste set-asides REPS requirements:

<u>Calendar Year</u>	<u>Requirement for Swine Waste Resources</u>
2018-2019	0.07%
2020-2022	0.14%
2023 and thereafter	0.20%

<u>Calendar Year</u>	<u>Requirement for Poultry Waste Resources</u>
2016	170,000 MWh
2017	170,000 MWh
2018	700,000 MWh
2019 and thereafter	900,000 MWh

On September 7, 2017, in Docket No. E-100, Sub 113, DEP, DEC, Dominion, NCEMC, FPWC, EnergyUnited, Halifax, TVA, NCMAPA1, and NCEMPA, filed a motion to modify the requirements of the 2018 swine and poultry waste set-aside requirements and to delay future increases in those requirements by one year. The Commission has requested comments on the matter and it is pending before the Commission.

***Order Adopting Administrative, Technical, and Conforming Amendments to Commission Rules, Docket No. E-100, Subs 113, 121, and 134 (March 29, 2018)***

On August 3, 2017, the Commission issued an order in Docket No. E-100, Subs 113, 121, and 134, giving notice of the Commission’s implementation of new fees and administrative changes as a result of the enactment of House Bill 589 (S.L. 2017-192). In that Order, the Commission expressed its intent to undertake additional administrative implementation of the provisions of S.L. 2017-192, including adopting amendments to the Commission’s rules, as necessary, and updating and adopting various forms available on the Commission’s website. Finally, that Order noted the Commission’s intent to initiate separate proceedings to implement other sections of S.L. 2017-192.

Since August 3, 2017, the Commission has adopted the following Commission Rules: Rule R8-71, Competitive Procurement of Renewable Energy (Docket No. E-100, Sub 150); Rule R8-72, Community Solar Program (Docket No. E-100, Sub 155); and Rule R8-73, Applications for Certificate of Authority to

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<sup>5</sup> On December 15, 2017, in Docket No. E-100, Sub 113, the Commission issued an order revising the schedule for the swine and poultry waste set-aside requirements consistent with the Commission’s conclusions reached in the October 17 Order.

Engage in Business as an Electric Generator Lessor; Transfers; and Notice (Docket No. E-100, Sub 156).

The Commission, therefore, found good cause to adopt various administrative, technical, and conforming amendments to the Commission's rules in the form reflected in the appendix A, attached to this order, to continue implementation of S.L. 2017-192. The Commission further found good cause to adopt revised forms as reflected in the appendices to this order, including the following: (1) Application for a Certificate of Public Convenience and Necessity – Rule R8-64; (2) Report of Proposed Construction – Rule R8-65; (3) Registration Statement for the Registration of a Renewable Energy Facility or New Renewable Energy Facility – Rule R8-66; and (4) Annual Certification of Compliance with the Requirements of Commission Rule R8-66 for the Continuation of the Registration of a Renewable Energy Facility or New Renewable Energy Facility. Finally, the Commission gave notice that, effective May 1, 2018, the Commission would require the use of these forms by persons seeking a certificate of public convenience and necessity pursuant to Commission Rule R8-64, reporting the proposed construction of an electric generating facility pursuant to N.C.G.S. § 62-110.1(g), seeking registration of a renewable energy facility pursuant to Commission Rule R8-66, or annually certifying compliance with the requirements of Commission Rule R8-66.

## **Renewable Energy Facilities**

The REPS statute defines certain electric generating facilities as renewable energy facilities or new renewable energy facilities. RECs associated with electric or thermal power generated at such facilities may be used by electric power suppliers for compliance with the REPS requirement as provided in N.C.G.S. § 62-133.8(b) and (c). In its rulemaking proceeding, the Commission adopted rules providing for a report of proposed construction, certification or registration of renewable energy facilities and new renewable energy facilities.

Pursuant to N.C.G.S. § 62-110.1(a), no person, including any electric power supplier, may begin construction of an electric generating facility in North Carolina without first obtaining from the Commission a certificate of public convenience and necessity (CPCN). Two exemptions from this certification requirement are provided in N.C.G.S. § 62-110.1(g): (1) self-generation, and (2) nonutility-owned renewable generation under 2 MW. Any person exempt from the certification requirement must, nevertheless, file a report of proposed construction with the Commission pursuant to Rule R8-65.

To ensure that each renewable energy facility from which electric power or RECs are used for REPS compliance meets the particular requirements of Senate Bill 3, the Commission adopted Rule R8-66 to require that the owner, including an electric power supplier, of each renewable energy facility or new renewable energy facility register with the Commission if it intends for RECs it earns to be eligible for

use by an electric power supplier for REPS compliance. This registration requirement applies to both in-state and out-of-state facilities. As of September 1, 2016, the Commission has accepted registration statements filed by 1419 facilities.

As detailed in the 2017 REPS Report, the Commission has issued a number of orders addressing issues related to the registration of a facility, including the definition of “renewable energy resource,” as summarized below.

- Accepted registration as a new renewable energy facility, a 1.6-MW electric generating facility to be located near Clinton in Sampson County, North Carolina, and fueled by methane gas produced from anaerobic digestion of organic wastes from a Sampson County pork packaging facility and from a local swine farm.
- Issued a declaratory ruling that: (1) the percentage of refuse-derived fuel (RDF) that is determined by testing to be biomass, and the synthesis gas (Syngas) produced from that RDF is a “renewable energy resource” as defined in N.C.G.S. § 62-133.8(a)(8); (2) the applicant’s delivery of Syngas from a co-located gasifier to an electric utility boiler would not make the company a “public utility” as defined in N.C.G.S. § 62-3(23); and (3) the applicant’s construction of a co-located gasifier and the piping connection from the gasifier to an existing electric utility boiler would not require a CPCN under N.C.G.S. § 62-110(a) or under N.C.G.S. § 62-110.1(a).
- Issued an Order amending existing CPCNs for two electric generating facilities in Southport and Roxboro, North Carolina, that were being converted to burn a fuel mix of coal, wood waste, and tire-derived fuel (TDF). The Commission concluded that the portion of TDF derived from natural rubber, an organic material, meets the definition of biomass, and is eligible to earn RECs, but required the applicant to submit additional information to demonstrate the percentage of TDF that is derived from natural rubber. In addition, the Commission accepted registration of the two facilities as new renewable energy facilities.
- Accepted registration as a new renewable energy facility a 1.6-MW CHP facility to be located in Darlington County, South Carolina, that will generate electricity using methane gas produced via anaerobic digestion of poultry litter from a chicken farm mixed with other organic, biodegradable materials, and use the waste heat from the electric generators to provide temperature control for the methane-producing anaerobic digester as well as the chicken houses. The Commission concluded that the thermal energy used as an input back into the anaerobic digestion process effectively increases the efficiency of the electric production from the facility; but is not used to directly produce electricity or useful, measureable thermal or mechanical energy at a retail electric customer’s facility pursuant to N.C.G.S. § 62-133.8(a)(1); and is not eligible for RECs. However, the thermal energy that is used to heat the chicken houses is eligible to earn RECs.

- Issued a declaratory ruling that: (1) biosolids, the organic material remaining after treatment of domestic sewage and combusted at the applicant's wastewater treatment plant, are a "renewable energy resource" as defined by N.C.G.S. § 62-133.8(a)(8); and (2) the applicant, a county water and sewer authority organized in 1992 pursuant to the North Carolina Water and Sewer Authorities Act, is specifically exempt from regulation as a public utility pursuant to N.C.G.S. § 62-3(23)(d).
- Accepted for registration as a new renewable energy facility a solar thermal hot water heating facility located in Mecklenburg County, North Carolina, used to heat two commercial swimming pools. The Commission concluded, however, that as an unmetered solar thermal facility, RECs earned based on the capacity of the solar panels are not eligible to meet the solar set-aside requirement of N.C.G.S. § 62-133.8(d). However, the Commission allowed the applicant to earn general thermal RECs based upon an engineering analysis of the energy from the unmetered solar thermal system that is actually required to heat the pools, which was determined to be substantially less than the capacity of the solar thermal panels.
- Issued an Order concluding that primary harvest wood products, including wood chips from whole trees, are "biomass resources" and "renewable energy resources" under N.C.G.S. § 62-133.8(a)(8). The Commission reasoned that the General Assembly, by including several specific examples of biomass in the statute, did not intend to limit the scope of the term to those examples. Rather, the term "biomass" encompasses a broad category of resources and should not be limited absent express intent to do so. The Environmental Defense Fund and NCSEA appealed the Commission's Order to the North Carolina Court of Appeals. On August 2, 2011, the Court of Appeals issued a decision affirming the Commission's Order.
- Issued an Order declaring that yard waste and the percentage of RDF used as fuel are renewable energy resources, and that the percentage of Syngas produced from yard waste and RDF used as fuel is a renewable energy resource. The Commission held that yard waste is an organic material having a constantly replenished supply, and, thus, is a renewable resource under N.C.G.S. § 62-133.8(a)(8).
- Accepted for registration as a new renewable facility a CHP facility, determining that the portion of electricity produced by landfill gas will be eligible to earn RECs and the portion of waste steam produced from the electric turbines that is used as an input for a manufacturing process will be eligible to earn thermal RECs. However, the Commission also concluded that steam that bypasses the turbine generators and waste heat being used to pre-heat the feedwater for the boilers will not be used to directly produce electricity or useful, measureable thermal or mechanical energy at a retail electric customer's facility pursuant to N.C.G.S. § 62-133.8(a)(1), and, therefore, will not be eligible to earn RECs.

- Accepted registration of residential solar thermal water heating facilities on over one thousand homes which were allowed to install meters on a representative sample of the homes, rather than on each home, to determine the number of British Thermal Units (BTUs) of thermal energy that will be produced and on which RECs will be earned, and assigned to the unmetered homes the thermal heat measures recorded on the metered homes.
- Issued an Order accepting the registrations of nine solar thermal facilities, but found that a request for a waiver of the requirement in N.C.G.S. § 62-133.8(d) that solar thermal energy be measured by a meter in order to produce RECs eligible to meet the solar set-aside requirement was inappropriate, disallowing the use of RETScreen Analysis Software (RETScreen) to calculate the estimated solar thermal production of each facility. The Commission notes that there was no cited or known legal authority by which the Commission is authorized to grant such a waiver. Further, the Commission concluded that the use of RETScreen is not appropriate because it estimates the total amount of solar thermal energy that could be produced, rather than the amount of energy actually used to heat water.
- The Commission denied the registration of a thermal system as a new renewable energy facility based upon the fact that the system would be integrated into an existing biomass facility and the thermal energy would be used to pre-heat the feed water entering the biomass-fueled boiler resulting in the use of less biomass fuel. The Commission concluded that it was appropriate to view the facility as one entity eligible to earn RECs on the electrical output of the biomass-fueled boiler, rather than two separate entities capable of earning RECs.
- Granted CPCNs with conditions and accepted registrations as new renewable energy facilities for a 300-MW wind facility in Pasquotank and Perquimans Counties and an 80-MW wind facility in Beaufort County.
- Issued an Order declaring that directed biogas is a renewable energy resource. The Commission's order states that for a facility to earn RECs on electricity created using directed biogas, appropriate attestations must be made and records kept regarding the source and amounts of biogas injected into the pipeline and used by the facility to avoid double counting. The Commission's order further notes that as provided in Commission Rule R8-67(d)(2) a facility utilizing directed biogas would earn RECs "based only upon the energy derived from renewable energy resources in proportion to the relative energy content of the fuels used." Finally, the Commission notes that each facility's registration will be considered on a case-by-case basis, and that the Commission had not addressed whether RECs earned would be subject to the out-of-state limitation on unbundled RECs under N.C.G.S. § 62-133.8(b)(2)(e).

- Issued an Order stating that the policy that only net output is eligible for the issuance of RECs was not based solely on the definition of “station service” in the Commission rules, but that N.C.G.S. § 62.133.8(a)(6) requires that RECs be derived from “electricity or equivalent energy” that is “supplied by a renewable energy facility.” The Commission held that gross electricity used to power the facility itself cannot be considered electricity “supplied by a renewable energy facility.” The Commission interpreted “station service” to encompass all electric demand consumed at the generation facility that would not exist but for the generation itself, including, but not limited to, lighting, office equipment, heating, and air-conditioning at the facility.
- Issued an Order finding that, because compensation could be built into alternative financial arrangements to recover the costs of electric generation, a scenario in which an electricity producer sold steam and gave away electricity must be considered “[p]roducing, generating, transmitting, delivering, or furnishing electricity ... to or for the public for compensation” under N.C.G.S. § 62-3(23)a.1. The Commission notes that were it to rule otherwise it would create multiple scenarios in which an electric generator could provide electrical services “free of charge” to a third party and build in compensation to recover its costs via other arrangements, thus, avoiding the statutory definition of a public utility in N.C.G.S. § 62-3(23)a.1.
- Issued an Order on Request for Declaratory Ruling addressing the eligible output, pursuant to S.L. 2010-195 (Senate Bill 886), to which triple credit is applied to any electric power or RECs generated by an eligible facility. The Commission held that, although the first 20 MW of biomass renewable energy facility generating capacity remained eligible for the triple credit, only the first 10 MW of biomass renewable energy facility generating capacity was eligible to earn additional credits to meet the poultry waste set-aside requirements in N.C.G.S. § 62-133.8(f). The Commission held that the limit was on the electric generating capacity, not the amount of energy or RECs that may be earned, and that RECs may be derived from both the electric generation and the waste heat used to produce electricity or useful, measurable thermal or mechanical energy at a retail electric customer's facility
- Issued an Order accepting amended registrations of a 1.9-MW<sub>AC</sub> Directed Biogas-fueled combined heat and power (CHP) facility and a 1.6-MW<sub>AC</sub> biomass fueled CHP facility that would generate electricity through the pyrolysis of wood (the first of this type registered in the State). Both facilities were certified by the Secretary of State as being located in a “cleanfields renewable energy demonstration parks.”
- Issued an Order revoking the registrations of 63 facilities registered as renewable energy facilities or as new renewable energy facilities with the Commission. The owners of the 63 facilities listed in Appendices A and B of the Order did not complete their annual certifications on or before October 15,

2014, as required by the Commission's September 9, 2014 Order, nor had an annual certification been completed for these facilities as of the date of the Order. The Order states that should the owner of a facility whose registration has been revoked wish to have the energy output from its facility become eligible for compliance with the REPS; the owner must again register the facility with the Commission.

- Issued an Order Accepting Registration of Incremental Capacity as a New Renewable Energy Facility, finding that, consistent with previous Commission orders, the incremental capacity of Weyerhaeuser NR Company's renovated CHP system, added subsequent to January 1, 2007, is a "new" renewable energy facility pursuant to N.C.G.S. § 62-133.8(a)(7). Weyerhaeuser was required to register a new project for the incremental portion in NC-RETS to facilitate the issuance of RECs, with 22.1% of the facility's electric generation and 12.2% of the facility's thermal generation reported for the new project and the remainder for the existing project.
- Issued an Order revoking the registrations of 127 facilities registered with the Commission as renewable energy facilities or as new renewable energy facilities. The owners of the 127 facilities did not complete their annual certifications on or before October 1, 2015, as required by the Commission's August 12, 2015 Order, nor had an annual certification been completed for these facilities as of the date of the Order. The Order states that should the owner of a facility whose registration has been revoked wish to have the energy output from its facility become eligible for compliance with the REPS, the owner must again register the facility with the Commission..
- Issued an Order Accepting Registration of New Renewable Energy Facilities, accepting the registration of DEC's Buck and Dan River combined-cycle facilities as new renewable energy facilities. Consistent with previous Commission orders, the Commission found that when biogas derived from anaerobic digestion of animal waste is injected into the natural gas pipeline, nominated for use by a natural gas-fueled electric generating facility, and a proper showing can be made that it is displacing or offsetting conventional natural gas, it is a renewable energy resource pursuant to N.C.G.S. § 62-133.8(a)(5). Noting that Buck and Dan River were placed into service subsequent to January 1, 2007, the Commission concluded that those facilities are "new renewable energy facilities" pursuant to N.C.G.S. § 62-133.8(a)(7). The Commission further concluded that the RECs associated with the renewable energy generated at Buck and Dan River from directed biogas will not be deemed out-of-state RECs subject to the 25% limitation on the use for REPS compliance of unbundled out-of-state RECs.

- On November 15, 2016, the Commission issued an Order revoking the registrations of 112 facilities registered with the Commission as renewable energy facilities or as new renewable energy facilities. The owners of the 112 facilities did not complete their annual certifications on or before October 1, 2016, as required by the Commission's August 25, 2016 Order, nor had an annual certification been completed for these facilities as of the date of the Order. The Order states that should the owner of a facility whose registration has been revoked wish to have the energy output from its facility become eligible for compliance with the REPS, the owner must again register the facility with the Commission. Since the October 1, 2017 report was submitted, the Commission has issued a limited number of orders interpreting provisions of the REPS Statute regarding applications for registration of renewable energy facilities, as described below.

***Order Revoking Registration of Renewable Energy Facilities and New Renewable Energy Facilities, Docket No. E-100, Sub 130 (October 25, 2017).***

On November 15, 2016, the Commission issued an Order revoking the registrations of 59 facilities registered with the Commission as renewable energy facilities or as new renewable energy facilities. The owners of the 59 facilities did not complete their annual certifications on or before October 1, 2017, as required by the Commission's August 30, 2017 Order, nor had an annual certification been completed for these facilities as of the date of the Order. The Order states that should the owner of a facility whose registration has been revoked wish to have the energy output from its facility become eligible for compliance with the REPS, the owner must again register the facility with the Commission.

***Order Giving Notice of Intent to Revoke Registration of Renewable Energy Facilities and New Renewable Energy Facilities, Docket No. E-100, Sub 130 (August 7, 2018).***

On August 7, 2018, the Commission issued an Order giving notice of its intent to revoke the registration of 8 renewable energy facilities and 129 new renewable energy facilities because their owners had not completed or filed the annual certifications required each April 1, as detailed in Commission Rule R8-66(b). Facility owners were given until October 1, 2018, to file their annual certifications belatedly. Owners that do not complete the annual certifications face their facility's registrations being revoked pursuant to Commission Rule R8-66(f). The matter is pending before the Commission.

***Order Approving Appendix F and Establishing Pilot Program, Docket No. G-9, Sub 698 (June 19, 2018).***

On June 19, 2018, in Docket No. G 9, Sub 698, the Commission issued an Order approving a revised version of Piedmont Natural Gas Company, Inc.'s (Piedmont) proposed Appendix F, which sets forth the terms and conditions under

which Piedmont will accept “alternative gas” into its system and deliver or redeliver it to Piedmont’s customers. Alternative gas is defined, in summary, as gas capable of combustion in customer appliances or facilities which is similar in heat content and chemical characteristics to natural gas that is produced from traditional underground well sources. In proposing Appendix F, Piedmont stated that the need for establishing such terms and conditions has arisen due to the potential for sourcing supplies of methane from non-traditional suppliers, including landfills, swine waste-to-energy facilities, and poultry waste-to-energy facilities. Under the revised Appendix F approved by the Commission, and the related interconnection agreements between Piedmont and Optima KV, LLC, and between Piedmont and C2e Renewables NC, Piedmont would receive alternate gas from swine waste-to-energy projects as part of a three year pilot program. The Commission also required detailed reporting from Piedmont related to technical and operational issues that would inform the Commission’s future consideration of the issues involved. In approving the pilot program, the Commission recognized the advantages to the State of making use of alternative gas, including providing a cost effective and environmentally sound way for North Carolina swine and poultry producers to manage animal waste and providing the opportunity for electric power suppliers to comply with the swine and poultry waste set aside requirements under the REPS. After the Commission issued its order, Piedmont and the North Carolina Pork Council sought clarification and reconsideration. As of the drafting of this report, this matter was pending before the Commission.

## **North Carolina Renewable Energy Tracking System (NC-RETS)**

In its February 29, 2008 Order in Docket No. E-100, Sub 113, the Commission concluded that REPS compliance would be determined by tracking RECs associated with renewable energy and EE. In its Order, the Commission further concluded that a “third-party REC tracking system would be beneficial in assisting the Commission and stakeholders in tracking the creation, retirement and ownership of RECs for compliance with Senate Bill 3” and states that “[t]he Commission will begin immediately to identify an appropriate REC tracking system for North Carolina.” Pursuant to N.C.G.S. § 133.8(k), enacted in 2009, the Commission was required to develop, implement, and maintain an online REC tracking system no later than July 1, 2010, in order to verify the compliance of electric power suppliers with the REPS requirements.

On September 4, 2008, the Commission issued an Order in Docket No. E-100, Sub 121, initiating a new proceeding to define the requirements for a third-party REC tracking system, or registry, and to select an administrator. The Commission established a stakeholder process to finalize a Requirements Document for the tracking system.

After issuing an RFP and evaluating the bids received, the Commission signed a Memorandum of Agreement (MOA) with APX, Inc. (APX), on February 2, 2010, to develop and administer NC-RETS. Pursuant to the MOA, on

July 1, 2010, APX successfully launched NC-RETS. By letter dated September 3, 2010, the Commission informed APX that, to the best of its knowledge, NC-RETS has performed in substantial conformance with the MOA and has no material defects. The Commission, therefore, authorized APX to begin billing North Carolina electric power suppliers and other users the fees that were established in the MOA.

Funding for NC-RETS is provided directly to APX by the electric power suppliers in North Carolina that are subject to the REPS requirements of Senate Bill 3 and is recovered from the suppliers' customers through the REPS incremental cost rider. Owners of renewable energy facilities and other NC-RETS users do not incur charges to open accounts, register projects, and create and transfer RECs, but will incur nominal fees to export RECs to other tracking systems or to retire RECs other than for REPS compliance.

At the end of 2017, each electric power supplier was required to place the RECs that it acquired to meet its 2017 REPS requirements into compliance accounts where the RECs are available for audit. The Commission will review each electric power suppliers' 2017 REPS compliance report; the associated RECs will be permanently retired. Members of the public can access the NC-RETS web site at [www.ncrets.org](http://www.ncrets.org). The site's "Resources" tab provides extensive information regarding REPS activities and NC-RETS account holders. NC-RETS also provides an electronic bulletin board where RECs can be offered for purchase.

- As of December 31, 2017, NC-RETS had issued 153,371,153 RECs and 22,955,769 EE certificates. These numbers could increase because renewable energy generators are allowed to enter historic production data for up to two years.
- As of September 1, 2018, 504 organizations, including electric power suppliers and owners of renewable energy facilities, had established accounts in NC-RETS.
- As of September 1, 2018, approximately 1157 renewable energy or new renewable energy facilities had been established as NC-RETS projects, enabling the issuance of RECs based on their energy production data.

Pursuant to the MOA, APX has been working with other registries in the United States, such as the Electric Reliability Council of Texas (ERCOT), to establish procedures whereby RECs that were issued in those registries may be transferred to NC-RETS. To date, such arrangements have been established with five such registries. Additionally, the Commission has established an on-going NC-RETS stakeholder group, providing a forum for resolution of issues and discussion of system improvements.

The original MOA with APX expired on December 31, 2013. Based on feedback received from stakeholders, the Commission extended the MOA with APX through 2017, and subsequently extended the MOA through 2020.

## **Environmental Impacts**

Pursuant to N.C.G.S. § 62-133.8(j), the Commission was directed to consult with the North Carolina Department of Environmental Quality (DEQ) in preparing its report and to include any public comments received regarding direct, secondary, and cumulative environmental impacts of the implementation of the REPS requirements of Senate Bill 3. The Commission has not identified, nor has it received from the public or DEQ, any public comments regarding direct, secondary, and cumulative environmental impacts of the implementation of the REPS provision of Senate Bill 3. DEQ, in response to the Commission's request, notes impacts on North Carolina's air, water and land quality. DEQ's full response is attached to this report as a part of Appendix 1.

# ELECTRIC POWER SUPPLIER COMPLIANCE

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Pursuant to Senate Bill 3, electric power suppliers are required, beginning in 2012, to meet an increasing percentage of their retail customers' energy needs by a combination of renewable energy resources and energy reductions from the implementation of EE and DSM measures. Also, pursuant to Senate Bill 3, starting in 2012, part of the REPS requirements must be met through poultry waste and swine waste (as discussed above this requirement has been amended by the Commission.) In addition, beginning in 2010 each electric power supplier was required to meet a certain percentage of its retail electric sales "by a combination of new solar electric facilities and new metered solar thermal energy facilities that use one or more of the following applications: solar hot water, solar absorption cooling, solar dehumidification, solar thermally driven refrigeration, and solar industrial process heat." N.C.G.S. § 62-133.8(d). An electric power supplier is defined as "a public utility, an electric membership corporation, or a municipality that sells electric power to retail electric power customers in the State." N.C.G.S. § 62-133.8(a)(3). Described below are the REPS requirements for the various electric power suppliers and, to the extent reported to the Commission, the efforts of each toward REPS compliance.

## **Monitoring of Compliance with REPS Requirement**

Monitoring of electric power supplier compliance with the REPS requirement of Senate Bill 3 is accomplished through annual filings with the Commission. The rules adopted by the Commission require each electric power supplier to file an annual REPS compliance plan and REPS compliance report to demonstrate reasonable plans for and actual compliance with the REPS requirement.

### ***Compliance plan***

Pursuant to Commission Rule R8-67(b), on or before September 1 of each year, each electric power supplier is required to file with the Commission a REPS compliance plan providing, for at least the current and following two calendar years, specific information regarding its plan for complying with the REPS requirement of Senate Bill 3. The information required to be filed includes, for example, forecasted retail sales, RECs earned or purchased, EE measures implemented and projected impacts, avoided costs, incremental costs, and a comparison of projected costs to the annual per-account cost caps.

### ***Compliance report***

Pursuant to Commission Rule R8-67(c), each electric power supplier is required to annually file with the Commission a REPS compliance report. While a

REPS compliance plan is a forward-looking forecast of an electric power supplier's REPS requirement and its plan for meeting that requirement, a REPS compliance report is an annual look back at the RECs earned or purchased and energy savings actually realized during the prior calendar year and the electric power supplier's actual progress toward meeting its REPS requirement. Thus, as part of this annual REPS compliance report, each electric power supplier is required to provide specific information regarding its experience during the prior calendar year, including, for example, RECs actually earned or purchased, retail sales, avoided costs, compliance costs, status of compliance with its REPS requirement, and RECs to be carried forward to future REPS compliance years. An electric power supplier must file with its REPS compliance report any supporting documentation as well as the direct testimony and exhibits of expert witnesses. The Commission will schedule a hearing to consider the REPS compliance report filed by each electric power supplier.

For each electric public utility, the Commission will consider the REPS compliance report and determine the extent of compliance with the REPS requirement at the same time as it considers cost recovery pursuant to the REPS incremental cost rider authorized in N.C.G.S. § 62-133.8(h). Each EMC and municipally-owned electric utility, over which the Commission does not exercise ratemaking authority, is required to file its REPS compliance report on or before September 1 of each year.

## Cost Recovery Rider

N.C.G.S. § 62-133.8(h) authorizes each electric power supplier to establish an annual rider to recover the incremental costs incurred to comply with the REPS requirement and to fund certain research. The annual rider, however, may not exceed the following per-account annual charges:

<u>Customer Class</u>	<u>2008-2011</u>	<u>2012-2014</u>	<u>2015 and thereafter</u>
Residential per account	\$10.00	\$12.00	\$27.00
Commercial per account	\$50.00	\$150.00	\$150.00
Industrial per account	\$500.00	\$1,000.00	\$1,000.00

Commission Rule R8-67(e) establishes a procedure under which the Commission will consider approval of a REPS rider for each electric public utility. The REPS rider operates similar to the fuel charge adjustment rider authorized in N.C.G.S. § 62-133.2. Each electric public utility is required to file its request for a REPS rider at the same time as it files the information required in its annual fuel charge adjustment proceeding, which varies for each utility. The test periods for both the REPS rider and the fuel charge adjustment rider are the same for each utility, as are the deadlines for publication of notice, intervention, and filing of testimony and exhibits. A hearing on the REPS rider will be scheduled to begin as soon as practicable after the hearing held by the Commission for the purpose of determining the utility's fuel charge adjustment rider. The burden of proof as to

whether the REPS costs were reasonable and prudently incurred shall be on the electric public utility. Like the fuel charge adjustment rider, the REPS rider is subject to an annual true-up, with 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 reflected in a REPS experience modification factor (REPS EMF) rider. Pursuant to N.C.G.S. § 62-130(e), any over-collection under the REPS rider shall be refunded to a utility's customers with interest through operation of the REPS EMF rider.

## Electric Public Utilities

There are three electric public utilities operating in North Carolina subject to the jurisdiction of the Commission: DEP, DEC, and Dominion. Although DEC and DEP underwent a merger in 2012, for REPS compliance purposes they continue to operate as two distinct entities.

### ***REPS requirement***

N.C.G.S. § 62-133.8(b) provides that each electric public utility in the State (DEC, DEP, and Dominion) shall be subject to a REPS requirement according to the following schedule:

<u>Calendar Year</u>	<u>REPS Requirement</u>
2012	3% of prior year's North Carolina retail sales
2015	6% of prior year's North Carolina retail sales
2018	10% of prior year's North Carolina retail sales
2021 and thereafter	12.5% of prior year's North Carolina retail sales

An electric public utility may meet the REPS requirement by any one or more of the following:

- Generate electric power at a new renewable energy facility.
- Use 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.
- Reduce energy consumption through the implementation of an EE measure; provided, however, an electric public utility subject to the provisions of this subsection may meet up to 25% of the requirements of this section through savings due to implementation of EE measures. Beginning in calendar year 2021 and each year thereafter, an electric public utility may meet up to 40% of the requirements of this section through savings due to implementation of EE measures.
- Purchase electric power from a new renewable energy facility. Electric power purchased from a new renewable energy facility

located outside the geographic boundaries of the State shall meet the requirements of this section if the electric power is delivered to a public utility that provides electric power to retail electric customers in the State; provided, however, the electric public utility shall not sell the RECs created pursuant to this paragraph to another electric public utility.

- Purchase RECs derived from in-State or out-of-state new renewable energy facilities. Certificates derived from out-of-state new renewable energy facilities shall not be used to meet more than 25% of the requirements of this section, provided that this limitation shall not apply to Dominion.
- Use 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 this section for any calendar year as a credit towards the requirements of this section in the following calendar year or sell the associated RECs.
- Reduce energy consumption through “electricity demand reduction,” which is a voluntary reduction in the demand of a retail customer achieved by two-way communications devices that are under the real time control of the customer and the electric public utility.<sup>6</sup>

## ***Duke Energy Progress, LLC (DEP)***

### ***Compliance Report***

On June 6, 2017, in Docket No. E-2, Sub 1144, DEP filed its 2016 REPS compliance report and application for approval of its 2017 REPS cost recovery rider pursuant to N.C.G.S. § 62-133.8 and Commission Rule R8-67. On September 1, 2017, DEP filed supplemental testimony and revisions to its application for REPS cost recovery. By its revised application and supplemental testimony, DEP proposed to implement the following total REPS rates effective for service rendered on and after December 1, 2017: \$0.55 per month for residential customers; \$6.42 per month for general service/lighting customers; and \$58.71 per month for industrial customers. DEP’s proposed new REPS rates, if approved, will change current REPS rates (including regulatory fee), as follows: decrease the residential customer charge by \$0.74 per month; decrease the general service/lighting customer charge by \$4.24 per month; and decrease the industrial customer charge by \$24.50 per month. In its 2016 REPS compliance report, DEP indicates that it acquired sufficient RECs to meet the 2016 requirement of 6% of its 2015 retail sales. Additionally, DEP indicates that it acquired sufficient solar

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<sup>6</sup> Sec. 1 of S.L. 2011-55 amended N.C.G.S. § 62-133.8(a) by adding a definition of “electricity demand reduction,” and Sec. 2 amended N.C.G.S. § 62-133.8(b)(2) by adding a new subsection (g) making electricity demand reduction a REPS resource, effective April 28, 2011.

RECs to meet the 2016 requirement of 0.14% of its 2015 retail sales. DEP also indicates that it was able to meet the revised poultry waste set-aside requirement in 2016. Pursuant to the Commission's October 17, 2016 Order in Docket No. E-100, Sub 113, DEP's 2016 swine waste set-aside requirement was delayed until 2017. On September 19, 2017, the Commission held a hearing on DEP's 2016 REPS compliance report and 2017 REPS cost recovery rider. On November 22, 2017, the Commission issued an order allowing DEP's revised proposed REPS rider charges to become effective December 1, 2017. In addition, the Commission found that DEP complied with the 2016 REPS requirements, including the solar set-aside requirements and the poultry waste set-aside requirements, for itself and for the wholesale customers to whom DEP provides REPS compliance services. Therefore, the Commission approved DEP's 2016 REPS compliance report and ordered that the RECs in DEP's 2016 compliance sub-account and the sub-accounts of those wholesale customers be retired.

On June 20, 2018, in Docket No. E-2, Sub 1175, DEP filed its 2017 REPS compliance report and application for approval of its 2018 REPS cost recovery rider pursuant to N.C.G.S. § 62-133.8 and Commission Rule R8-67. By its application and testimony, DEP proposed to implement the following total REPS rates effective for service rendered on and after December 1, 2018: \$1.42 per month for residential customers; \$7.96 per month for general service/lighting customers; and \$73.17 per month for industrial customers. DEP's proposed rates are below the annual per-account limits established pursuant to N.C.G.S. § 62-133.8(h)(4). DEP's proposed new REPS rates, if approved, will result in increases in the current REPS charges (including regulatory fee) as follows: \$0.87 per month for the residential customers; \$1.54 per month for general service/lighting customers; and \$14.16 per month for industrial customers. In its 2017 REPS compliance report, DEP indicates that it acquired sufficient RECs to meet the 2017 requirement of 6% of its 2016 retail sales. Additionally, DEP indicates that it acquired sufficient solar RECs to meet the 2017 requirement of 0.14% of its 2016 retail sales. DEP also indicates that it was able to meet the revised poultry waste set-aside requirement in 2017. Pursuant to the Commission's October 16, 2017 Order in Docket No. E-100, Sub 113, DEP's 2017 swine waste set-aside requirement was delayed until 2018. On September 18, 2018, the Commission held a hearing on DEP's 2017 REPS compliance report and 2018 REPS cost recovery rider. This matter is pending before the Commission.

### ***Compliance Plan***

On September 1 2017, in Docket No. E-100, Sub 147, DEP filed its 2017 REPS compliance plan as part of its 2017 Integrated Resource Plan (IRP) update report. In its plan, DEP indicates that its overall compliance strategy to meet the REPS requirements consisted of the following key components: (1) purchases of RECs; (2) operations of company-owned renewable facilities; (3) energy efficiency programs that will generate savings that can be counted towards obligation requirements; and (4) research studies to enhance its ability to comply

in future years. DEP notes that its agreement to provide REPS compliance services for the following wholesale customers, as allowed under N.C.G.S. § 62-133.8(c)(2)(e), expires effective December 31, 2017: the towns of Black Creek, Lucama, Sharpsburg, Stantonsburg, and Winterville. Therefore, DEP's estimated retail sales for the purposes of estimating DEP's future REPS compliance obligations excludes the amounts related to these wholesale customers for compliance years 2018 and 2019. On February 5, 2018, the Commission held a required public hearing on DEP's 2017 REPS compliance plan and 2017 IRP Update Report. On April 16, 2018, the Commission issued an Order Accepting 2017 Update Reports and Accepting 2017 REPS compliance plans, accepting DEP's 2017 REPS compliance plan.

On September 5, 2018, in Docket No. E-100, Sub 157, DEP filed its 2018 REPS compliance plan as part of its 2018 IRP. In its compliance plan, DEP details its REPS compliance obligation for 2018-2020, including the requirement to comply with the solar, swine waste, and poultry waste set-aside requirements. DEP calculates its solar set-aside requirements to be 72,660 RECs in 2018, and estimates its solar set-aside requirements to be 75,402 RECs in 2019 and 75,372 RECs in 2020. DEP states that it has fully satisfied and vastly exceeded the minimum solar set-aside requirements of 0.20% during the 2018-2020 compliance planning period through a combination of power purchase agreements and company-owned facilities.

DEP estimates its swine waste set-aside requirements to be 25,781 RECs in 2018, 26,265 RECs in 2019, and 52,760 RECs in 2020. DEP identifies three primary methods for compliance with the swine waste set-aside requirement: (1) on-farm generation; (2) centralized digestion; and (3) injected/directed biogas. DEP states that despite its active and diligent efforts, it will be unable to comply with the requirement in 2018 and is highly uncertain of its ability to comply in 2019 and 2020 due to multiple variables, particularly related to counterparty achievement of projected delivery requirements and commercial operation milestones. Therefore, DEP states that it will join other electric power suppliers seeking to delay the swine waste set-aside requirement by one year.

As to compliance with the poultry waste set-aside requirements, DEP states that it continues to pursue various efforts to meet its compliance requirement, including, (1) direct negotiations for additional supplies of both in-state and out-of-state resources with multiple counterparties; (2) gaining an understanding of the technological, permitting, and operational risks associated with various methods to produce qualifying RECs; (3) exploring leveraging current biomass contracts by working with developers to add poultry waste to their fuel mix; (4) exploring adding thermal capabilities to current poultry sites to bolster REC production; (5) exploring poultry-derived directed biogas at facilities in North Carolina for use at its combined cycle plants; (6) utilizing its REC trader to search for out-of-state poultry RECs available in the market; and (7) participating in the North Carolina Energy Policy Council Biogas Working Group. DEP states that it is in a position to meet its poultry

waste set-aside requirements in 2018, but its ability to procure sufficient RECs to meet these requirements in 2019 and 2020 remains uncertain and largely subject to counterparty performance. DEP notes that one new poultry project has come online in 2018 and another is expected to come online in 2019. DEP further states that its ability to comply in 2019 and 2020 is dependent on facilities producing at contracted levels and that ramping up to meet the increase compliance requirements has been problematic because suppliers have either delayed projects or lowered the volume of RECs to be produced. Nevertheless, DEP states that it is encouraged by the growing use of thermal poultry RECs and the proposals it has recently received from developers. Therefore, DEP will join other electric suppliers in submitting a motion to the Commission requesting a modification to the poultry waste set-aside requirements.

DEP states that its general REPS requirement, net of the set-asides discussed above, is estimated to be 3,682,990 RECs in 2018; 3,752,108 RECs in 2019 and 3,768,582 RECs in 2020. DEP notes several resource options available to the Company to meet its general requirement, including, using the maximum allowable use of EE savings (25%), hydroelectric power procured from suppliers and from its wholesale customers SEPA allocations, and a variety of biomass, wind and solar resources. DEP states that it purchases RECs from multiple biomass facilities in the Carolinas, including landfill gas to energy facilities and biomass fueled combined heat and power facilities. DEP states it views the downward trend in solar equipment and installation costs as a positive trend and that it expects solar resources to contribute to compliance efforts beyond the solar set-aside minimum threshold. In addition, DEP notes the passage of House Bill 589 introducing a competitive procurement process for procurement of 2,660 MW of additional energy and capacity supplied by renewable energy facilities. Approval of DEP's 2018 REPS compliance plan is pending before the Commission.

On September 7, 2017, in Docket No. E-100, Sub 113, DEP joined a number of other electric power suppliers in filing a motion to modify the 2018 swine and poultry waste set-aside requirements and to delay future increases in those requirements by one year. The Commission has requested comments on the matter and it is pending before the Commission.

### ***Duke Energy Carolinas, LLC (DEC)***

#### ***Compliance Report***

On March 7, 2018, in Docket No. E-7, Sub 1162, DEC filed its 2017 REPS compliance report and an application for approval of a REPS rider to be effective September 1, 2018. By its application and testimony, DEC requested a total REPS rider of \$0.07 per month for residential customers; \$1.03 per month for general customers (the DEC equivalent of commercial class customers); and \$(6.44) per month for industrial customers-each of which is below the incremental per-account cost cap established in N.C.G.S. § 62-133.8(h). In its 2017 REPS compliance

report, DEC indicates that it acquired sufficient RECs to meet the 2016 requirement of 6% of its 2015 retail sales. Additionally, DEC indicates that it acquired sufficient solar RECs to meet the 2016 requirement of 0.14% of its 2016 retail sales and had acquired its pro-rata share of poultry RECs to satisfy the 2017 poultry waste set-aside requirement. Pursuant to the Commission's October 16, 2017 Order in Docket No. E-100, Sub 113, DEC's 2017 swine waste set-aside requirement was delayed until 2018. On June 5, 2018, the Commission held a hearing on DEC's 2017 compliance report and REPS cost recovery application. On August 17, 2018, the Commission issued an order approving DEC's proposed REPS riders. In the same Order, the Commission approved DEC's 2017 compliance report and retired the RECs in DEC's 2017 compliance sub account.

### ***Compliance Plan***

On September 1, 2017, in Docket No. E-100, Sub 147, DEC filed its 2017 REPS compliance plan as part of its 2017 IRP update report. In its compliance plan, DEC indicates that its overall compliance strategy to meet the REPS requirements consisted of the following key components: (1) purchases of RECs; (2) operations of company-owned renewable facilities; (3) energy efficiency programs that will generate savings that can be counted towards obligation requirements; and (4) research studies to enhance its ability to comply in future years. DEC has agreed to provide REPS compliance services for the following wholesale customers, as allowed under N.C.G.S. § 62-133.8(c)(2)(e): Rutherford Electric Membership Corporation, Blue Ridge Electric Membership Corporation, Town of Dallas, Town of Forest City, City of Concord, Town of Highlands, and the City of Kings Mountain. DEC notes that its wholesale power contracts with the City of Concord and the City of Kings Mountain expire on December 31, 2018, and DEC's obligation to provide REPS compliance services to these customers terminates on the same date. Therefore, DEC's compliance plan only reflects REPS compliance services for these customers through 2018. On February 5, 2018, the Commission held a required public hearing on DEC's 2017 REPS compliance plan and 2017 IRP Update Report. On April 16, 2018, the Commission issued an Order Accepting 2017 Update Reports and Accepting 2017 REPS compliance plans, accepting DEC's 2017 REPS compliance plan.

On September 5, 2018, in Docket No. E-100, Sub 157, DEC filed its 2018 REPS compliance plan as part of its 2018 IRP. In its compliance plan, DEC details its REPS compliance obligation for 2018-2020, including the requirement to comply with the solar, swine waste, and poultry waste set-aside requirements. DEC calculates its solar set-aside requirements to be 119,037 RECs in 2018, and estimates its solar set-aside requirements to be 120,209 RECs in 2019 and 120,570 RECs in 2020. DEC states that it has fully satisfied and vastly exceeded the minimum solar set-aside requirements of 0.20% during the 2018-2020 compliance planning period through a combination of power purchase agreements and company-owned facilities.

DEC estimates its swine waste set-aside requirements to be 41,663 RECs in 2018, 42,073 RECs in 2019, and 84,399 RECs in 2020. DEP identifies three primary methods for compliance with the swine waste set-aside requirement: (1) on-farm generation; (2) centralized digestion; and (3) injected/directed biogas. DEP states that despite its active and diligent efforts, it will be unable to comply with the requirement in 2018 and is highly uncertain of its ability to comply in 2019 and 2020 due to multiple variables, particularly related to counterparty achievement of projected delivery requirements and commercial operation milestones. Therefore, DEC states that it will join other electric power suppliers seeking to delay the swine waste set-aside requirement by one year.

As to compliance with the poultry waste set-aside requirements, DEC states that it continues to pursue various efforts to meet its compliance requirement, including, (1) direct negotiations for additional supplies of both in-state and out-of-state resources with multiple counterparties; (2) gaining an understanding of the technological, permitting, and operational risks associated with various methods to produce qualifying RECs; (3) exploring leveraging current biomass contracts by working with developers to add poultry waste to their fuel mix; (4) exploring adding thermal capabilities to current poultry sites to bolster REC production; (5) exploring poultry-derived directed biogas at facilities in North Carolina for use at its combined cycle plants; (6) utilizing its REC trader to search for out-of-state poultry RECs available in the market; and (7) participating in the North Carolina Energy Policy Council Biogas Working Group. DEC states that it is in a position to meet its poultry waste set-aside requirements in 2018, but its ability to procure sufficient RECs to meet these requirements in 2019 and 2020 remains uncertain and largely subject to counterparty performance. DEC notes that one new poultry project has come online in 2018 and another is expected to come online in 2019. DEC further states that its ability to comply in 2019 and 2020 is dependent on facilities producing at contracted levels and that ramping up to meet the increase compliance requirements has been problematic because suppliers have either delayed projects or lowered the volume of RECs to be produced. Nevertheless, DEC states that it is encouraged by the growing use of thermal poultry RECs and the proposals it has recently received from developers. Therefore, DEC will join other electric suppliers in submitting a motion to the Commission requesting a modification to the poultry waste set-aside requirements.

DEC states that its general REPS requirement, net of the set-asides discussed above, is estimated to be 3,682,990 RECs in 2018; 3,752,108 RECs in 2019 and 3,768,582 RECs in 2020. DEP notes several resource options available to the Company to meet its general requirement, including, using the maximum allowable use of EE savings (25%), hydroelectric power procured from suppliers and from its wholesale customers SEPA allocations, and a variety of biomass, wind and solar resources. DEP states that it purchases RECs from multiple biomass facilities in the Carolinas, including landfill gas to energy facilities and biomass fueled combined heat and power facilities. DEC states it views the downward trend in solar equipment and installation costs as a positive trend and that it expects

solar resources to contribute to compliance efforts beyond the solar set-aside minimum threshold. In addition, DEC notes the passage of House Bill 589 introducing a competitive procurement process for procurement of 2,660 MW of additional energy and capacity supplied by renewable energy facilities. Approval of DEC's 2018 REPS compliance plan is pending before the Commission.

On September 7, 2017, in Docket No. E-100, Sub 113, DEC joined a number of other electric power suppliers in filing a motion to modify the 2018 swine and poultry waste set-aside requirements and to delay future increases in those requirements by one year. The Commission has requested comments on the matter and it is pending before the Commission.

### ***Dominion North Carolina Power (Dominion)***

#### ***Compliance Report***

On August 23, 2017, in Docket No. E-22, Sub 544, Dominion filed an application for approval of a 2017 REPS recovery rider and its 2017 REPS compliance report (for the 2016 compliance year). Dominion's REPS compliance report included compliance status for the Town of Windsor (Windsor). By its application and testimony, Dominion requested approval of the following REPS rider charges, including regulatory fee, effective for service rendered on and after January 1, 2018: a \$0.49 charge per month for residential customers; a \$2.71 charge per month for commercial customers; and an \$18.12 charge per month for industrial customers. Dominion's 2017 REPS compliance report states that Dominion met its 2016 general REPS requirements (262,654 RECs) by purchasing unbundled out-of-state solar and wind RECs, in-state solar RECs, and through energy efficiency measures and that Dominion met Windsor's requirements (3,043 RECs) with additional biomass RECs from within the State as well as the appropriate SEPA allocations. Dominion's compliance report further states that Dominion met its 2016 solar set-aside requirement (6,129 RECs) and the Town of Windsor's requirements (71 RECs) by purchasing solar RECs. Pursuant to the Commission's October 17, 2016 Order in Docket No. E-100, Sub 113, Dominion and Windsor's 2016 swine waste set-aside requirements were delayed until 2017. Finally, Dominion's compliance report states that Dominion met its 2016 poultry waste set-aside requirements for both itself (5,628 RECs) and Windsor (65 RECs) and anticipates fulfillment of the 2017 requirement for itself and the Town of Windsor. On December 13, 2017, in Docket No. E-22, Sub 544, the Commission issued an Order Approving REPS and REPS EMF Riders and 2016 REPS Compliance. That Order approved the following total REPS rider charges for use during the 2018 calendar year: \$0.49 for residential accounts, \$2.71 for commercial accounts, and \$18.12 for industrial accounts. In addition, that Order approved Dominion's 2017 REPS compliance report, for the calendar year 2016, and retired the RECs and EECs in Dominion's and Windsor's 2016 compliance sub-accounts.

On August 30, 2018, in Docket No. E-22, Sub 557, Dominion filed its application for approval of its proposed 2018 REPS cost recovery rider charges and its 2018 REPS compliance report (for the 2017 compliance year). Dominion's REPS compliance report included compliance status for Windsor and was submitted with direct testimony and exhibits in support of Dominion's application for REPS cost recovery. By its application and testimony, Dominion requests recovery of \$1.105 million in incremental REPS compliance costs and proposes to implement the following total REPS rates, including regulatory fee, effective for service rendered on and after February 1, 2019: a \$0.46 charge per month for residential customers; a \$2.48 charge per month for commercial customers; and an \$16.89 charge per month for industrial customers. In addition, Dominion's compliance report details its efforts to achieve compliance with the REPS requirements. The Commission has scheduled a public hearing in this proceeding for November 5, 2018, and approval of Dominion's report and application are pending before the Commission.

### ***Compliance Plan***

On May 1, 2017, in Docket No. E-100, Sub 147, Dominion filed its 2017 REPS compliance plan as part of its 2017 IRP Update Report. In its compliance plan, Dominion states that it intends to meet its general REPS requirements in 2017 through 2019 through the use of RECs, EE savings, and new company-generated renewable energy where economically feasible. Dominion further states that it will continue to be responsible for meeting the REPS requirements for its wholesale customer the Town of Windsor. In addition to the above resources, the Town of Windsor's general REPS requirement for 2017 through 2019 will also be satisfied by utilizing the Town's SEPA allocations. Dominion states that its plan to comply with the solar set-aside requirements is similar to previous years, in that Dominion plans to buy unbundled solar RECs and that it has executed contracts with solar facilities located in North Carolina to satisfy Windsor's in-state portion of Windsor's solar set-aside requirements. Dominion further states that it will continue to make all reasonable efforts to satisfy these requirements during the planning period. Dominion summarized its efforts to comply with the swine waste set-aside requirements through 2018, stating that it has spent considerable time and effort attempting to locate operational swine waste digesters. This effort identified only two small and three large potential suppliers, and Dominion has executed contracts sufficient to meet Windsor's swine waste set-aside requirements in 2017-2019. In addition, Dominion has sufficient RECs in NC-RETS to meet its swine waste set-aside requirements in 2017-2019; however, Dominion notes that its compliance is dependent upon a single supply source. Dominion's efforts to comply with the poultry waste set-aside requirements have been more successful, resulting in three contracts that could individually provide sufficient poultry RECs to meet its 2017 poultry waste set-aside requirements. In addition, Dominion states that it is reasonably confident that Windsor will achieve compliance with the poultry waste set-aside requirements in 2018 and 2019. Dominion also states that it continues to search for opportunities to purchase poultry RECs in North Carolina

and throughout the continental United States, and that these efforts yielded multiple contracts that should allow both Dominion and Windsor to comply with the poultry waste set-aside requirement in 2018 and 2019. On February 5, 2018, the Commission held a required public hearing on Dominion's 2017 REPS compliance plan and 2017 IRP Update Report. On April 16, 2018, the Commission issued an Order Accepting Integrated Resource Plans and Accepting REPS Compliance Plans, accepting Dominion's 2017 REPS compliance plan.

On May 1, 2018, in Docket No. E-100, Sub 157, Dominion filed its 2018 REPS compliance plan as part of its 2018 IRP. Dominion states that, during the 2018-2020 planning period, Dominion plans to meet its general REPS requirements through the use of RECs, EE savings, and new company-generated renewable energy where economically feasible. Dominion continues to be responsible for meeting the REPS requirements for Windsor. Dominion projects that it will meet the solar set-aside requirements for itself through 2020, as it has executed contracts for the sale of solar RECs sufficient to meet these requirements. Dominion further states that it has executed contracts with solar facilities located in North Carolina sufficient to meet Windsor's in-state compliance requirements for 2018 through 2020. Dominion states that it will continue to make all reasonable efforts to satisfy these requirements during the 2018-2020 planning period. As a result of Dominion's efforts to locate operational swine digesters in the continental United States, Dominion has sufficient RECs in NC-RETS to meet both Dominion and Windsor's swine waste set-aside requirements during the 2018-2020 planning period. In addition, Dominion states that, due to the high default rate with swine waste to energy contracts, Dominion intends to contract for RECs above and beyond the initial requirement to increase the probability of achieving and maintaining compliance and to back any excess RECs for future compliance years. Dominion further states that it believes that it will be likely to have sufficient poultry RECs to achieve compliance with the poultry waste set-aside requirements for years 2018 through 2020. Consideration of Dominion's 2018 compliance report is pending before the Commission.

On September 7, 2017, in Docket No. E-100, Sub 113, Dominion joined a number of other electric power suppliers in filing a motion to modify the 2018 swine and poultry waste set-aside requirements and to delay future increases in those requirements by one year. The Commission has requested comments on the matter and it is pending before the Commission.

## EMCs and Municipally-Owned Electric Utilities

There are thirty-one EMCs serving customers in North Carolina, including twenty-six that are headquartered in the state. Twenty-five of the EMCs are members of North Carolina EMC (NCEMC), a generation and transmission (G&T) services cooperative that provides wholesale power and other services to its members.

In addition, there are seventy-four municipal and university-owned electric distribution systems serving customers in North Carolina. These systems are members of ElectriCities of North Carolina, Inc. (ElectriCities), an umbrella service organization. ElectriCities is a non-profit organization that provides many of the technical, administrative, and management services required by its municipally-owned electric utility members in North Carolina, South Carolina, and Virginia. ElectriCities is a service organization for its members, not a power supplier. Fifty-one of the North Carolina municipalities are participants in either NCEMPA or NCMPA1, municipal power agencies that provide wholesale power to their members. The remaining municipally-owned electric utilities generate their own electric power or purchase electric power from wholesale electric suppliers.

By Orders issued August 27, 2008, the Commission allowed twenty-two EMCs to file their REPS compliance plans on an aggregated basis through GreenCo, and the fifty-one municipal members of the power agencies to file through NCEMPA and NCMPA1. On September 7, 2010, the Commission similarly allowed TVA to file annual REPS compliance plans and reports on behalf of its four wholesale customers that provide retail service to customers in North Carolina.

### ***REPS requirement***

N.C.G.S. § 62-133.8(c) provides that each EMC or municipality that sells electric power to retail electric power customers in the state shall be subject to a REPS according to the following schedule:

<u>Calendar Year</u>	<u>REPS Requirement</u>
2012	3% of prior year's North Carolina retail sales
2015	6% of prior year's North Carolina retail sales
2018 and thereafter	10% of prior year's North Carolina retail sales

Compliance with the REPS requirement is slightly different for an EMC or municipality than for an electric public utility. An EMC or municipality may meet the REPS requirement by any one or more of the following:

- Generate electric power at a new renewable energy facility.
- Reduce energy consumption through the implementation of DSM or EE measures.

- Purchase electric power from a renewable energy facility or a hydroelectric power facility, provided that no more than 30% of the requirements of this section may be met with hydroelectric power, including allocations made by the Southeastern Power Administration.
- Purchase RECs derived from in-state or out-of-state renewable energy facilities. An electric power supplier subject to the requirements of this subsection may use certificates derived from out-of-state renewable energy facilities to meet no more than 25% of the requirements of this section.
- Acquire all or part of its electric power through a wholesale purchase power agreement with a wholesale supplier of electric power whose portfolio of supply and demand options meet the requirements of this section.
- Use electric power that is supplied by a new renewable energy facility or saved due to the implementation of DSM or EE measures that exceeds the requirements of this section for any calendar year as a credit towards the requirements of this section in the following calendar year or sell the associated RECs.
- Reduce energy consumption through “electricity demand reduction,” which is a voluntary reduction in the demand of a retail customer achieved by two-way communications devices that are under the real time control of the customer and electric power supplier.<sup>7</sup>

### ***Electric Membership Corporations***

#### GreenCo Solutions, Inc. (GreenCo)

GreenCo has long served as REPS compliance aggregator on behalf of a number of EMCs and for the Town of Oak City, which is a wholesale customer of Edgecombe-Martin EMC. In addition, GreenCo has provided REPS compliance services for Mecklenburg Electrical Cooperative, headquartered in Chase, Virginia, and Broad River Electrical Cooperative, headquartered in Gaffney, South Carolina, both of which serve retail electric customers in North Carolina. On November 16, 2017, in Docket Nos. EC-67, Sub 36, and EC-83, Sub 2, NCEMC and GreenCo filed a joint notice and petition for waivers. In their petition, they request approval of their joint plan to substitute NCEMC for GreenCo as utility compliance aggregator for NCEMC’s “REPS Compliance Members”<sup>8</sup> and its REPS

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<sup>7</sup> Sec. 1 of S.L. 2011-55 amended N.C.G.S. § 62-133.8(a) by adding a definition of “electricity demand reduction,” and Sec. 2 amended N.C.G.S. § 62-133.8(c)(2) by adding a new subsection (g) making electricity demand reduction a REPS resource, effective April 28, 2011.

<sup>8</sup> NCEMC’s REPS Compliance Members include Albemarle EMC, Brunswick EMC, Cape Hatteras EMC, Carteret-Craven EMC, Central EMC, Edgecombe-Martin EMC, Four County EMC,

compliance customers.<sup>9</sup> On December 18, 2017, the Commission issued an Order approving the substitution plan, effective January 1, 2018. In addition, on May 21, 2018, in Docket Nos. E-100, Sub 118, and EC-67, Sub 39, the Commission issued an Order that, among other things, allowed NCEMC to serve as utility compliance aggregator on behalf of the Town of Fountain, which is a wholesale customer of Pitt & Greene EMC.

On September 1, 2017, in Docket No. E-100, Sub 152, GreenCo filed its 2016 REPS compliance report and its 2017 compliance plan. In its plan, GreenCo states that it intends to use its members' allocations from SEPA, RECs purchased from both in-state and out-of-state renewable energy facilities, and EE savings from eleven approved EE programs to meet its members' REPS requirements. GreenCo states that it has joined other electric power suppliers to request a delay to the 2017 poultry and swine waste set-aside REPS requirements, noting that the prospect of complying in 2018 is more likely than 2017. In its 2016 REPS compliance report, GreenCo states that, its member cooperatives, as well as Broad River and Mecklenburg EMCs, fully met the general REPS requirement. GreenCo further states that it met its total solar set-aside requirement for 2016 (18,160 RECs for GreenCo) and its total poultry waste set-aside requirement for 2016 (16,423 RECs). GreenCo also states that it secured adequate resources to meet its members' general REPS requirement for 2015 (778,258 RECs). Lastly, for 2015, the REPS incremental costs incurred by GreenCo's members were less the cost limits established in N.C.G.S. § 62-133.8(h). On August 9, 2018, the Commission issued an order approving GreenCo's 2016 compliance report, accepting GreenCo's 2017 compliance plan, and retiring the associated RECs in GreenCo's 2016 compliance sub account.

#### North Carolina Electric Membership Corporation (NCEMC)

As described immediately above, NCEMC will now assume the role of utility compliance aggregator on behalf of the electric power suppliers that were previously served by GreenCo, in addition to other electric suppliers as permitted by the Commission.

On August 30, 2018, in Docket No. E-100, Sub 159, NCEMC filed its 2017 REPS compliance report and 2018 compliance plan. In its plan, NCEMC states that it intends to use its members' allocations from SEPA, RECs purchased from both in-state and out-of-state renewable energy facilities, and EE savings from approved EE programs to meet its members' REPS requirements. NCEMC states that the electric power suppliers will request a delay to the 2018 poultry and swine

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French Broad EMC, Haywood EMC, Jones-Onslow EMC, Lumbee River EMC, Pee Dee EMC, Piedmont EMC, Pitt & Greene EMC, Randolph EMC, Roanoke EMC, South River EMC, Surry-Yadkin EMC, Tideland EMC, Tri-County EMC, Union EMC, and Wake EMC.

<sup>9</sup> NCEMC's REPS compliance customers include Mecklenburg Electrical Cooperative, Broad River Electrical Cooperative, Oak City, and Fountain.

waste set-aside REPS requirements due to a lack of sufficient swine and poultry waste resources. In addition, NCEMC states that it will monitor the progress of the development of such resources and continue to make reasonable efforts to comply with the swine and poultry waste set-aside requirements. In its 2017 REPS compliance report, NCEMC states that it retired a total of 778,912 RECs to meet the REPS compliance requirements of its REPS compliance members and those of Mecklenburg and Broad River EMCs, which included 18,175 solar RECs to meet the solar set-aside requirements and 16,426 poultry waste RECs to meet the poultry waste set-aside requirements. NCEMC notes that its swine waste set-aside requirements were delayed pursuant to the Commission's Order issued on October 16, 2017, in Docket No. E-100, Sub 113. In addition, NCEMC detailed the RECs associated with EE programs, totaling 253,600 RECs, that are attributed to EE and DSM programs. Approval of NCEMC's 2017 REPS compliance report and 2018 REPS compliance plan is pending before the Commission.

On September 7, 2017, in Docket No. E-100, Sub 113, NCEMC joined a number of other electric power suppliers in filing a motion to modify the 2018 swine and poultry waste set-aside requirements and to delay future increases in those requirements by one year. The Commission has requested comments on the matter and it is pending before the Commission.

#### EnergyUnited Electric Membership Corporation (EnergyUnited)

On August 31, 2017, in Docket No. E-100, Sub 152, EnergyUnited filed its 2016 REPS compliance report with the Commission and its 2017 REPS compliance plan. In its report, EnergyUnited states that it met its 2016 general REPS requirement (147,024 RECs), its solar set-aside requirement (3,431 RECs), and its poultry waste set-aside requirement (3,102 RECs). In its plan, EnergyUnited states that it intends to comply with its future obligations through its SEPA allocations, EE programs, and the purchase of RECs and renewable energy. EnergyUnited states that it planned to fulfill its general and solar REPS requirement in 2017 and beyond. EnergyUnited states that it has entered into several contractual arrangements to purchase swine RECs and is currently in negotiations with three additional potential suppliers of swine RECs. Based upon those contracts, banking of swine RECs from prior years, and the potential that EnergyUnited will take delivery of additional swine RECs from a swine and poultry operation in Mt. Olive, NC, EnergyUnited states that it would be able to meet its swine waste set-aside requirements for 2018-2022. EnergyUnited displayed its anticipated annual REPS riders in its 2017 compliance plan for compliance years 2017-2019 as \$3.60 for residential customers, \$18.36 for commercial customers, and \$184.44 for industrial customers. EnergyUnited states that it does not anticipate an increase in its rider during the next several years. On June 14, 2017, the Commission issued an order approving EnergyUnited's 2016 compliance report, accepting EnergyUnited's 2017 compliance plan, and retiring the associated RECs in GreenCo's 2016 compliance sub account.

On August 20, 2018, in Docket No. E-100, Sub 159, EnergyUnited filed its 2017 REPS compliance report and 2018 REPS compliance plan. In its report, EnergyUnited states that it met its 2017 general REPS requirement (154,951 RECs), its solar set-aside requirements (3,616 RECs), and its poultry waste set-aside requirement (3,102 RECs). In its plan, EnergyUnited states that it intends to comply with its future REPS obligations through its SEPA allocations, approved EE programs, and the purchase of RECs and renewable energy, including the purchase of renewable energy from Iredell Transmission, LLC (a landfill gas-powered generation facility). EnergyUnited states that it has entered into several contractual arrangements to purchase swine RECs. In addition, EnergyUnited further described an arrangement with a swine and poultry operation in North Carolina that was expected to deliver sufficient RECs to meet EnergyUnited requirements for most years; however, the project's commercial operation date has been delayed and it remains unclear whether the project will achieve its operational goals. Despite these efforts, EnergyUnited does not anticipate meeting its portion of the swine waste set-aside requirements in 2018, and expects to join other electric power suppliers in requesting a delay in these requirements. EnergyUnited displayed its anticipated annual REPS riders in its 2016 compliance plan for compliance years 2017-2019 as \$3.60 for residential customers, \$18.36 for commercial customers, and \$184.44 for industrial customers. EnergyUnited states that it does not anticipate an increase in its rider during the next several years. Approval of EnergyUnited's 2018 REPS compliance plan and 2017 REPS compliance report is pending before the Commission.

On September 7, 2017, in Docket No. E-100, Sub 113, EnergyUnited joined a number of other electric power suppliers in filing a motion to modify the 2018 swine and poultry waste set-aside requirements and to delay future increases in those requirements by one year. The Commission has requested comments on the matter and it is pending before the Commission.

#### Tennessee Valley Authority (TVA)

On September 7, 2010, in Docket No. E-100, Sub 129, the Commission issued an Order approving TVA's request to file an aggregated REPS compliance plan and REPS compliance report on behalf of its four wholesale customers serving retail customers in North Carolina: Blue Ridge Mountain EMC, Mountain Electric Coop, Inc., Tri-State EMC, and Murphy Electric Power Board.

On September 13, 2017, in Docket No. E-100, Sub 152, TVA filed its 2017 REPS compliance plan and 2016 REPS compliance report. In its plan, TVA indicates its intent to fulfill the general REPS requirement in 2017 through 2019 with its SEPA allocations, purchase of out-of-state wind RECs, and the purchases of various in-state RECs. With regard to its cooperatives' solar set-aside requirement in years 2017 through 2019, TVA reiterated its plans to meet the requirement by generating the energy at its own facilities. TVA states that it is making reasonable efforts to procure potential and available swine RECs, but it

believes that there are not sufficient amounts of such energy and RECs available to meet the 2017 swine waste set-aside requirements. TVA states that it is making reasonable efforts to procure energy and RECs from available poultry waste resources, including generating electricity at its own facility and other permitted resources, to meet the REPS poultry waste set-aside requirements. In its report, TVA states it had satisfied its cooperatives' 2016 general REPS requirement with its SEPA allocations, purchase of out-of-state wind RECs, and the purchases of various in-state RECs and had satisfied its cooperatives' 2016 solar set-aside requirement through the generation of solar energy. TVA notes that it was relieved of its 2016 swine waste set-aside requirements and had fulfilled its 2016 poultry waste set-aside requirement. TVA states that it had no incremental costs of compliance (TVA's estimated cost cap is \$1,763,934). On August 9, 2018, the Commission issued an order approving TVA's 2016 compliance report, accepting TVA's 2017 compliance plan, and retiring the associated RECs in TVA's 2016 compliance sub account.

On August 31, 2018, in Docket No. E-100, Sub 159, TVA filed its 2018 REPS compliance plan and 2017 REPS compliance report. In its plan, TVA indicates its intent to fulfill the general REPS requirement in 2018 through 2020 with its SEPA allocations, purchase of out-of-state wind RECs, and the purchases of various in-state RECs. With regard to its cooperatives' solar set-aside requirement in years 2018 through 2020, TVA stated that it plans to use its TVA Generation Partners solar site for meeting 100% of the cooperatives' solar set-aside requirements. TVA states that it is making reasonable efforts to procure potential and available swine RECs, but it believes that there are not sufficient amounts of such energy and RECs available to meet the 2018 swine waste set-aside requirements. TVA also states that it is making reasonable efforts to procure energy and RECs from available poultry waste resources, including generating electricity at its own facility and other permitted resources, to meet the REPS poultry waste set-aside requirements. In its report, TVA states it had satisfied its cooperatives' 2016 general REPS requirement with its SEPA allocations, purchase of out-of-state wind RECs, and the purchases of various in-state RECs and had satisfied its cooperatives' 2015 solar set-aside requirement through the generation of solar energy. TVA notes that it was relieved of its 2017 swine waste set-aside requirements and had fulfilled its 2017 poultry waste set-aside requirement. Approval of TVA's 2018 REPS compliance plan and 2017 REPS compliance report is pending before the Commission.

On September 7, 2017, in Docket No. E-100, Sub 113, TVA joined a number of other electric power suppliers in filing a motion to modify the 2018 swine and poultry waste set-aside requirements and to delay future increases in those requirements by one year. The Commission has requested comments on the matter and it is pending before the Commission.

### Halifax Electric Membership Corporation (Halifax)

On September 1, 2016 in Docket No. E-100, Sub 147, Halifax filed with the Commission its 2016 compliance plan and 2015 compliance report. In its compliance plan, Halifax states that it intends to meet its REPS requirements with a combination of SEPA allocations, EE programs, various RECs, and additional resources to be determined on an ongoing basis. Halifax notes concerns regarding the addition of industrial customers and its cost cap in future years. With regard to its 2014 solar set-aside requirement, Halifax met the requirement by generating solar energy and purchasing solar RECs. With regard to its 2014 poultry waste set-aside requirement, Halifax met the requirement by purchasing poultry RECs. Halifax's (and the other electric power suppliers') swine waste set-aside requirement was delayed until 2016 pursuant to the Commission's December 1, 2015 Order in Docket No. E-100, Sub 113. On June 14, 2017, the Commission issued an order requiring Halifax to file additional comments addressing three specific issues, and requiring the public staff to file additional comments in response to Halifax's required filing. On August 10, 2017, and on August 22, 2017, respectively, Halifax and the Public Staff made these additional filings. Consideration of Halifax's response and approval of Halifax's 2015 compliance plan and 2014 compliance report is pending before the Commission.

On September 1, 2017, in Docket No. E-100, Sub 152, Halifax filed with the Commission its 2017 compliance plan and 2016 compliance report. On August 9, 2018, the Commission issued an order in which the Commission withheld consideration of Halifax's 2016 REPS compliance report while Halifax's 2015 REPS compliance report is pending before the Commission in Docket No. E-100, Sub 147.

On September 4, 2018, in Docket No. E-100, Sub 159, Halifax filed its 2018 REPS compliance plan and 2017 REPS compliance report.

On September 7, 2017, in Docket No. E-100, Sub 113, Halifax joined a number of other electric power suppliers in filing a motion to modify the 2018 swine and poultry waste set-aside requirements and to delay future increases in those requirements by one year. The Commission has requested comments on the matter and it is pending before the Commission.

### ***Municipally-owned electric utilities***

#### North Carolina Eastern Municipal Power Agency (NCEMPA)

On September 1, 2017, in Docket No. E-100, Sub 152, NCEMPA filed w on behalf of its member municipalities, its 2017 REPS compliance plan and 2016 REPS compliance report. In its 2017 compliance plan, NCEMPA states that its members have no plans to generate electric power at a renewable energy facility. NCEMPA states that its members would meet their REPS requirements by purchasing RECs and SEPA allocations. NCEMPA states that it will continue to

implement its current EE programs, but it will no longer use EE as a method of REPS compliance, citing the costs of M&V, the low number of RECs actually produced, and the availability of other REPS compliance methods. NCEMPA states that it has entered into contracts to purchase various types of RECs and will continue to investigate the market for unbundled RECs as a cost-effective means of REPS compliance. NCEMPA further states that it has entered into contracts for enough RECs to satisfy the solar set-aside requirement through 2019. NCEMPA has also entered into agreements to secure NCEMPA's pro rata share of the statewide aggregate of the poultry waste set-aside requirement through 2018, but has joined the joint motion to delay the requirement because the aggregate goal will not be met. NCEMPA cites a number of challenges in securing swine waste RECs and states that it is not in a position to meet the 2017 swine waste requirements. In its compliance report, NCEMPA states that it met its 2015 general REPS requirement (434,715 RECs) through the purchase of bundled renewable energy from hydroelectric generation sources and the purchase of solar, biomass, and poultry RECs. Additionally, NCEMPA states in its report that it met its 2015 solar set-aside requirement (10,144 RECs) by purchasing solar RECs and its 2015 poultry waste set-aside requirement (9,122 RECs) by purchasing poultry RECs and RECs available under S.L. 2011-279 (Senate Bill 886). NCEMPA shows in its report that its 2016 actual incremental compliance costs were well below the per-account cost cap and estimated in its compliance plan that the incremental costs for REPS compliance will be significantly less than its per-account cost cap in 2016 through 2018. On August 9, 2018, the Commission issued an order approving NCEMPA's 2016 REPS compliance report, accepting NCEMPA's 2017 REPS compliance plan, and retiring the associated RECs in NCEMPA's 2016 compliance sub account.

On August 29, 2018, in Docket No. E-100, Sub 159, NCEMPA filed, on behalf of its members, its 2018 REPS compliance plan and 2017 REPS compliance report. In its compliance plan, NCEMPA states that its members have no plans to generate electric power at a renewable energy facility, but will continue to meet their REPS requirements by purchasing RECs and through its' members SEPA allocations. NCEMPA further states that it continues to implement EE programs, but it will no longer use EE as a method of REPS compliance, citing the costs of M&V, the low number of RECs actually produced, and through other REPS compliance methods. NCEMPA states that it has entered into contracts to purchase various types of RECs, including contracts for enough RECs to satisfy the solar set-aside requirement through 2020, and its pro rata share of the statewide aggregate of the poultry waste set-aside requirement through 2020. With regard to the swine waste set-aside requirements, NCEMPA states that it contracted for swine waste RECs and taken delivery of a portion of these RECs; however, counterparty delays and operational failures continue to place NCEMPA in a position where it will be unable to meet its swine waste set-aside requirements in 2018. In its compliance report, NCEMPA states that it met its 2015 general REPS requirement (432,829 RECs) through the purchase of bundled renewable energy from hydro generation sources and the purchase of solar, biomass, and

poultry RECs. Additionally, NCEMPA states in its report that it met its 2014 solar set-aside requirement (10,100 RECs) by purchasing solar RECs and its 2014 poultry waste set-aside requirement (9,122 RECs) by purchasing poultry RECs and RECs available under S.L. 2011-279 (Senate Bill 886). NCEMPA shows in its report that its 2015 actual incremental compliance costs were well below the per-account cost cap. Approval of NCEMPA's 2018 REPS compliance plan and 2017 REPS compliance report is pending before the Commission.

On September 7, 2017, in Docket No. E-100, Sub 113, NCEMPA joined a number of other electric power suppliers in filing a motion to modify the 2018 swine and poultry waste set-aside requirements and to delay future increases in those requirements by one year. The Commission has requested comments on the matter and it is pending before the Commission.

#### North Carolina Municipal Power Agency No. 1 (NCMPA1)

On September 1, 2017, in Docket No. E-100, Sub 152, NCMPA1 filed on behalf of its member municipalities, its 2017 REPS compliance plan and 2016 REPS compliance report. In its plan, NCMPA1 states that it intends to investigate and develop, as applicable, new renewable energy facilities. NCMPA1 states that its members would meet their REPS requirements by purchasing RECs, as well as utilizing SEPA allocations. NCMPA1 states that it will continue to implement its current EE programs, but it will no longer use EE as a method of REPS compliance, citing the costs of M&V, the low number of RECs actually produced, and the availability of other REPS compliance methods. NCMPA1 further states that it had entered into contracts to purchase various types of RECs and would continue to investigate the market for unbundled RECs as a cost-effective means of REPS compliance. In its compliance plan, NCMPA1 states that it had entered into contracts for enough RECs to satisfy the solar set-aside requirement through 2019. In its compliance report, NCMPA1 states that it met its 2016 general REPS requirement (302,148 RECs) by purchasing renewable energy from solar generation resources purchase of bundled renewable energy from hydro generation resources, and through the purchase of solar, biomass, hydro and poultry RECs. Additionally, NCMPA1 states that it met its 2016 solar set-aside requirement (7,051 RECs) by purchasing electricity from solar generating facilities and through the purchase of solar RECs, and met its 2016 poultry set-aside requirement (6,367 poultry RECs) through the purchase of RECs. NCMPA1 states that its 2016 incremental costs were below the annual limits and estimated in its compliance plan that the incremental costs for REPS compliance will be significantly less than the spending limits in 2017 through 2019. On August 9, 2018, the Commission issued an order approving NCMPA1's 2016 compliance report, accepting NCMPA1's 2017 compliance plan, and retiring the associated RECs in NCMPA1's 2016 compliance sub account.

On August 29, 2018, in Docket No. E-100, Sub 159, NCMPA1 filed its 2018 REPS compliance plan and 2017 REPS compliance report, on behalf of its

member municipalities. In its plan, NCMPA1 states that it intends to meet its' members' REPS requirements by investigating and developing new renewable energy facilities, purchasing RECs, and utilizing SEPA allocations. NCMPA1 states that it will continue to implement its current EE programs, but it will no longer use EE as a method of REPS compliance, citing the costs of M&V, the low number of RECs actually produced, and the availability of other REPS compliance methods. NCMPA1 states that it had entered into contracts to purchase various types of RECs and would continue to investigate the market for unbundled RECs as a cost-effective means of REPS compliance. In its compliance plan, NCMPA1 states that it had entered into contracts for enough RECs to satisfy the solar set-aside requirements through 2020, and contracts for enough RECs to satisfy the poultry waste set-aside requirements through 2020. With regard to the swine waste set-aside requirements, NCMPA1 states that despite having taken delivery of a portion of its expected swine waste RECs, material delays in the operation of swine waste to energy projects has resulted in NCMPA1 projecting that it will not be able to meet its swine waste set-aside requirements in 2018 or beyond. In its compliance report, NCMPA1 states that it met its 2017 general REPS requirement (305,293 RECs) by purchasing renewable energy from solar generation resources purchase of bundled renewable energy from hydro generation resources, and through the purchase of solar, biomass, hydro and poultry RECs. Additionally, NCMPA1 states that it met its 2017 solar set-aside requirement (7,124 RECs) by purchasing electricity from solar generating facilities and through the purchase of solar RECs, and met its 2017 poultry set-aside requirement (6,367 poultry RECs) through the purchase of RECs. NCMPA1 states that its 2017 incremental costs were below the annual limit on incremental costs for REPS compliance. Approval of NCMPA1's 2018 REPS compliance plan and 2017 REPS compliance report is pending before the Commission.

On September 7, 2017, in Docket No. E-100, Sub 113, NCMPA1 joined a number of other electric power suppliers in filing a motion to modify the 2018 swine and poultry waste set-aside requirements and to delay future increases in those requirements by one year. The Commission has requested comments on the matter and it is pending before the Commission.

#### Fayetteville Public Works Commission (FPWC)

On August 30, 2017, in Docket No. E-100, Sub 152, FPWC filed its 2016 REPS compliance report and 2017 REPS compliance plan. On May 7, 2018, the Public Staff filed comments addressing FPWC's 2016 compliance report and 2017 compliance plan. The Public Staff stated, in part, that it was unable to execute a confidentiality agreement and, as a result, the Public Staff is unable to make a recommendation regarding FPWC's 2016 REPS compliance report. On August 3, 2018, the Commission issued an Order withholding consideration of FPWC's 2016 REPS compliance until the Commission receives from the Public Staff a substantive recommendation related to these filings. In addition, the Commission stated that it expected the parties to cooperate with each other to promptly resolve

this dispute. Both FPWC and the Public Staff made filings in response to the Commission's Order, and this matter remains pending before the Commission as of the drafting of this report.

On August 31, 2018, in Docket No. E-100, Sub 159, FPWC filed its 2017 compliance report and 2018 REPS compliance plan. In its compliance plan, FPWC states that it intends to meet its REPS requirements by earning solar RECs through the generation of electric power attributable to its community solar program, as well as utilizing its SEPA allocations, implementing EE programs, and through the purchase of RECs. FPWC further states that it is in the process of implementing a DSM program, it calls its "Voltage Reduction Strategy." Further, FPWC notes that it continues to seek and consider all reasonable opportunities to engage in efforts to achieve compliance with the swine and poultry waste set-aside requirements. Finally, FPWC states that its incremental costs for REPS compliance are projected to be less than its per-account cost cap in 2018 through 2020. In its compliance report, FPWC states that it is required to meet a 2017 general REPS requirement of 123,297 RECs, solar set-aside requirements of 2,887 solar RECs and poultry waste set-aside requirements of 2,646 poultry RECs. Approval of FPWC's 2017 compliance report and 2018 compliance plan is pending before the Commission.

On September 7, 2017, in Docket No. E-100, Sub 113, FPWC joined a number of other electric power suppliers in filing a motion to modify the 2018 swine and poultry waste set-aside requirements and to delay future increases in those requirements by one year. The Commission has requested comments on the matter and it is pending before the Commission.

#### Town of Fountain (Fountain)

On August 31, 2017, in Docket No. E-100, Sub 152, Fountain filed its 2017 REPS compliance plan and 2016 REPS compliance report. Fountain notes in its compliance plan that compliance for 2017 through 2019 would be satisfied through the purchase of RECs. Fountain states that it has no plans to implement energy efficiency or demand side management programs. In its compliance report, Fountain states that its 2016 general REPS requirement was 199 RECs. Fountain additionally notes that its solar set-aside requirement was 5 solar RECs and its poultry waste set-aside requirement was 5 RECs, all of which were satisfied through the purchase of RECs. On August 9, 2018, the Commission issued an Order approving Fountain's 2016 REPS compliance report and accepting Fountain's 2017 REPS compliance plan. As noted above, in the future, Fountain's REPS compliance requirements will be met by NCEMC, in its role as utility compliance aggregator on behalf of Fountain, among other electric power suppliers.

### Town of Waynesville (Waynesville)

On August 31, 2017, in Docket No. E-100, Sub 152, Waynesville filed its 2016 REPS compliance report and 2017 REPS compliance plan. In its plan, Waynesville states that it seeks to comply with its REPS obligations through a diverse portfolio of cost-effective renewable energy resources, and that the key components of its compliance plan include purchase or RECs, use of Waynesville's SEPA allocations, and EE programs. In its compliance report, Waynesville states that it met its 2016 general REPS obligation of 5,361 RECs, and its solar set-aside requirements of 126 solar RECs to and its poultry waste set-aside requirements of 117 poultry waste RECs . On August 9, 2018, the Commission issued an Order approving Waynesville's 2016 REPS compliance report and 2017 REPS compliance plan.

On August 31, 2018, in Docket No. E-100, Sub 159, Waynesville filed its 2017 REPS compliance report and 2018 REPS compliance plan. In its plan, Waynesville states that it intends to use its allocations from SEPA, REC purchases, and EE savings from approved EE programs to meet its REPS requirements. In its 2017 REPS compliance report, Waynesville states that it retired a total of 5,445 RECs to meet its REPS compliance requirements, which included 128 solar RECs to meet the solar set-aside requirements and 117 poultry waste RECs to meet the poultry waste set-aside requirements. Approval of Waynesville's 2017 REPS compliance report and 2018 REPS compliance plan is pending before the Commission.

### NC Towns

On September 1, 2017, in Docket No. E-100, Sub 152, the Towns of Black Creek, Lucama, Sharpsburg, and Statonsburg (collectively, NC Towns) filed their 2017 REPS compliance plan. The NC Towns state that their all-requirements power supply contracts with DEP terminate at the end of 2017, and DEP has indicated that it will no longer provide REPS compliance services after the termination of the contracts. Therefore, the NC Towns' 2017 REPS compliance plan is their first REPS compliance filing. On August 9, 2018, the Commission issued an Order accepting the NC Towns' 2017 REPS compliance plan.

On August 31, 2018, in Docket No. E-100, Sub 159, the NC Towns, along with the Town of Winterville and the City of Concord (Concord) and the City of Kings Mountain (Kings Mountain), provided notice to the Commission that these municipalities will now take power supply from NTE Carolinas, LLC (NTE), and that NTE is assisting these municipalities in preparing and filing the 2019 REPS compliance plans. In addition, NTE states that it is waiting on the delivery of certain information from DEC and DEP that is necessary to the preparation of the REPS compliance plans. Therefore, NTE states that it will file these plans on behalf of these municipalities on or before October 1, 2018.

### NTE Municipalities

As mentioned above, on August 31, 2018, in Docket No. E-100, Sub 159, NTE provided notice to the Commission that the following municipalities will take full requirements power supply services from NTE: the Towns of Black Creek, Lucama, Sharpsburg, Stantonsburg, and Winterville, and the Cities of Concord and Kings Mountain.

#### The Town of Winterville (Winterville)

As mentioned above, Winterville was previously a wholesale customer of DEP, and DEP included Winterville's REPS compliance requirements and planning requirements in DEP's REPS filings. With the termination of the wholesale contract between DEP and Winterville at the end of 2017, Winterville became responsible for its own REPS reporting and planning. On September 1, 2017, Winterville filed its 2017 REPS compliance report, detailing its plans to comply with its REPS requirements for 2018-2020. On August 9, 2018, the Commission issued an Order accepting Winterville's 2017 REPS compliance report. As mentioned above, and as indicated by the August 31, 2018 filing in Docket No. E-100, Sub 159, Winterville has now joined other municipalities in reporting its REPS compliance through NTE.

# CONCLUSIONS

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All of the electric power suppliers have met or appear to have met the 2017 REPS requirements and appear to be on track to meet the 2018 general REPS requirements.<sup>10</sup> All of the electric power suppliers have met or appear to have met the 2017 solar set-aside requirement of the REPS. A joint motion to delay implementation of the 2017 swine waste set-aside requirements was granted, delaying implementation of that section of the REPS by one additional year. In addition, after meeting the poultry waste set-aside requirement for the first time in 2014, the electric power suppliers met the 2016 and 2017 poultry waste set-aside requirement at the same 170,000 MWh level as was required in 2014. Despite this, most electric power suppliers do not appear on track to fully meet the swine and poultry waste set-asides for 2018 and have requested modifications in the 2018 requirements and delays in the future increases of these requirements. Nonetheless, there are multiple proceedings pending before the Commission related to the use of alternative gas that is derived from swine and/or poultry waste, and these projects show some prospects for future compliance with the swine and poultry waste set-aside requirements.

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<sup>10</sup> As discussed in this report, the Commission has withheld consideration of the REPS compliance filings made by Halifax and FPWC.

# APPENDICES

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## APPENDICES

### 1. Environmental Review

- Letter from Chairman Edward S. Finley, Jr., North Carolina Utilities Commission, to Secretary Michael S. Regan, North Carolina Department of Environmental Quality (July 16, 2018)
- Letter from Secretary Michael S. Regan, North Carolina Department of Environmental Quality, to Chairman Edward S. Finley, Jr., North Carolina Utilities Commission (September 26, 2018)

### 2. Rulemaking Proceeding to Implement Session Law 2007-397

- Order Modifying the Swine and Poultry Waste Set-Aside Requirements and Providing Other Relief, Docket No. E-100, Sub 113 (October 16, 2017)

### 3. Renewable Energy Facility Registrations

- Order Revoking Registration of Renewable Energy Facilities and New Renewable Energy Facilities, Docket No. E-100, Sub 130 (October 24, 2017)
- Order Giving Notice of Intent to Revoke Registration of Renewable Energy Facilities and New Renewable Energy Facilities, Docket No. E-100, Sub 130 (August 7, 2018)

# APPENDIX 1



## State of North Carolina Utilities Commission

### COMMISSIONERS

EDWARD S. FINLEY, JR., CHAIRMAN  
TONOLA D. BROWN-BLAND      LYONS GRAY  
JERRY C. DOCKHAM          DANIEL G. CLODFELTER  
JAMES G. PATTERSON        CHARLOTTE A. MITCHELL

July 16, 2018

Secretary Michael S. Regan  
N.C. Department of Environmental Quality  
1601 Mail Service Center  
Raleigh, NC 27699-1601

Dear Secretary Regan:

In August 2007, the North Carolina General Assembly enacted comprehensive energy legislation, Session Law 2007-397 (Senate Bill 3), which, among other things, establishes a Renewable Energy and Energy Efficiency Portfolio Standard (REPS) for this State. As part of this legislation, the General Assembly requires the Commission to submit an annual report no later than October 1 of each year on the activities taken by the Commission to implement, and by the electric power suppliers to comply with, the REPS requirements. The Commission is further required pursuant to G.S. 62-133.8(j) to consult with the Department of Environmental Quality and include in its report "any public comments received regarding direct, secondary, and cumulative environmental impacts of the implementation of" the REPS requirement.

The Commission is not aware of the receipt of any public comments related to this issue. In order to respond to the General Assembly, I am requesting that the Department provide to the Commission any information it may have "regarding direct, secondary, and cumulative environmental impacts of the implementation of" the REPS requirement, including any public comments received by the Department. Your response by September 4, 2018, is appreciated so that the Commission may meet its deadline.

Please feel free to contact me if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Edward S. Finley, Jr." with a stylized flourish at the end.

Edward S. Finley, Jr.

cc: Sheila Holman, Assistant Secretary for the Environment, DEQ  
Bill Lane, General Counsel, DEQ  
Jennifer Mundt, Energy Director, DEQ

STREET ADDRESS:  
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NORTH CAROLINA  
Environmental Quality

ROY COOPER  
Governor

MICHAEL S. REGAN  
Secretary

September 25, 2018

Mr. Edward S. Finley, Chairman  
North Carolina Utilities Commission  
4325 Mail Service Center  
Raleigh, NC 27699-4325

Re: Renewable Energy and Energy Efficiency Portfolio Standard

Dear Chairman Finley:

The following information is being provided in response to your letter dated July 16, 2018 to the Department of Environmental Quality (DEQ). It consists of an update on the direct, secondary and cumulative environmental impacts, including any public comments received by DEQ on the implementation of the North Carolina Renewable Energy and Energy Efficiency Portfolio Standard (REPS), enacted under S.L. 2007-397 (Senate Bill 3).

#### A. Electricity Generation Mix

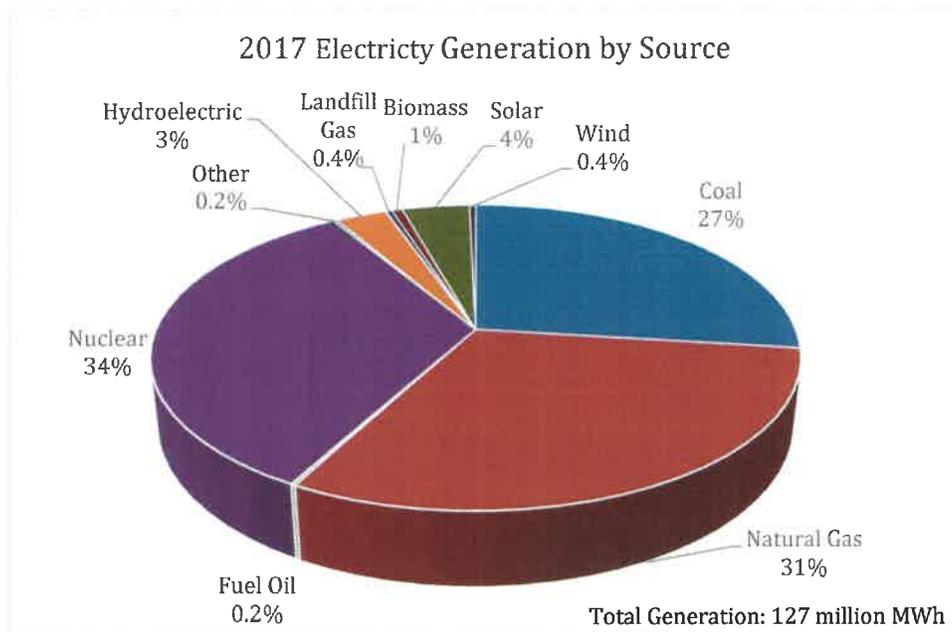
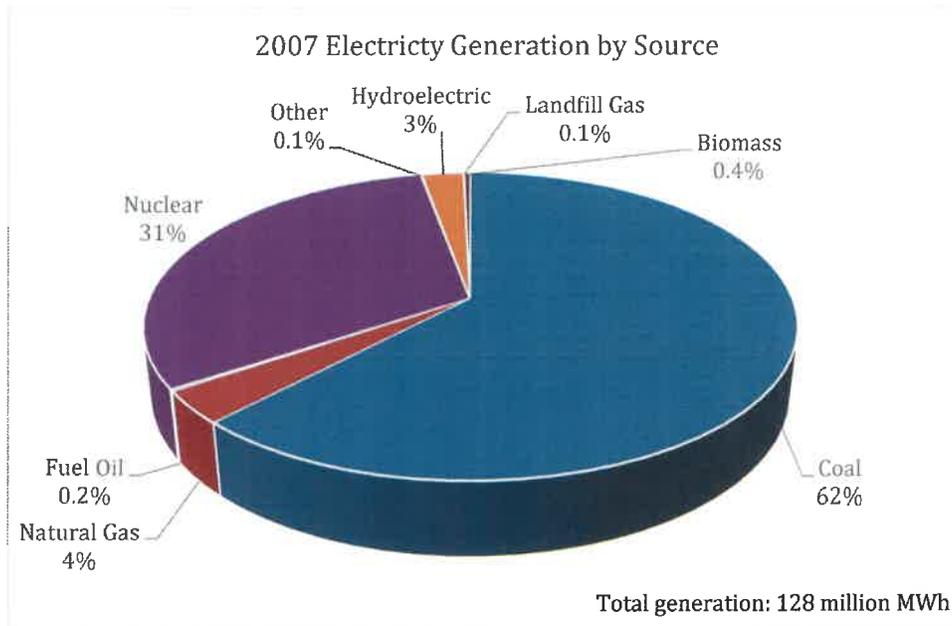
Renewable energy resources including hydroelectric, biomass, biogas, solar and wind, along with energy efficiency measures, are important to North Carolina's diverse energy portfolio. Figure 1 shows North Carolina's net electric power generation from the utility sector in 2007, the year REPS became effective. In 2007, only 2.8% of electric power was generated by renewable sources, primarily hydroelectric power. By 2017, 8.4% of electricity (10.6 million MWh) was generated by renewable energy with 4% generated by solar and 3% generated by hydroelectric power. The significant increase in renewable energy generation is due to the monetary incentives and favorable regulatory environment for these sources provided by REPS, federal tax credits, and declining costs of renewable energy technologies.

In addition to this change in renewable electric generation, there was also a shift from coal being the predominant fuel for electric power generation in North Carolina. In 2007, 62% of the electric power was generated by coal, while natural gas only accounted for 4% of the electric power generation.<sup>1</sup> By 2017, natural gas generated 31% and coal only generated 27% of the electric power in North Carolina. In ten years, coal generation went from 80 million MWh to 34 million MWh, while natural gas generation surpassed coal at 39 million MWh. The notable increase in natural gas generation between 2007 and 2017 is due to economic drivers, such as increased natural gas production from shale formation, lower natural gas prices, and federal and state regulations (such as the North Carolina Clean Smokestacks Act), which resulted in the replacement of smaller, older coal units with more efficient natural gas combined cycle plants.

<sup>1</sup> Energy Information Administration (EIA) Form 923 Detailed Data, <https://www.eia.gov/electricity/data/eia923/>.



**Figure 1. North Carolina Electric Power Generation Profile in 2007 and 2017**



Source: U.S. Energy Information Administration (EIA)

Table 1 shows the changes in generation for hydroelectric, biomass, landfill gas, solar and wind from 2007 to 2017. By 2017, solar generation surpassed hydroelectric and biomass generation combined. There is now over 2,400 MW of utility-scale solar capacity operating in North Carolina with more scheduled to come on line in the coming years. A 208 MW wind facility



began operating in 2017 providing almost half a million MWh of generation. The growth in renewable energy resources in North Carolina has been facilitated by the Public Utility Regulatory Policies Act of 1978 (PURPA) which promotes alternative energy resources and energy efficiency, and by state policies such as the REPs and the state renewable energy tax credit.

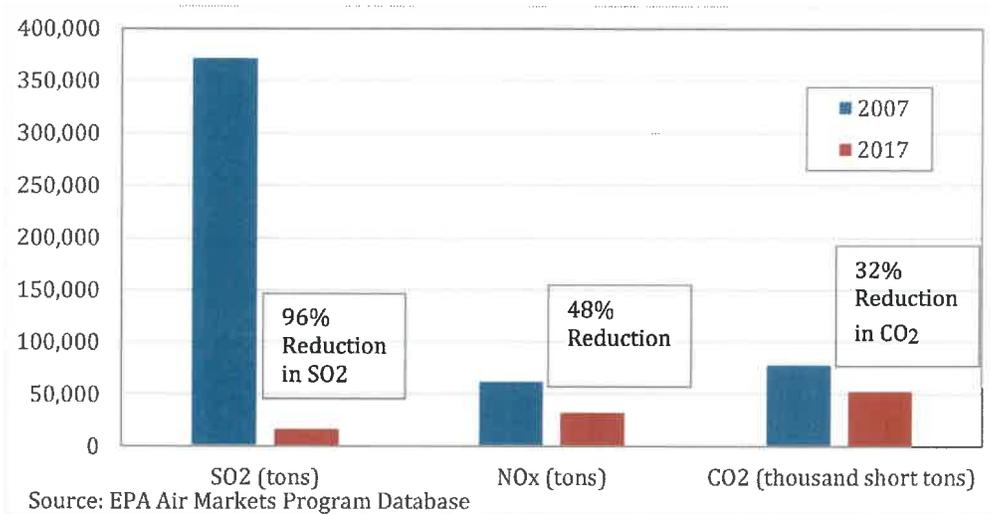
**Table 1. Renewable Energy Electricity Generation in North Carolina from 2007 to 2017 in MWh**

Source	2007	2011	2013	2015	2017
Hydroelectric	990	3,893,000	6,901,000	4,742,000	3,829,000
Biomass	142,832	979,000	1,207,000	975,000	799,000
Landfill Gas	109,297	214,000	372,000	524,000	470,000
Solar		17,000	345,000	1,374,000	5,056,000
Wind					471,000
<b>Total</b>	<b>253,119</b>	<b>5,103,250</b>	<b>8,824,393</b>	<b>7,615,217</b>	<b>10,625,838</b>

**B. Air Pollutant Emissions Reductions**

Figure 2 presents emissions reductions from 2007 to 2017. Based on the generation profile shown in Figure 1, it is estimated that the electric power sector had emission reductions of 96%, 48%, and 32% for sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), and carbon dioxide (CO<sub>2</sub>), respectively. These reductions are primarily due to the retirement of over 3,000 MW of coal power plants and installation of emissions controls on fossil fuel plants that are still operating. A small portion of these reductions are due to avoided fossil fuel generation resulting from REPS projects. The following sections estimate the amount of air pollution that was avoided due to REPS.

**Figure 2. North Carolina Power Plant Emissions in 2007 and 2017**



## Emission Reductions Due to Energy Efficiency Measures

Energy efficiency (EE) results in less demand for electricity generated by power plants; therefore, less air pollution is emitted from these power plants. To estimate the environmental benefits of EE programs, the NC North Carolina Renewable Energy Tracking System (NC RETS) is used. The RETS tracks the estimated amount of avoided electricity generation in MWh from EE programs operated by the electricity retailers in North Carolina.<sup>2</sup> Table 2 shows the number of energy efficiency certificates (EECs) issued for each year from the NC RETS publicly available data. In 2017, North Carolina issued 4,797,944 MWh of EECs, which reduced retail sales of electricity by approximately 3%. This is the equivalent of a small coal utility power plant not operating.

The North Carolina Division of Air Quality (DAQ) estimated the CO<sub>2</sub>, NO<sub>x</sub> and SO<sub>2</sub> emissions that were not emitted due to the avoided electricity generation resulting from EE measures. For this estimation, the total EECs issued in a given year are assumed equal to the avoided electrical generation in North Carolina during that year. The estimate also assumes that all the emissions reductions would occur in North Carolina. These assumptions represent an over estimate of the actual air pollution reductions that would take place in our State since electricity is provided by the regional power grid, not just by power plants located in North Carolina. The U.S. EPA has developed average CO<sub>2</sub>, NO<sub>x</sub> and SO<sub>2</sub> emission factors for power plants located in the State of North Carolina using the Emissions & Generation Resource Integrated Database (eGRID).<sup>3</sup> The air pollution not being emitted by power plants was estimated as the avoided generation due to EE multiplied by the EPA eGRID emission factors.<sup>4</sup>

The data in Table 2 below presents a summary of the maximum reduction in emissions due to EE savings achieved through REPS. In 2017, EE measures resulted in 1,339 tons of NO<sub>x</sub> and 1,068 tons of SO<sub>2</sub> not being emitted. The CO<sub>2</sub> not emitted due to EE measures is approximately 2 million tons, which is 4% of the total CO<sub>2</sub> emitted by power plants in North Carolina. This analysis shows that EE measures resulting from the REPS are significantly decreasing air pollution emitted in North Carolina and neighboring states.

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<sup>2</sup> North Carolina Renewable Energy Tracking System, <http://www.ncrets.org/>.

<sup>3</sup> eGRID2016 Technical Support Document, Prepared for: Clean Air Markets Division, Office of Atmospheric Programs, U.S. Environmental Protection Agency, February 2018.

<sup>4</sup> Note that the avoided generation does not include electricity transmission line losses. Including line losses would increase the estimated generation that was avoided.



**Table 2. Energy Efficiency Certificates Issued and Estimated Avoided Air Pollution Emissions**

<b>Year</b>	<b>EECs Or Avoided Generation (MWh)</b>	<b>CO<sub>2</sub> Not Emitted (tons)</b>	<b>NO<sub>x</sub> Not Emitted (tons)</b>	<b>SO<sub>2</sub> Not Emitted (tons)</b>
2008	22,907	14,145	12	69
2009	79,861	46,181	29	79
2010	499,582	295,018	210	476
2011	1,127,747	665,969	475	1,075
2012	1,278,013	674,789	533	666
2013	2,101,819	1,109,758	877	1,096
2014	2,699,578	1,322,434	929	929
2015	6,196,154	3,035,291	2,131	2,131
2016	4,046,094	1,754,874	1,129	900
2017	4,797,944	2,080,967	1,339	1,068

**Emission Reductions Due to Non-Emitting Renewable Energy Measures**

The NC RETS also tracks the estimated amount of renewable energy (RE) generation in MWh from projects receiving Renewable Energy Certificates (RECS). 93% of the installed RE capacity is located in North Carolina. There are two categories of RE generation sources: 1) sources that combust fuel such as biomass and emit air pollution and 2) sources that do not emit air pollution such as solar. DAQ obtained the number of RECS issued for each year by RE project type from the NC RETS, then split the generation RECS into the emitting and non-emitting sources as shown in Table 3 below. In 2017, non-emitting RE source generated a total of 4,847,973 MWh of electricity while RE sources that emit air pollution generated 4,833,530 MWh of electricity, an almost even split. This almost 10 million MWh of electricity is equivalent to a mid-sized utility coal power plant.

DAQ estimated the reduction in emissions from electricity generation due to non-emitting RE projects and the EPA eGRID emission factors discussed in the previous section. DAQ assumed that all the emissions reductions would occur in North Carolina; however, this is an over estimate of the actual reductions that would take place in North Carolina. Table 3 presents a summary of the maximum reductions in emissions due to non-emitting RE generation projects achieved through the REPS. In 2017, non-emitting RE electricity generation resulted in 1,353 tons of NO<sub>x</sub> and 1,079 of SO<sub>2</sub> not being emitted in the air. In addition, avoided CO<sub>2</sub> emissions are estimated at just over 2 million tons.



**Table 3. Annual Renewable Energy RECs Generated and Estimated Avoided Air Pollution Emissions**

Year	RECS from Emitting RE Sources* (MWh)	RECS from Non-Emitting RE Sources** (MWh)	CO <sub>2</sub> Not Emitted (tons)	NO <sub>x</sub> Not Emitted (tons)	SO <sub>2</sub> Not Emitted (tons)
2008	523,352	539,142	332,911	285	1,632
2009	705,098	790,184	456,941	287	778
2010	918,776	829,911	490,088	350	791
2011	2,290,003	719,672	424,988	303	686
2012	3,256,230	773,196	408,247	323	403
2013	4,005,084	1,420,290	749,911	593	740
2014	4,810,110	1,687,381	826,592	580	580
2015	4,442,271	2,131,664	1,044,232	733	733
2016	4,615,521	3,634,409	1,576,318	1,014	809
2017	4,833,530	4,847,973	2,102,665	1,353	1,079

\*Emitting sources include biomass, cogeneration, tire derived fuel projects

\*\*Non-Emitting sources include hydropower, solar and wind projects

The annual avoided emissions from both EE measures and non-emitting RE for 2017 are summarized in Table 4.

**Table 4. Total Avoided Emissions Due to REPS in 2017**

REPS Program	EECs/RECS (MWh)	CO <sub>2</sub> Not Emitted (tons)	NO <sub>x</sub> Not Emitted (tons)	SO <sub>2</sub> Not Emitted (tons)
Non-Emitting RE	4,847,973	2,102,665	1,353	1,079
EE Measures	4,797,944	2,080,967	1,339	1,068
<b>Total</b>	<b>9,645,917</b>	<b>4,183,632</b>	<b>2,691</b>	<b>2,146</b>

C. Air Quality Permit Reviews

North Carolina General Statute § 62-133.8(g) requires a biomass combustion process at any new renewable energy facility that delivers electric power to an electric power supplier to meet Best Available Control Technology (BACT). BACT is an emissions limitation for an air pollutant based on the maximum degree of emission reductions achievable for a facility, taking into account energy, environmental, and economic impacts, and other costs. DAQ continues to review air permit applications and make case-by-case BACT determinations for new renewable energy facilities.

As of September 8, 2018, the DAQ permitted or registered 38 facilities receiving renewable energy credits under the REPS program. Most of the permitted facilities capture and utilize landfill gas at municipal solid waste landfills as shown below in Table 5. The second largest



category of permitted and registered facilities utilize anaerobic digestion of swine waste to produce biogas at hog operations.

**Table 5. Permitted Renewable Energy Facilities with BACT Limits**

Type of New Biomass Facility with BACT Limits	Number of Permitted or Registered Facilities
Biomass & Tire-Derived Fuels	3
Landfills	17
Swine Waste	10
Poultry Litter	1
Biomass & Poultry Litter	7
<b>Total</b>	<b>38</b>

DAQ continues to inspect and assure compliance for each BACT limit specified in a facility’s operating permit. All landfills are meeting their respective BACT limits. One of the biomass facilities combusting tire-derived fuels has experienced compliance challenges related to the SO<sub>2</sub> ambient air quality standard. Using its existing authority, DAQ has entered into a Special Order by Consent (SOC) with the facility to address the associated air quality violations and non-compliance status. DAQ is also addressing exceedances of BACT limits at several facilities fueled by poultry litter based on initial stack testing results.

**D. Waste Management Permit Reviews**

Thirty-two municipal solid waste landfills permitted by the Division of Waste Management utilize landfill gas (LFG) for energy projects. Approximately 60% are receiving renewable energy credits under the REPS program. The majority of LFG collected at these facilities is used to generate electricity that is in turn sold to local power companies. The remaining uses are direct thermal projects that use LFG to heat nearby buildings or greenhouses or projects that involve LFG as fuel for boilers at neighboring manufacturing businesses. Two new projects involving LFG as vehicle fuel are due to come online by the end of 2018.

**E. Swine Waste to Bioenergy**

According to NC RETS, 18 facilities are registered as using biogas derived from swine waste in North Carolina. Of these facilities, 5 use directed biogas (which may or may not have been produced in North Carolina); 7 are swine waste-to-energy facilities operating in North Carolina; and 6 are swine waste to energy facilities operating outside of North Carolina. It is likely that all 18 facilities participate in the production of Renewable Energy Credits to satisfy the requirements of Senate Bill 3.

North Carolina is recognized as the third-richest state in biogas resources in the country, with swine waste as one of the largest contributor to these resources. The benefits of producing biogas from swine waste include methane capture otherwise emitted to the atmosphere, reducing odors from hog farms, the creation of new potential revenue streams, and the creation of new jobs.



Per comments received during the May 2018 meeting of the North Carolina Energy Policy Council, technological opportunities to improve swine waste-to-energy facilities exist, including further reduction of odors from hog farms, reduced ammonia emissions, and addressing localized concentrations of nitrogen, phosphorous, and ammonia.

## F. Wind Energy

### **Onshore Wind Energy Development and Regulatory Environment**

There is one wind turbine project that is registered in NC RETS as of September 2018: the Broyhill Wind Turbine located at Appalachian State University. As designed, the turbine has a capacity of 0.1 MW and is capable producing up to 147,000 kWh annually. As of May 2018, one wind energy facility (WEF), or utility-scale wind facility, is in operation in the State. Located in Perquimans and Pasquotank counties near Elizabeth City, Avangrid's Amazon Wind Farm, US East,<sup>5</sup> boasts 104 2MW wind turbines. According to Avangrid, the facility generates enough electricity to power 61,000 homes annually, spans 22,000 acres, and is leased from approximately 60 local land owners.

Article 21C of Chapter 143 of the General Statutes governs permitting for WEFs in the State.<sup>6</sup> The WEF permitting law was enacted in 2013 and included a grandfather clause that provided relief to Amazon Wind, allowing the project to proceed without being subject to the requirements under the new law. DEQ is authorized to permit WEFs under the law; however, DEQ may not issue permits during the 18-month permitting moratorium established pursuant to Section 13 of S.L. 2017-192 (H589).<sup>7</sup> According to the legislation, the purpose of the moratorium is to allow the General Assembly time to study military operations in the State and to consider the impact of future WEFs and energy infrastructure on military operations, training, and readiness. The findings and recommendations from the study were submitted to the General Assembly in May 2018, and the moratorium, pending further legislative intervention, will end on December 31, 2018.

### **Offshore Wind Energy Development and Regulatory Environment**

To date, there are no offshore WEF located within either North Carolina's 3-mile offshore jurisdiction or the 200-mile exclusive economic zone of the OCS under federal jurisdiction. Furthermore, at present there are no WEFs in operation in the mid- Atlantic planning area of the OCS (comprising Delaware, Maryland, Virginia, and North Carolina). The first, and only offshore WEF in the United States, the Block Island Wind Farm,<sup>8</sup> is located off the coast of Rhode Island, and went into operation in December 2016.

<sup>5</sup> Avangrid Renewables. (2017). Amazon Wind Farm US East. Retrieved from [http://www.avangridrenewables.us/cs\\_amazon-wind-farm-us-east.html](http://www.avangridrenewables.us/cs_amazon-wind-farm-us-east.html)

<sup>6</sup> North Carolina General Statutes. Permitting of Wind Energy Facilities. N.C. Gen. Stat. § 21C-115-126. Retrieved from [https://www.ncleg.net/EnactedLegislation/Statutes/PDF/ByArticle/Chapter\\_143/Article\\_21C.pdf](https://www.ncleg.net/EnactedLegislation/Statutes/PDF/ByArticle/Chapter_143/Article_21C.pdf)

<sup>7</sup> North Carolina General Assembly. (2017, July 27). House Bill 589. Retrieved from <https://www.ncleg.net/Sessions/2017/Bills/House/PDF/H589v6.pdf>.

<sup>8</sup> Deepwater Wind. (2018). Block Island Wind Farm: America's First Offshore Wind Farm. Retrieved April 4, 2018, from <http://dwwind.com/project/block-island-wind-farm/>



Offshore wind energy development proposed in areas 3 to 200 miles off the coast is subject to federal jurisdiction under Bureau of Ocean Energy Management (BOEM). On April 6, 2018, BOEM issued a Request for Feedback (RFF)<sup>9</sup> regarding its Proposed Path Forward for Future Offshore Renewable Energy Leasing on the OCS, wherein the Bureau proposes to conduct a high-level assessment of all waters offshore the Atlantic Coast for potential additional lease locations. The assessment would rely on various factors to assess which areas along the Atlantic are the most likely to have the highest potential for offshore wind development in the next 3 to 5 years. The period for public comments on the RFF ended on July 6, 2018.

#### G. Summary

North Carolina has made great strides toward diversifying its energy portfolio in a manner that meets the needs of consumers and businesses, provides greater energy diversification, and protects the environment. DEQ supports the use of clean, reliable energy sources that grows our economy, and will continue to monitor the environmental impacts of the implementation of the REPS program. The only public comments received by DEQ during this reporting period pertained to improved technologies for swine waste-to-energy projects.

Sincerely,



Sheila Holman  
Assistant Secretary for Environment

cc: Christopher Ayers, Executive Director, NC Utilities Commission Public Staff  
Bill Lane, General Counsel, DEQ

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<sup>9</sup> Bureau of Ocean Energy Management, United States Department of the Interior. (2018, April 6). Request for Feedback on BOEM's Proposed Path Forward for Future Offshore Renewable Energy Leasing on the Atlantic OCS. 83 Federal Register 67, pp. 14881-14884. Retrieved from <https://www.gpo.gov/fdsys/pkg/FR-2018-04-06/pdf/2018-07106.pdf>



# APPENDIX 2

**STATE OF NORTH CAROLINA  
UTILITIES COMMISSION  
RALEIGH**

DOCKET NO. E-100, SUB 113

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of Rulemaking Proceeding to Implement Session Law 2007-397	) ) ) ) )	ORDER MODIFYING THE SWINE AND POULTRY WASTE SET-ASIDE REQUIREMENTS AND PROVIDING OTHER RELIEF
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BY THE COMMISSION: On August 11, 2017, a verified motion to modify and delay the 2017 requirements of G.S. 62-133.8(e) and (f) was filed by Duke Energy Carolinas, LLC (DEC); Duke Energy Progress, LLC (DEP); Virginia Electric and Power Company, d/b/a Dominion Energy North Carolina (Dominion); GreenCo Solutions, Inc.; Public Works Commission of the City of Fayetteville; EnergyUnited Electric Membership Corporation; Halifax Electric Membership Corporation; the Tennessee Valley Authority (TVA); the Town of Waynesville; North Carolina Eastern Municipal Power Agency (NCEMPA); and North Carolina Municipal Power Agency Number 1 (NCMPA1) (hereinafter referred to collectively as the Joint Movants).<sup>1</sup> The Joint Movants seek Commission approval of the following requests: 1) to delay the requirements of G.S. 62-133.8(e) (Compliance With [North Carolina’s Renewable Energy and Energy Efficiency Portfolio Standard (REPS)] Requirement Through Use of Swine Waste Resources) until 2018; 2) to modify the requirements of G.S. 62-133.8(f) (Compliance With REPS Requirement Through Use of Poultry Waste Resources) by lowering the 2017 requirement to 170,000 MWh and delaying subsequent increases until 2018; 3) to allow Joint Movants “to bank any swine and/or poultry renewable energy certificates (RECs) previously or subsequently acquired for use in future compliance years;” and 4) to “allow Joint Movants to replace compliance with the poultry and swine waste requirements in 2017 with other compliance measures in accordance with G.S. 62-133.8(b), (c), and (d).” The Joint Movants state that they have individually and collectively made reasonable efforts to comply with the REPS swine and poultry waste resource provisions, and that the relief sought is in the public interest. In addition, Joint

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<sup>1</sup> DEC states that it is also acting in its capacity as REPS compliance aggregator for Blue Ridge Electric Membership Corporation (EMC), Rutherford EMC, the City of Dallas, the Town of Forest City, the City of Concord, the Town of Highlands, and the City of Kings Mountain. DEP states that it is acting in its capacity as REPS compliance aggregator for the Towns of Sharpsburg, Lucama, Black Creek, Winterville, and Stantonsburg. Dominion states that it is acting in its capacity as REPS compliance aggregator for the Town of Windsor. TVA states that it is acting in its capacity as REPS compliance aggregator for Blue Ridge Mountain EMC, Mountain Electric Cooperative, Tri-State EMC and Murphy Electric Power Board. NCEMPA asserts that it is acting in its capacity as REPS compliance aggregator for its 32 member municipalities, which are electric power suppliers. NCMPA1 asserts that it is acting in its capacity as REPS compliance aggregator for its 19 member municipalities, which are electric power suppliers.

Movants request that the Commission allow the current semiannual stakeholder meetings on compliance with the swine and poultry waste resource provisions to be held just once a year. Finally, the Joint Movants request that the Commission consider and approve their motion without an evidentiary hearing because they believe that through required semiannual reports and stakeholder meetings stakeholders and regulatory staff have ample information surrounding the Joint Movants' compliance efforts.

On August 31, 2017, the Commission issued an Order Requesting Comments. On September 22, 2017, the Commission granted a motion for an extension of time filed by the Public Staff, extending the deadline by which parties may file comments until September 29, 2017.

Between September 21, 2017 and September 29, 2017, the North Carolina Poultry Federation (NCPF), the North Carolina Pork Council (NCPC), and the Public Staff filed comments on Joint Movants' motion. No other party filed comments on the motion.

### SUMMARY OF THE COMMENTS

In its comments, NCPF states that it "does not oppose" the portion of the motion requesting to modify the requirements of G.S. 62-133.8(f) by lowering the 2017 compliance requirement to 170,000 MWh and delaying the subsequent increases in compliance requirements until calendar year 2018. NCPF limits its comments to the motion and its application to G.S. 62-133.8(f). Thus, NCPF takes no position with regard to banking poultry waste RECs and substituting other types of RECs for 2017 compliance purposes. In addition, NCPF stipulates and agrees that the Commission may enter an order on the motion on the basis of written submissions without the need for an evidentiary hearing. Finally, NCPF requests that the Commission "continue to monitor the process" and "continue to use its authority to motivate the parties to achieve compliance with the poultry waste set-aside as soon as practicable."

In its comments, NCPC also states that it does not oppose the Joint Movants' motion and that it has no reason to believe that good faith efforts are not being made toward compliance with the requirements of the animal waste provisions. Nevertheless, NCPC opines that it appears that the "industry as a whole" is relying on DEC and DEP to carry the burden of meeting these requirements. NCPC states that at some point soon, DEC and DEP and a few other electric power suppliers will be in a position to meet these requirements and the Commission will be called upon to decide how to address a situation where some electric power suppliers will have met their obligations but others have not. NCPC also makes reference to the Joint Motion's mention of recently enacted provision in House Bill 589 (S.L. 2017-192), establishing an accelerated interconnection for animal waste projects. NCPC sites this provision as a continued demonstration of the General Assembly's investment in the animal waste-to-energy set-aside requirements and the policy goals underlying these requirements. On that basis, NCPC argues that the Commission should "take such action as necessary to assure that this manifest legislative intent is carried out."

The Public Staff, in its comments, states that it has reviewed the motion, the semiannual reports, and the data in the North Carolina Renewable Energy Tracking System (NC-RETS). In addition, the Public Staff states that it has obtained useful information from the swine waste and poultry waste stakeholder meetings. The Public Staff's comments include a review of detailed data available in the triannual and semiannual reports filed with the Commission in Docket E-100, Sub 113A showing the approximate overall compliance position of the electric power suppliers. Based upon this review, the Public Staff concludes that the Joint Movants are making good faith efforts to comply with the swine and poultry waste set-aside requirements, but will fall short for 2017. Therefore, the Public Staff recommends that the Commission: (1) delay for one year the swine waste set-aside requirements; (2) modify the poultry waste set-aside requirements to maintain the current 170,000 MWh or equivalent for calendar year 2017 and delay all of the additional poultry waste set-aside compliance obligations for one year; (3) allow the electric power suppliers to bank any swine and poultry waste RECs previously or subsequently acquired for use in the future, exclusive of poultry waste RECs retired in 2014, 2015, 2016, and 2017; (4) allow the animal-waste set-aside requirements stakeholder meetings to be held once a year, during the summer; and (5) not require an evidentiary hearing on this matter.

#### DISCUSSION

Pursuant to G.S. 62-133.8(i)(2), the Commission, in developing rules implementing the REPS, shall:

Include a procedure to modify or delay the provisions of subsections (b), (c), (d), (e), and (f) of this section in whole or in part if the Commission determines that it is in the public interest to do so. The procedure adopted pursuant to this subdivision shall include a requirement that the electric power supplier demonstrate that it made a reasonable effort to meet the requirements set out in this section.

Commission Rule R8-67(c)(5) states:

In any year, an electric power supplier or other interested party may petition the Commission to modify or delay the provisions of G.S. 62-133.8(b), (c), (d), (e) and (f), in whole or in part. The Commission may grant such petition upon a finding that it is in the public interest to do so. If an electric power supplier is the petitioner, it shall demonstrate that it has made a reasonable effort to meet the requirements of such provisions.

The Commission has previously exercised this authority and delayed compliance with the swine and/or poultry waste set-aside requirements on several occasions by the following orders issued in this docket: the November 29, 2012 Order Modifying the Poultry and Swine Waste Set-Aside Requirements and Granting Other Relief (2012 Delay Order); the March 26, 2014 Final Order Modifying the Poultry and Swine Waste Set-Aside Requirements and Providing Other Relief (2013 Delay Order); the November 13, 2014 Order Modifying the Swine Waste Set-Aside Requirement and

Providing Other Relief (2014 Delay Order); the December 1, 2015 Order Modifying the Swine and Poultry Waste Set-Aside Requirements and Providing Other Relief (2015 Delay Order); the October 17, 2016 Order Modifying the Swine and Poultry Waste Set-Aside Requirements and Providing Other Relief (2016 Delay Order).

As an initial matter, the Commission considers Joint Movants' request to consider and approve their motion without the need for an evidentiary hearing. In support of this request, Joint Movants state that the compliance status for the swine and poultry waste set-aside requirements is essentially unchanged since the Commission issued its 2015 Delay Order. The motion is verified by Kendal C. Bowman, Vice President of Regulatory Affairs and Policy, North Carolina, for Duke Energy Corporation, pursuant to Commission Rule R1-7 on behalf of the Joint Movants. The Public Staff, like the Joint Movants, recommends that the Commission approve the request without an evidentiary hearing. No party filed comments opposing this portion of the motion. Based upon the foregoing, the Commission finds that the material facts in this matter, including those contained in Joint Movants' verified motion and in the semiannual reports filed in Docket No. E-100, Sub 113A, are uncontroverted and concludes that the motion may be decided without an evidentiary hearing.

Based on the triannual and semiannual reports submitted by the electric power suppliers in Docket No. E-100, Sub 113A, the verified motion, the parties' comments, and the entire record herein, the Commission finds that the State's electric power suppliers have made a reasonable effort to comply with the 2017 statewide swine waste set-aside requirements established by G.S. 62-133.8(e), but will not be able to comply. Compliance with the swine waste set-aside requirement has been hindered by the fact that the technology of power production from swine waste continues to be in its early stages of development. No party presented evidence that the aggregate 2017 swine waste set-aside requirement could be met. However, the Commission notes that the electric power suppliers report encouraging developments in the technology of power production from swine waste that, combined with the availability of RECs banked from current and prior years, increase the likelihood that compliance with the swine waste set-aside requirements will be achieved in 2017. The Commission further notes that it has permitted the Joint Movants to bank RECs for four consecutive years and the cumulative effect of this banking has yet to result in the ability to comply with the initial swine waste set-aside requirement. To require that the Joint Movants retire their banked swine RECs would, thus, result in wiping the slate clean for compliance purposes in future years. Therefore, consistent with the 2016 Delay Order, the Commission finds that it is in the public interest to delay the entire requirement of G.S. 62-133.8(e) for one additional year. Electric power suppliers that have acquired swine waste RECs for 2017 REPS compliance should be allowed to bank such RECs for swine waste set-aside compliance in future years. Electric power suppliers should continue to make efforts to comply with the swine waste set-aside requirement as modified by this Order.

Based on the semiannual reports submitted by the electric power suppliers in Docket No. E-100, Sub 113A, the verified motion, the parties' comments, and the entire record herein, the Commission similarly finds that the State's electric power suppliers

have made a reasonable effort to comply with the 2017 statewide poultry waste set-aside requirement established by G.S. 62-133.8(f), but will not be able to comply. As with the swine waste set-aside requirement, compliance with the poultry waste set-aside requirement has been hindered by the fact that the technology of power production from poultry waste continues to be in its early stages of development. No party presented evidence that the aggregate 2017 poultry waste set-aside requirement could be met; however, the parties agree that the 2016 compliance level of 170,000 MWh, if maintained for 2017, can be met. Therefore, the Commission finds that it is in the public interest to modify the entire requirement of G.S. 62-133.8(f) for one year. Consistent with the 2016 Delay Order, the Commission finds good cause to modify the poultry waste set-aside requirement established by G.S. 62-133.8(f) by adding an additional year (2017) of compliance at the 170,000 MWh threshold, prior to escalating the requirement to 700,00 MWh. Electric power suppliers should continue to make efforts to comply with the poultry waste set-aside requirements as modified by this Order.

IT IS, THEREFORE, ORDERED as follows:

1. That the 2017 swine waste set-aside requirements of G.S. 62-133.8(e), as established in the Commission’s 2016 Delay Order, are delayed for one additional year. The electric power suppliers, in the aggregate, shall comply with the requirements of G.S. 62-133.8(e) according to the following schedule:

<u>Calendar Year</u>	<u>Requirement for Swine Waste Resources</u>
2018-2019	0.07%
2020-2021	0.14%
2022 and thereafter	0.20%

Electric power suppliers shall be allowed to bank any swine waste RECs previously or subsequently acquired for use in future compliance years and to replace compliance with the swine waste set-aside requirement in 2017 with other compliance measures pursuant to G.S. 62-133.8(b) and (c), including the use of solar RECs beyond the requirements of G.S. 62-133.8(d);

2. That the 2017 poultry waste set-aside requirement of G.S. 62-133.8(f), as established in the Commission’s 2016 Delay Order, is modified to maintain the same level as the 2016 requirement, and that the scheduled increases in the requirement are delayed by one year. The electric power suppliers, in the aggregate, shall comply with the requirements of G.S. 62 133.8(f) according to the following schedule:

<u>Calendar Year</u>	<u>Requirement for Poultry Waste Resources</u>
2016	170,000 MWh
2017	170,000 MWh
2018	700,000 MWh
2019 and thereafter	900,000 MWh;

3. That the electric power suppliers subject to the semiannual filing requirement shall continue to report on the schedule established in the 2015 Delay

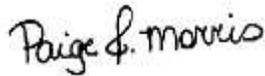
Order. These reports shall continue to include the information specified in Ordering Paragraph 3 of the Commission's 2015 Delay Order; and

4. That the Public Staff shall continue to arrange and facilitate stakeholder meetings, but may reduce the frequency of these meetings to once a year to occur in the summer months. The electric power suppliers subject to the semiannual filing requirement shall attend. Developers and other stakeholders are encouraged to participate and discuss potential obstacles to achieving the swine and poultry waste set-aside requirements. The Public Staff shall continue to file minutes of the stakeholder meetings in Docket No. E-100, Sub 113A.

ISSUED BY ORDER OF THE COMMISSION.

This the 16<sup>th</sup> day of October, 2017.

NORTH CAROLINA UTILITIES COMMISSION

A handwritten signature in cursive script that reads "Paige J. Morris".

Paige J. Morris, Deputy Clerk

# APPENDIX 3

**STATE OF NORTH CAROLINA  
UTILITIES COMMISSION  
RALEIGH**

DOCKET NO. E-100, SUB 130  
DOCKET NO. EMP-33, SUB 0  
DOCKET NO. EMP-39, SUB 0  
DOCKET NO. EMP-43, SUB 0  
DOCKET NO. EMP-44, SUB 0  
DOCKET NO. EMP-45, SUB 0  
DOCKET NO. RET-8, SUB 5  
DOCKET NO. RET-8, SUB 10  
DOCKET NO. RET-23, SUB 0  
DOCKET NO. SP-299, SUB 1  
DOCKET NO. SP-432, SUB 3  
DOCKET NO. SP-432, SUB 4  
DOCKET NO. SP-634, SUB 1  
DOCKET NO. SP-898, SUB 1  
DOCKET NO. SP-1240, SUB 0  
DOCKET NO. SP-1568, SUB 0  
DOCKET NO. SP-1768, SUB 0  
DOCKET NO. SP-2068, SUB 1  
DOCKET NO. SP-2142, SUB 0  
DOCKET NO. SP-2942, SUB 1  
DOCKET NO. SP-3062, SUB 0  
DOCKET NO. SP-3189, SUB 1  
DOCKET NO. SP-3214, SUB 0  
DOCKET NO. SP-3548, SUB 0  
DOCKET NO. SP-3690, SUB 0  
DOCKET NO. SP-3816, SUB 0  
DOCKET NO. SP-3880, SUB 0  
DOCKET NO. SP-4001, SUB 1  
DOCKET NO. SP-4420, SUB 0  
DOCKET NO. SP-4747, SUB 0  
DOCKET NO. SP-5013, SUB 0  
DOCKET NO. SP-5031, SUB 0  
DOCKET NO. SP-5095, SUB 0  
DOCKET NO. SP-5098, SUB 0  
DOCKET NO. SP-5138, SUB 0  
DOCKET NO. SP-5145, SUB 0  
DOCKET NO. SP-5272, SUB 0  
DOCKET NO. SP-5306, SUB 0  
DOCKET NO. SP-5375, SUB 0  
DOCKET NO. SP-5410, SUB 0  
DOCKET NO. SP-5474, SUB 0  
DOCKET NO. SP-5587, SUB 0

DOCKET NO. SP-5587, SUB 1  
 DOCKET NO. SP-5587, SUB 2  
 DOCKET NO. SP-5587, SUB 3  
 DOCKET NO. SP-5587, SUB 4  
 DOCKET NO. SP-5587, SUB 5  
 DOCKET NO. SP-5587, SUB 6  
 DOCKET NO. SP-5587, SUB 7  
 DOCKET NO. SP-5587, SUB 8  
 DOCKET NO. SP-5587, SUB 9  
 DOCKET NO. SP-5587, SUB 10  
 DOCKET NO. SP-5587, SUB 11  
 DOCKET NO. SP-5587, SUB 12  
 DOCKET NO. SP-5661, SUB 0  
 DOCKET NO. SP-6951, SUB 0  
 DOCKET NO. SP-6994, SUB 0  
 DOCKET NO. SP-7759, SUB 0  
 DOCKET NO. SP-7964, SUB 0  
 DOCKET NO. SP-8045, SUB 0

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of	)	
Revocation of Registration of Renewable	)	ORDER REVOKING REGISTRATION
Energy Facilities and New Renewable	)	OF RENEWABLE ENERGY
Energy Facilities Pursuant to	)	FACILITIES AND NEW RENEWABLE
Rule R8-66(f) – 2017	)	ENERGY FACILITIES

BY THE COMMISSION: On August 30, 2017, the Commission issued an Order giving notice of its intent to revoke the registration of 176 new and renewable energy facilities because their owners had not completed or filed the annual certification required each April 1 as detailed in Commission Rule R8-66(b)(9). According to Commission records, and records maintained in North Carolina Renewable Energy Tracking System (NC-RETS), the owners of the 59 new and renewable energy facilities listed in Appendices A and B did not complete their annual certification on or before October 1, 2017, as required by the Commission’s August 30, 2016 Order, nor has an annual certification been completed for these facilities as of the date of this Order.

The Commission, therefore, finds good cause to revoke the registration for the 59 facilities listed in Appendices A and B effective October 1, 2017.

IT IS, THEREFORE, ORDERED as follows:

1. That the registration previously approved by the Commission for the 59 facilities listed in Appendices A and B shall be, and are hereby, revoked effective October 1, 2017;

2. That the NC-RETS Administrator shall not allow the owners of the facilities listed in Appendices A and B to establish those facilities as “projects” in NC-RETS;

3. That the NC-RETS Administrator shall not allow any NC-RETS account holder to import from the facilities listed in Appendices A and B renewable energy certificates (RECs) that are dated October 1, 2017 or later;

4. That any RECs dated October 1, 2017 or later earned by one of the facilities listed in Appendices A and B whose registration has been revoked pursuant to this Order are ineligible to be used by an electric power supplier for compliance with the Renewable Energy and Energy Efficiency Portfolio Standard;

5. That in the future, should the owner of a facility whose registration has been revoked pursuant to this Order wish to have the energy output from its facility become eligible for compliance with the Renewable Energy and Energy Efficiency Portfolio Standard, the owner must again register the facility with the Commission;

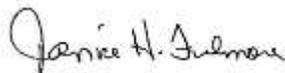
6. That the NC-RETS Administrator shall post a copy of this Order on the home page of the NC-RETS web site; and

7. That the Chief Clerk shall serve a copy of this Order on all of the parties in Docket No. E-100, Sub 113.

ISSUED BY ORDER OF THE COMMISSION.

This the 25<sup>th</sup> day of October, 2017.

NORTH CAROLINA UTILITIES COMMISSION



Janice H. Fulmore, Deputy Clerk

Revocation of Registered Facilities  
*(NC-RETS Participants)*

<b>Docket Number</b>	<b>Facility Owner</b>	<b>State</b>
RET-23, SUB 0	CMG, INC.	NC
SP-1240, SUB 0	AGPower, LLC	NC

Revocation of Registered Facilities (Non NC-RETS Participants)		
Docket Number	Facility Owner	State
EMP-33, Sub 0	Smoky Hills Wind Project II, LLC	KS
EMP-39, Sub 0	Smoky Hills Wind Farm, LLC	KS
EMP-43, Sub 0	Moraine Wind II, LLC	MN
EMP-44, Sub 0	Moraine Wind, LLC	MN
EMP-45, Sub 0	MinnDakota Wind, LLC	MN
RET-8, Sub 5	FLS Owner II, LLC	NC
RET-8, Sub 10	FLS Owner II, LLC	NC
SP-299, Sub 1	Mary Bennett	NC
SP-432, Sub 3	Madison County Public Schools	NC
SP-432, Sub 4	Madison County Public Schools	NC
SP-634, Sub 1	Bend of Ivy Lodge	NC
SP-898, Sub 1	Shree Dutt Sai, LLC	NC
SP-1568, Sub 0	Plymouth Solar, LLC	NC
SP-1768, Sub 0	Water & Sewer Authority of Cabarrus County	NC
SP-2068, Sub 1	All States Medical Supply, Inc.	NC
SP-2142, Sub 0	Mill Solar I, LLC	NC
SP-2942, Sub 1	Louisburg Solar, LLC	NC
SP-3062, Sub 0	Coastal Beverage Company, Inc.	NC
SP-3189, Sub 1	Windsor Cooper Hill Solar, LLC	NC
SP-3214, Sub 0	Westside Solar Farm, LLC	NC
SP-3548, Sub 0	Hemlock Solar, LLC	NC
SP-3690, Sub 0	Innovative Solar 68, LLC	NC
SP-3816, Sub 0	American Proteins, Inc.	NC
SP-3880, Sub 0	Estes Express Lines, Inc.	NC
SP-4001, Sub 1	Harvest Solar 1, LLC	NC
SP-4420, Sub 0	Red Toad 4188 Cleveland Rd, LLC	NC
SP-4747, SUB 0	Unadilla Solar, LLC	GA
SP-5013, Sub 0	Willard Keith Oneal	NC
SP-5031, Sub 0	Gantts Grove Church Road, LLC	NC
SP-5095, Sub 0	Landmark Solar Farm, LLC	NC
SP-5098, Sub 0	Shine Solar, LLC	NC
SP-5138, Sub 0	Mark Mautner	NC
SP-5145, Sub 0	Country Oak Solar Farm, LLC	NC
SP-5272, Sub 0	Sunflower Solar, LLC	NC
SP-5306, Sub 0	Red Toad 243 Mort Harris Rd	NC
SP-5375, Sub 0	Innovative Solar 49, LLC	NC

SP-5410, Sub 0	Innovative Solar 32, LLC	NC
SP-5474, Sub 0	Broadway Road Solar, LLC	NC
SP-5587, SUB 0	San Jose Unified School District	CA
SP-5587, SUB 1	San Jose Unified School District	CA
SP-5587, SUB 2	San Jose Unified School District	CA
SP-5587, SUB 3	San Jose Unified School District	CA
SP-5587, SUB 4	San Jose Unified School District	CA
SP-5587, SUB 5	San Jose Unified School District	CA
SP-5587, SUB 6	San Jose Unified School District	CA
SP-5587, SUB 7	San Jose Unified School District	CA
SP-5587, SUB 8	San Jose Unified School District	CA
SP-5587, SUB 9	San Jose Unified School District	CA
SP-5587, SUB 10	San Jose Unified School District	CA
SP-5587, SUB 11	San Jose Unified School District	CA
SP-5587, SUB 12	San Jose Unified School District	CA
SP-5661, Sub 0	234 Williamston WF Solar I, LLC	NC
SP-6951, Sub 0	Discovery Solar, LLC	NC
SP-6994, Sub 0	Charlotte Latin Schools, Inc.	NC
SP-7759, Sub 0	Legion Solar, LLC	NC
SP-7964, Sub 0	Seven Bridges Solar, LLC	NC
SP-8045, Sub 0	CB Bladen Solar II, LLC	NC

**STATE OF NORTH CAROLINA  
UTILITIES COMMISSION  
RALEIGH**

DOCKET NO. E-100, SUB 130

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of  
Revocation of Registration of Renewable Energy Facilities and New Renewable Energy Facilities Pursuant to Rule R8-66(f) - 2018 ) ORDER GIVING NOTICE OF INTENT TO REVOKE REGISTRATION OF RENEWABLE ENERGY FACILITIES AND NEW RENEWABLE ENERGY FACILITIES

BY THE COMMISSION: Pursuant to Commission Rule R8-66(b), for renewable energy certificates (RECs) earned by a renewable energy facility or new renewable energy facility to be eligible for use by an electric power supplier for compliance with the Renewable Energy and Energy Efficiency Portfolio Standard (REPS), the owner of the facility shall register it with the Commission as a renewable energy facility or new renewable energy facility and thereafter file an annual certification of compliance with the conditions of continuation of the registration. Each Commission order approving the registration of a renewable energy facility or new renewable energy facility states that the owner of the facility shall annually file the information required by Commission Rule R8-66 on or before April 1 of each year. Specifically, Commission Rule R8-66(b)(9) states that annual certifications are due April 1 of each year, and that owners of facilities that are registered as projects in the North Carolina Renewable Energy Tracking System (NC-RETS) may complete their annual certification electronically via the NC-RETS system. Pursuant to Commission Rule R8-66(f), failure to file an annual certification may result in the revocation of a facility's registration.

According to records maintained in NC-RETS, 8 renewable energy facilities and/or new renewable energy facilities registered in NC-RETS (listed in Appendix A of this Order) have not completed the on-line annual certification that was due April 1, 2018. In addition, 129 renewable energy facilities and/or new renewable energy facilities that are registered with the Commission, but that are not registered as projects in NC-RETS (listed in Appendix B of this Order) have not filed with the Commission the annual certification that was due April 1, 2018.

The Commission, therefore, finds good cause to notice its intent to revoke, as of October 1, 2018, the registration of any facility listed in Appendix A of this Order, unless the owner of the facility completes the on-line certification on or before that date. Further, the Commission finds good cause to notice its intent to revoke, as of October 1, 2018, the registration of any facility listed in Appendix B of this Order, unless the owner of the facility files the verified certification required by Rule R8-66(b) (attached as Appendix C of this Order) on or before that date. Finally, the Commission

concludes that it is appropriate to waive the 2018 annual certification requirement in Rule R8-66(b) for recently-registered facilities that received orders accepting a registration statement after January 1, 2018.

IT IS, THEREFORE, ORDERED as follows:

1. That the Commission shall issue orders revoking the registration of any renewable energy facilities and/or new renewable energy facilities listed in Appendix A as of October 1, 2018, unless the owner of the facility completes the on-line certification required by Rule R8-66(b) on or before that date;

2. That the Commission shall issue orders revoking the registration of any renewable energy facility and/or new renewable energy facility listed in Appendix B as of October 1, 2018, unless the owner of the facility files the verified certification required by Rule R8-66(b) (attached as Appendix C of this Order) on or before that date;

3. That the NC-RETS Administrator shall not import any RECs from a renewable energy facility or new renewable energy facility listed in Appendix B until the owner of the facility has filed with the Commission the certification required by Rule R8-66(b) and this Order;

4. That the Chief Clerk shall serve a copy of this Order on the owner of each facility listed in Appendices A and B by certified mail, return receipt requested;

5. That the Chief Clerk shall distribute a copy of this Order to all of the parties in Docket No. E-100, Sub 113.; and

6. That the Chief Clerk shall transmit a copy of this Order to the NC-RETS Administrator.

ISSUED BY ORDER OF THE COMMISSION.

This the 7<sup>th</sup> day of August, 2018.

NORTH CAROLINA UTILITIES COMMISSION



Janice H. Fulmore, Deputy Clerk

<b>Registered Facilities Pending Revocation (NC-RETS Participants)</b>		
<b>Docket Number</b>	<b>Facility Owner</b>	<b>State</b>
SP-1330 Sub 0	Lemuel D. Black	NC
SP-5 Sub 1	Cox Lake Hydro	NC
SP-523 Sub 1	Chapel Hill Tire	NC
SP-1015 Sub 1	Commonwealth Brands, Inc.	NC
SP-4929 Sub 0	Dave Minnich	NC
SP-1084 Sub 0	Dixon Dairy Road, LLC	NC
SP-1156 Sub 0	GE Aviation	NC
SP-3277, Sub 1	McFarland Septic, LLC	NC

<b>Registered Facilities Pending Revocation (Non NC-RETS Participants)</b>		
<b>Docket Number</b>	<b>Facility Owner</b>	<b>State</b>
SP-782, Sub 0	Solar Star California II, LLC	CA
SP-782, Sub 1	Solar Star California II, LLC	CA
SP-782, Sub 2	Solar Star California II, LLC	CA
SP-782, Sub 3	Solar Star California II, LLC	CA
E-22 Sub 489	Dominion Energy North Carolina	NC
EMP-17, Sub 0	Capricorn Ridge Wind, LLC	TX
EMP-30, Sub 0	Story Wind, LLC	IA
EMP-61, Sub 0	Pantego Wind Energy, LLC	NC
EMP-95, Sub 0	Bobcat Bluff Wind Project, LLC	TX
EMP-96, Sub 0	TX Hereford Wind Project, LLC	TX
EMP-97, Sub 0	Longhorn Wind Project, LLC	TX
RET-5, Sub 0	FLS YK Farm, LLC	NC
RET-27, Sub 0	Gaston County Schools	NC
SP-161, Sub 0	Coastal Carolina Clean Power, LLC	NC
SP-481, Sub 1	Raylen Vineyards, Inc.	NC
SP-833, Sub 0	Tony Smith	NC
SP-833, Sub 1	Tony Smith	NC
SP-1210 sub 1	Concepts by Gary, LLC	NC
SP-1324, Sub 0	Norman Fortier	NC
SP-1336, Sub 0	Raymond Wisniewski	NC
SP-1377, Sub 0	FLS Solar 60, LLC	NC
SP-1536, Sub 0	Sunrise NC Daughter, LLC	NC
SP-1537, Sub 0	Sunrise NC RKAN Lessee, LLC	NC
SP-1540, Sub 0	Sunrise NC 1 Martin Lessee, LLC	NC
SP-1541, Sub 0	Sunrise NC Alexander Lessee, LLC	NC
SP-1542, Sub 0	Sunrise NC Shields Lessee, LLC	NC
SP-1543, Sub 0	Sunrise NC Hindsman Lessee, LLC	NC
SP-1562, Sub 0	Blue Mountain Biogas, LLC	NC
SP-2364, Sub 0	Onslow Energy, LLC	NC
SP-2446, Sub 1	Green Creek Vineyards, LLC	NC
SP-2665, Sub 29	Fresh Air Energy II, LLC	NC
SP-2665, Sub 32	Fresh Air Energy II, LLC	NC
SP-2665, Sub 36	Fresh Air Energy II, LLC	NC

SP-2811, Sub 0	Mark and Janet Hosey	NC
SP-2894, Sub 1	Greenville Farm 2, LLC	NC
SP-2910, Sub 2	SolNCPower 1, LLC	NC
SP-3116, Sub 1	Wayne Cooley	NC
SP-3167, Sub 0	Woodland 258 Farm, LLC	NC
SP-3190, Sub 1	Bethel Price Solar, LLC	NC
SP-3511, Sub 0	TWE Kelford Solar Project, LLC	NC
SP-3557, Sub 0	Fresh Air Energy XI, LLC	NC
SP-3687, Sub 0	Innovative Solar 53, LLC	NC
SP-3701, Sub 0	Mount Olive I, LLC	NC
SP-3704, Sub 0	Clayton Byer	NC
SP-3717, Sub 0	SOLNCPower5, LLC	NC
SP-4092, Sub 0	Wilkesboro Hydropower, LLC	NC
SP-4293, Sub 0	Amigo Farm, LLC	NC
SP-4421, Sub 0	Red Toad 5840 Buffalo Road, LLC	NC
SP-4443, Sub 0	McDougald Solar, LLC	NC
SP-4446, Sub 0	Warrenton Solar 1, LLC	NC
SP-4463, Sub 0	Staley Solar, LLC	NC
SP-4624, Sub 0	Fresh Air Energy XXI, LLC	NC
SP-4625, Sub 0	Fresh Air energy XXII, LLC	NC
SP-4776, Sub 0	SunE Bearpond Lessee, LLC	NC
SP-4796, Sub 0	SunE Shankle Lessee, LLC	NC
SP-4891, Sub 0	Fresh Air Energy XXIII, LLC	NC
SP-4892, Sub 0	Fresh Air Energy XXIV, LLC	NC
SP-4893, Sub 0	Fresh Air Energy XXV, LLC	NC
SP-4894, Sub 0	Fresh Air Energy XXIX, LLC	NC
SP-4895, Sub 0	Fresh Air Energy XXXI, LLC	NC
SP-4896, Sub 0	Fresh Air Energy XXXII, LLC	NC
SP-4897, Sub 0	Fresh Air Energy XXXII, LLC	NC
SP-4900, Sub 0	Fresh Air Energy XXXVII, LLC	NC
SP-4901, sub 0	Fresh Air Energy XXXVIII, LLC	NC
SP-4927, Sub 0	Daniela & Thomas Doyle	NC
SP-5002, Sub 0	Upper Piedmont Renewables, LLC	NC
SP-5003, Sub 0	Foothills Renewables, LLC	NC
SP-5039, sub 0	Signature Solar, LLC	NC
SP-5043, Sub 0	Anna Solar, LLC	NC
SP-5044, Sub 0	Sadie Solar, LLC	NC

SP-5052, Sub 0	Hawk Solar, LLC	NC
SP-5053, Sub 0	Cardinal Solar, LLC	NC
SP-5056, Sub 0	Bonnie Solar, LLC	NC
SP-5057, Sub 0	Jordan Solar, LLC	NC
SP-5058, Sub 0	Clayton Solar, LLC	NC
SP-5075, Sub 0	Carter Solar, LLC	NC
SP-5077, Sub 0	Christina Solar, LLC	NC
SP-5098, Sub 1	Shine Solar I, LLC	NC
SP-5099, Sub 0	Clear Solar I, LLC	NC
SP-5100, Sub 0	Fire Solar I, LLC	NC
SP-5108, Sub 0	Doug Stuber	NC
SP-5154, Sub 0	Rowan Solar, LLC	NC
SP-5195, Sub 0	Red Toad Powhatan Phase 2, LLC	NC
SP-5235, Sub 0	Sanchez 18 Solar, LLC	NC
SP-5252, Sub 0	Belafonte Farm, LLC	NC
SP-5253, Sub 0	Henry Farm, LLC	NC
SP-5255, Sub 0	C & S Solar, LLC	NC
SP-5269, Sub 0	Shakespeare Solar, LLC	NC
SP-5392, Sub 0	Wilson Solar Farm 4, LLC	NC
SP-6372, Sub 1	Enerparc, Inc.	NC
SP-6372, Sub 4	Enerparc, Inc.	NC
SP-6529, Sub 0	ESA Marshville, LLC	NC
SP-6832, Sub 0	HCE Moore II, LLC	NC
SP-6842, Sub 0	Heights Solar Farm, LLC	NC
SP-7190, Sub 0	Whiteville Solar 2, LLC	NC
SP-7200, Sub 0	Lucky Clays Farm & Forestry, LLC	NC
SP-7460, Sub 0	ESA Sherrills Ford, LLC	NC
SP-7687, Sub 0	Greensboro Ecosystems, LLC	NC
SP-7712, Sub 0	Summerset Farms Solar, LLC	NC
SP-7729, Sub 0	U.S. Ecogen Polk, LLC	NC
SP-7817, Sub 0	Black Bear Solar, LLC	NC
SP-7986, Sub 0	Princeville Solar, LLC	NC
SP-8013, Sub 0	Territorial Solar Farm, LLC	NC
SP-8023, Sub 0	Freedom Solar, LLC	NC
SP-8046, Sub 1	Ridgeback Solar, LLC	NC
SP-8166, Sub 0	Longneck Solar, LLC	NC
SP-8191, Sub 0	Gamble Solar, LLC	NC

SP-8203, Sub 0	C&C Solar, LLC	NC
SP-8254, Sub 0	Sun Farm VIII, LLC	NC
SP-8272, Sub 0	Badger Hill Solar, LLC	NC
SP-8328, Sub 0	Harmony Solar, LLC	NC
SP-8329, Sub 0	Hollingsworth Solar, LLC	NC
SP-8333, Sub 0	Rose Solar, LLC	NC
SP-8356, Sub 0	Varken Bioenergy, LLC	NC
SP-8469, Sub 0	ESA Solar Farm NC, LLC	NC
SP-8545, Sub 0	ESA Wilson Solar, LLC	NC
SP-8563, Sub 0	Breeden Solar, LLC	NC
SP-8564, Sub 0	Mount Moriah Solar, LLC	NC
SP-8566, Sub 0	Osborne Solar, LLC	NC
SP-8567, Sub 0	Peacock Solar, LLC	NC
SP-8600, Sub 0	ESA Sun Farming, LLC	NC
SP-8624, Sub 0	Elkin Solar, LLC	NC
SP-8638, Sub 0	Taylor Solar, LLC	NC
SP-8692, Sub 0	AGA TAG Solar I, LLC	NC
SP-8845, Sub 0	Gastonia Solar Center, LLC	NC
SP-8921, Sub 1	Stacy Pontarollo	NC
SP-8974, Sub 0	Lewis Solar, LLC	NC
SP-9097, Sub 0	Bluetick Solar, LLC	NC
SP-9494 Sub 0	Storm Energy North Carolina, LLC	NC

## Annual Certification of Compliance with the Requirements of Commission Rule R8-66 for the Continuation of the Registration of a Renewable Energy Facility or New Renewable Energy Facility.

Docket No. \_\_\_\_\_ - \_\_\_\_\_

Facility Owner: \_\_\_\_\_

<input type="checkbox"/> YES	<input type="checkbox"/> NO	I certify that the facility is in substantial compliance with all federal and state laws, regulations, and rules for the protection of the environment and conservation of natural resources.
<input type="checkbox"/> YES	<input type="checkbox"/> NO	I certify that the facility satisfies the requirements of G.S. 62-133.8(a)(5) or (7) as a (select one) <input style="width: 200px;" type="text" value="Renewable Energy Facility"/>  and that the facility will be operated as a (select one): <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px auto;">Renewable Energy Facility</div> To determine whether your facility meets either of these definitions, you should check your registration order or consult your legal counsel.
<input type="checkbox"/> YES	<input type="checkbox"/> NO	I certify that 1) my organization is not simultaneously under contract with NC GreenPower to sell our RECs emanating from the same electricity production being tracked in NC-RETS; and 2) any renewable energy certificates (whether or not bundled with electric power) sold to an electric power supplier to comply with G.S. 62-133.8 have not, and will not, be remarketed or otherwise resold for any other purpose, including another renewable energy portfolio standard or voluntary purchase of renewable energy certificates in North Carolina (such as NC GreenPower) or any other state or country, and that the electric power associated with the certificates will not be offered or sold with any representation that the power is bundled with renewable energy certificates.
<input type="checkbox"/> YES	<input type="checkbox"/> NO	I certify that I consent to the auditing of my organization's books and records by the Public Staff insofar as those records relate to transactions with North Carolina electric power suppliers, and agree to provide the Public Staff and the Commission access to our books and records, wherever they are located, and to the facility.
<input type="checkbox"/> YES	<input type="checkbox"/> NO	I certify that I am the owner of the renewable energy facility or am duly authorized to act on behalf of the owner for the purpose of this filing.

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Title)

\_\_\_\_\_  
(Name - Printed or Typed)

\_\_\_\_\_  
(Date)

**VERIFICATION**

STATE OF \_\_\_\_\_ COUNTY OF \_\_\_\_\_

\_\_\_\_\_, personally appeared before me this day and, being first duly sworn, says that the facts stated in the foregoing certification and any exhibits, documents, and statements thereto attached are true as he or she believes.

WITNESS my hand and notarial seal, this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

My Commission Expires: \_\_\_\_\_

\_\_\_\_\_  
Signature of Notary Public

\_\_\_\_\_  
Name of Notary Public – Typed or Printed

The name of the person who completes and signs the certification must be typed or printed by the notary in the space provided in the verification. The notary's name must be typed or printed below the notary's seal. This original verification must be affixed to the original certification, and a copy of this verification must be affixed to each of the 15 copies that are also submitted to the Commission at:

Chief Clerk's Office  
North Carolina Utilities Commission  
4325 Mail Service Center  
Raleigh, North Carolina 27699-4300