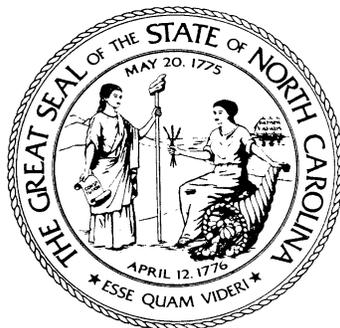


**ANNUAL REPORT REGARDING
RENEWABLE ENERGY AND ENERGY EFFICIENCY
PORTFOLIO STANDARD IN NORTH CAROLINA
REQUIRED PURSUANT TO N.C.G.S. § 62-133.8(j)**

DATE DUE: OCTOBER 1, 2019

SUBMITTED: OCTOBER 1, 2019

**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

In August 2007, North Carolina enacted legislation, Session Law 2007-397 (Senate Bill 3), that, 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; 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(a)(5), electric power suppliers may employ the services of a utility compliance aggregator to assist it in demonstrating its compliance with the REPS through, among other things, the filing of REPS compliance plans or reports and participating in NC - RETS on behalf of an electric power supplier. Pursuant to Commission Rule R8-67(b), on or before September 1 of each year, each electric power supplier, or its utility compliance aggregator, 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, or its utility compliance aggregator, 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 2018 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) update reports. Since the Commission's 2018 report, the Commission has also issued orders approving REPS compliance reports and accepting REPS compliance plans filed by NCEMC, EnergyUnited, TVA, Halifax EMC, NCEMPA, NCMPA1, FPWC, and the Town of Waynesville. NTE Carolinas, LLC (NTE), has applied for authorization to serve as a utility compliance aggregator for the Towns of Black Creek, Lucama, Sharpsburg, Stantonsburg, and Winterville as well as the Cities of Concord and Kings Mountain.(NTE Municipalities). NTE requested and was granted until November 1, 2019, to file its 2018 REPS compliance report and 2019 REPS compliance plan.

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 2018 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).

2019 Legislation

In 2019, 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 2018 report to the General Assembly:

- On October 8, 2018, 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 2018, but would not be able to comply. As to the swine waste set-aside requirement, the Commission noted that DEC, DEP, and Dominion are in a position to meet a modified swine waste set-aside requirement of 0.02% of prior year's retail sales even though the other electric power suppliers in the state are not in a similar position. The Commission also concluded that it is in the public interest to delay entirely the 2018 swine waste set-aside requirements for one additional year, for the remaining electric power suppliers and to delay future increases in the swine waste set-aside requirement. The Commission allowed electric power suppliers that have acquired swine waste RECs for 2018 REPS compliance to bank such RECs for swine waste set-aside 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 and projects have experienced operational challenges. While no party presented evidence that the aggregate 2018 poultry waste set-aside of 700,000 MWh could be met, the parties agree that a modified compliance requirement of 300,000 MWh for 2018, 700,000 MWh for 2019, and 900,000 MWh for 2020 is achievable. Therefore, the Commission concluded that the poultry waste set-aside requirement should be modified accordingly.

The Order resulted in the following updated compliance schedules for the swine waste set-asides REPS requirements:

For Electric Public Utilities:

Calendar Year	Requirement for Swine Waste Resources
2018	0.02%
2019-2020	0.07%

2021-2023	0.14%
2024 and thereafter	0.20%

For EMC’s and Municipalities:

Calendar Year	Requirement for Swine Waste Resources
2018	0.00%
2019-2020	0.07%
2021-2023	0.14%
2024 and thereafter	0.20%

The Order resulted in the following updated compliance schedules for the poultry waste set-asides REPS requirements:

Calendar Year	Requirement for Poultry Waste Resources
2018	300,000 MWh
2019	700,000 MWh
2020 and thereafter	900,000 MWh

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 reports of proposed construction and registration of renewable energy facilities and new renewable energy facilities. As of July 31, 2019, the Commission has accepted registration statements filed by 1445 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>.

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. 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. On October 1, 2018, the Commission issued an Order Denying Motions for Reconsideration and Granting in Part Motion for Clarification (Reconsideration Order). That order denied the motions for reconsideration filed by NCPA and Piedmont. Further, it granted Piedmont's request to revise Appendix F: (1) to modify the timing of the filing of the semi-annual report required in Ordering Paragraph No. 9 of the Appendix F Order, and (2) to make Piedmont rather than the Alternative Gas suppliers responsible for measuring and reporting to the Commission on a monthly basis the daily quantities, heat content, and Wobbe value of the Alternative Gas received by Piedmont.

In addition, since the 2018 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 30, 2018, the Commission issued an Order revoking the registrations of 36 facilities registered with the Commission as renewable energy facilities or as new renewable energy facilities. The owners of the 36 facilities did not complete their annual certifications on or before October 1, 2017, as required by the Commission's August 7, 2018 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 September 4, 2019, the Commission issued an Order giving notice of its intent to revoke the registration of nine renewable energy facilities and 78 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 5, 2019, 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 2010-2018 REPS solar set-aside requirements, the 2018 poultry waste set-aside requirement, and the 2012-2018 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

DEC continues to meet the REPS requirements for Rutherford EMC; Blue Ridge EMC; and the towns of Dallas, Forest City, and Highlands. 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 NCEMC for REPS compliance.

Conclusions

All of the electric power suppliers have met or appear to have met the 2012-2018 general REPS requirements and appear on track to meet the 2019 general REPS requirements. All of the electric power suppliers have met the 2012-2018 solar set-aside requirements and appear to be on track to meet the 2019 solar set-aside requirement. The Commission granted a joint motion to delay implementation of the 2018 swine waste set-aside requirement for one year - except for the electric public utilities – requiring them to meet a 0.02% swine waste set-aside for 2018. The electric public utilities met the 0.02% swine waste set-aside for 2018. Most electric power suppliers have indicated that they will have difficulty meeting the swine waste set-aside requirements for 2019 and that they will request a modification in these requirements for 2019, as well as a delay in future increases in these requirements. Electric power suppliers cite the lack of technological progress for power production from swine waste and failure of counter parties to deliver RECs as anticipated as impediments to meeting future swine waste set-aside requirements.

BACKGROUND

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 use of 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.¹

On October 1, 2008, the Commission made its first annual report pursuant to N.C.G.S. § 62-133.8(j),² and last year, on October 1, 2018, the Commission made its

¹ 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.

² 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).

eleventh annual report.³ 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.

2019 LEGISLATION

In 2019, the General Assembly did not pass any legislation amending the REPS.

COMMISSION IMPLEMENTATION

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 2018 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.

³ Annual Report of the North Carolina Utilities Commission to 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 Regarding Renewable Energy and Energy Efficiency Portfolio Standard, October 1, 2018 (2018 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.

- 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.
- 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 Engage in Business as an Electric Generator Lessor; Transfers; and Notice (Docket No. E-100, Sub 156).
- The Commission found good cause to adopt various administrative, technical, and conforming amendments to the Commission's rules to continue implementation of S.L. 2017-192. The Commission further found good cause to adopt revised forms 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.
- 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.

Since the October 1, 2018 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 8, 2018)

On September 7, 2018, DEC, DEP, Dominion, NCEMP, FPWC, EnergyUnited, Halifax EMC, TVA, the Town of Waynesville, the Town of Windsor, NCEMPA and NCMPA1 (Joint Movants) filed a motion to modify and delay the 2018 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 modify the obligation of DEC, DEP and Dominion to comply with the swine waste set-aside requirement by lowering the 2018 compliance requirement to 0.02% of prior-year retail sales, shifting the increase to 0.07% to begin in calendar year 2019; delaying the subsequent increases in compliance requirements by one year; and delaying all other electric suppliers' need to comply with the requirements by one year until 2019. As to the poultry waste set-aside requirement, Joint Movants requested that the Commission modify all electric suppliers' obligation to comply with the requirements by lowering the 2018 statewide compliance requirement to 300,000 MWh and shifting the increase to 700,000 MWh and 900,000 MWh to calendar years 2019 and 2020, respectively. The Joint Movants state that they have individually and collectively made reasonable efforts to comply with the REPS components for swine and poultry waste. On September 13, 2018, the Commission issued an Order Requesting Comments. Between September 27, 2018, and September 28, 2018, NC WARN, NCSEA, the North Carolina Poultry Federation (NCPF), the North Carolina Pork Council (NCPC), and the Public Staff filed comments on Joint Movants' motion.

On October 8, 2018, 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 meet the swine and poultry waste set-aside REPS requirements in 2018, but would not be able to comply. As to the swine waste set-aside requirement, the Commission noted that DEC, DEP, and Dominion are in a position to meet a modified swine waste set-aside requirement of 0.02% of the prior year's retail sales even though the other electric power suppliers in the state are not in a similar position. The Commission also concluded that it is in the public interest to delay entirely the 2018 swine waste set-aside requirements for one additional year, for the remaining electric power suppliers and to delay future increases in the swine waste set-aside requirement. The Commission allowed electric power suppliers that have acquired swine waste RECs for 2018 REPS compliance to bank such RECs for swine waste set-aside 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 and projects have experienced operational challenges. No party presented evidence that the aggregate 2018 poultry waste set-aside of 700,000 MWh could be met; however, the parties agree that a modified compliance requirement of 300,000 MWh for 2018, 700,000 MWh for 2019, and 900,000 MWh for 2020 is achievable. Therefore, the Commission concluded that the poultry waste set-aside requirement should be modified accordingly.

The Order resulted in the following updated compliance schedules for the swine waste set-asides REPS requirements:

For Electric Public Utilities:

Calendar Year	Requirement for Swine Waste Resources
2018	0.02%
2019-2020	0.07%
2021-2023	0.14%
2024 and thereafter	0.20%

For EMC's and Municipalities:

Calendar Year	Requirement for Swine Waste Resources
2018	0.00%
2019-2020	0.07%
2020-2023	0.14%
2024 and thereafter	0.20%

The Order resulted in the following updated compliance schedules for the poultry waste set-asides REPS requirements:

Calendar Year	Requirement for Poultry Waste Resources
2018	300,000 MWh
2019	700,000 MWh
2020 and thereafter	900,000 MWh

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 July 31, 2019, the Commission has accepted registration statements filed by 1445 facilities.

As detailed in the 2018 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_{AC} Directed Biogas-fueled combined heat and power (CHP) facility and a 1.6-MW_{AC} 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. An Errata Order was issued reducing the number of revocations to 61 facilities.
- 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. Additional Orders were issued which reduced the number of revocations to 107.

- 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 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.
- 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. On October 1, 2018, the Commission issued an Order Denying Motions for Reconsideration and Granting in Part Motion for Clarification (Reconsideration Order). That order denied the motions for reconsideration filed by NCPC and Piedmont. Further, it granted Piedmont's request to revise Appendix F: (1) to modify the timing of the filing of the semi-annual report required in Ordering Paragraph No. 9 of the Appendix F Order, and (2) to make Piedmont rather than the Alternative Gas suppliers responsible for measuring and reporting to the Commission on a monthly basis the daily quantities, heat content, and Wobbe value of the Alternative Gas received by Piedmont.

Since the October 1, 2018 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 30, 2018).

On October 30, 2018, the Commission issued an Order revoking the registrations of 36 facilities registered with the Commission as renewable energy facilities or as new renewable energy facilities. The owners of the 36 facilities did not complete their annual certifications on or before October 1, 2017, as required by the Commission's August 7, 2018 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 (September 4, 2019).

On September 4, 2019, the Commission issued an Order giving notice of its intent to revoke the registration of nine renewable energy facilities and 78 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 5, 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 Denying Motions for Reconsideration and Granting in Part Motion for Clarification, Docket No. G-9, Sub 698 (October 1, 2018).

On October 1, 2018, the Commission issued an Order Denying Motions for Reconsideration and Granting in Part Motion for Clarification (Reconsideration Order). That order denied the motions for reconsideration filed by (NCPC) and Piedmont. Further, it granted Piedmont's request to revise Appendix F: (1) to modify the timing of the filing of the semi-annual report required in Ordering Paragraph No. 9 of the Appendix F Order, and (2) to make Piedmont rather than the Alternative Gas suppliers responsible for measuring and reporting to the Commission on a monthly basis the daily quantities, heat content, and Wobbe value of the Alternative Gas received by Piedmont.

On October 30, 2018, the Commission issued an Order Accepting Compliance Filing in Part and Requiring Revisions. The order revised the Interchangeability standard in Appendix F, required modifications to Appendix F and improved

notifications to the Commission when Alternative Gas Quality Standards are out of compliance with Appendix F.

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 2018, each electric power supplier was required to place the RECs that it acquired to meet its 2018 REPS requirements into compliance accounts where the RECs are available for audit. The Commission will review each electric power suppliers’ 2018 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. 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, 2018, NC - RETS had issued 64,678,595 RECs and 28,544,727 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, 2019, 552 organizations, including electric power suppliers and owners of renewable energy facilities, had established accounts in NC - RETS.
- As of September 1, 2019, approximately 1188 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

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.⁴

Duke Energy Progress, LLC (DEP)

Compliance Report

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 new REPS rates, if approved, will result in increases in the current REPS rates (including regulatory fee), as follows: \$0.87 per month for the residential customers; \$1.54 per month for general service/lighting customers; and \$14.46 per month for industrial customers. In its 2017 REPS compliance report, DEP indicates that it acquired sufficient 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

⁴ 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.

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. On November 8, 2018, the Commission issued an order allowing DEP's proposed REPS rider charges to become effective December 1, 2018. In addition, the Commission found that DEP complied with the 2017 REPS requirements, including the solar set-aside requirements and the poultry waste set-aside requirements, for itself and for the wholesale customers for whom DEP provides REPS compliance services. Therefore, the Commission approved DEP's 2017 REPS compliance report and ordered that the RECs in DEP's 2017 compliance sub-account and the sub-accounts of those wholesale customers be retired.

On June 11, 2019, in Docket No. E-2, Sub 1205, DEP filed its 2018 REPS compliance report and application for approval of its 2019 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, 2019: \$1.45 per month for residential customers; \$8.25 per month for general service/lighting customers; and \$59.58 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, would result in increases in monthly REPS charges, including regulatory fee, as follows: \$0.03 for residential customers; \$0.29 for general service/lighting customers; and a decrease including regulatory fee of \$13.59 for industrial customers. In its 2018 REPS compliance report, DEP indicates that it acquired sufficient RECs to meet the 2018 requirement of 10% of its 2017 retail sales. Additionally, DEP indicates that it acquired sufficient solar RECs to meet the 2018 requirement of 0.20% of its 2017 retail sales. DEP also indicates that it was able to meet the revised poultry waste set-aside requirement in 2018. Pursuant to the Commission's October 8, 2018 Order in Docket No. E-100, Sub 113, DEP's swine waste set-aside requirement was modified to 0.02% of prior year's sales for 2018. DEP indicates that it met the modified swine waste set-aside requirement. DEP's 2018 REPS compliance report and application for approval of its 2019 REPS cost recovery rider are pending before the Commission.

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 Integrated Resource Plan (IRP). 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. On February 4, 2019, the Commission held a required public hearing on DEP's 2018 REPS compliance plan and 2018 IRP. On August 27, 2019, the

Commission issued an Order accepting 2018 Integrated Resource Plans, accepting 2018 REPS compliance plans, and accepting DEP's 2018 REPS compliance plan.

On September 3, 2019, in Docket No. E-100, Sub 157, DEP filed its 2019 REPS compliance plan as part of its 2019 IRP Update Report. In its compliance plan, DEP details its REPS compliance obligation for 2019-2021, 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 77,375 RECs in 2019, and estimates its solar set-aside requirements to be 75,930 RECs in 2020 and 76,250 RECs in 2021. DEP states that it has fully satisfied and exceeded the minimum solar set-aside requirements of 0.20% during the 2019-2021 compliance planning period through a combination of power purchase agreements and company-owned facilities.

DEP estimates its swine waste set-aside requirements to be 27,081 RECs in 2019, 26,575 RECs in 2020, and 53,375 RECs in 2021. 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 2019 as existing contracts have not been able to reach contracted levels of production, and new contracts have not come online in the timeframe originally planned. DEP stated its ability to comply in 2020 and 2021 is dependent on whether several swine projects currently scheduled to come online over the next few years are able to achieve projected delivery requirements and commercial operation milestones. Therefore, DEP states that it will file a motion seeking to lower the 2019 compliance requirement and delay subsequent increases to 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 estimates its poultry waste set-aside to be 197,318 RECs in 2019, 253,695 RECs in 2020, and 253,695 in 2021. DEP states that it is in a position to meet its poultry waste set-aside requirements in 2019, but its ability to procure sufficient RECs to meet these requirements in 2020 and 2021 remains uncertain and largely subject to counterparty performance.

DEP notes that one new poultry facility came online in 2018, and another is expected to come online in the third quarter of 2019. However, a third poultry facility is undergoing an outage to perform repairs, and three contracts for out-of-state poultry waste RECs were terminated due to failure to perform or force majeure issues. DEP's ability to comply in 2020 and 2021 is dependent on facilities producing at their contracted levels, and historical experience indicates that facilities usually experience some start-up issues and take time to reach full expected production levels. Ramping up to meet the increased compliance targets for 2020 - 2021 has been problematic because suppliers have either delayed projects or lowered the volume of RECs to be produced. The Company is, nevertheless, encouraged by the growing use of thermal poultry RECs and the proposals that it has recently received from developers. Therefore, DEP will join other electric suppliers in submitting a motion to the Commission requesting a reduction in the 2019 poultry waste set-aside requirements and to delay subsequent increases by one year.

DEP states that its general REPS requirement, net of the set-asides discussed above, is estimated to be 3,566,953 RECs in 2019, 3,440,276 RECs in 2020, and 4,382,286 RECs in 2021. DEP notes several resource options available to the Company to meet its general requirement, including, maximum use of allowable 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 2019 REPS compliance plan is pending before the Commission.

Duke Energy Carolinas, LLC (DEC)

Compliance Report

On February 26, 2019, in Docket No. E-7, Sub 1191, DEC filed its 2018 REPS compliance report and an application for approval of REPS rider charges to be effective September 1, 2019. By its application and testimony, DEC requested monthly REPS rates, not including regulatory fee, of: \$0.87 for residential customers; \$4.64 for general service and lighting customers; and \$4.64 for industrial customers-each of which is below the incremental per-account cost cap established in N.C.G.S. § 62-133.8(h). DEC's proposed new monthly REPS rates, if approved, will result in the following increases to DEC's current monthly REPS rates, not including regulatory fee: \$0.80 for residential customers; \$3.61 for general service and lighting customers; and \$27.71 for industrial customers. In its 2018 REPS

compliance report, DEC indicates that it acquired sufficient RECs to meet the 2018 requirement of 10% of its 2017 retail sales. Additionally, DEC indicates that it acquired sufficient solar RECs to meet the 2018 requirement of 0.20% of its 2017 retail sales and had acquired its pro-rata share of poultry RECs to satisfy the 2018 poultry waste set-aside requirement. Pursuant to the Commission's October 8, 2019 Order in Docket No. E-100, Sub 113, DEC's 2018 swine waste set-aside requirement was modified and set at 0.02% of prior year's sales. DEC met its swine waste set-aside requirement for 2018. On June 11, 2019, the Commission held a hearing on DEC's 2018 REPS compliance report and REPS cost recovery application. On August 15, 2019, the Commission issued an order approving DEC's proposed REPS riders, DEC's 2018 REPS compliance report and retiring the RECs in DEC's 2018 compliance sub account.

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 Integrated Resource Plan (IRP). In its REPS compliance plan, DEC indicates that its overall compliance strategy to meet the REPS requirements consisted of the following key components: (1) submission of applications to pursue reasonable and appropriate renewable energy and energy efficiency initiatives in support of the Company's REPS compliance needs; (2) solicitation, review, and analysis of proposals from renewable energy suppliers offering RECs and diligent pursuit of the most attractive opportunities, as appropriate; and (3) development and implementation of administrative processes to manage the Company's REPS compliance operations, such as procuring and managing renewable resource contracts, accounting for RECs, safely interconnecting renewable energy suppliers, reporting renewable generation to the North Carolina Renewable Energy Tracking System (NC - RETS), and forecasting renewable resource availability and cost in the future. 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. On February 4, 2019, the Commission held a required public hearing on DEC's 2018 REPS compliance plan and 2018 IRP. On August 27, 2019, the Commission issued an Order accepting 2018 Integrated Resource Plans, accepting 2018 REPS compliance plans, and accepting DEC's 2018 REPS compliance plan.

On September 3, 2019, in Docket No. E-100, Sub 157, DEC filed its 2019 REPS compliance plan as part of its 2019 IRP Update Report. In its compliance plan, DEC details its REPS compliance obligation for 2019-2021, 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 124,354 RECs in 2019, and estimates its solar set-aside requirements to be 122,833 RECs in 2020 and 122,887 RECs in 2021. DEC states that it has fully satisfied and exceeded the minimum solar set-aside requirements of 0.20% during the 2019-

2021 compliance planning period through a combination of power purchase agreements and company-owned facilities.

DEC estimates its swine waste set-aside requirements to be 43,524 RECs in 2019, 43,009 RECs in 2020, and 86,021 RECs in 2021. DEC 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. DEC states that it is in a position to comply with its swine waste set-aside requirements in 2019, but, its ability to comply in 2020 and 2021 is dependent on the performance of swine waste-to-energy developers under current contracts, particularly achievement of projected delivery requirements and commercial operation milestones. Therefore, DEC states that it will submit a motion for approval of a request to reduce the 2019 swine waste set-aside compliance requirement and delay subsequent increases 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 2019, but its ability to procure sufficient RECs to meet these requirements in 2020 and 2021 remains uncertain and largely subject to counterparty performance. DEC notes that one new poultry project is scheduled to come online in the third quarter of 2019, but three poultry waste-to-energy facilities that were previously operational were shut down in 2018 to perform plant modifications. While two of the facilities have come back online, and a third is expected back online in late 2019, production will be lower than originally expected. DEC also had to terminate one contract for out-of-state poultry waste RECs due to failure to perform. DEC's ability to comply in 2020 and 2021 is dependent on facilities producing at their contracted levels, and historical experience indicates that facilities usually experience some start-up issues and take time to reach full expected production levels. Ramping up to meet the increased compliance targets for 2020 - 2021 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 5,736,201 RECs in 2019; 5,575,036 RECs in 2020 and 7,001,622 RECs in 2021. DEC notes several resource options available to the Company to meet its general requirement, including, 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. DEC 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 2019 REPS compliance plan is pending before the Commission.

Dominion North Carolina Power (Dominion)

Compliance Report

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 REPS compliance report details its efforts to achieve compliance with the REPS requirements. On November 5, 2018, and November 8, 2018, the Commission held public hearings on Dominion's 2018 REPS compliance report and REPS cost recovery application. On January 4, 2019, the Commission issued an order approving Dominion's proposed REPS riders, Dominion's 2018 REPS compliance report and retiring the RECS in Dominion's 2018 compliance sub account.

On August 13, 2019, in Docket No. E-22, Sub 578, Dominion filed an application for approval of a 2019 REPS recovery rider and its 2019 REPS compliance report (for the 2018 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, 2019: a \$0.55 charge per month for residential customers; a \$3.08 charge per month for commercial customers; and a \$20.84 charge per month for

industrial customers. Dominion's 2019 REPS compliance report states that Dominion met its 2018 general REPS requirements (397,643 RECs) by purchasing eligible wind and hydro RECs and EECs and that Dominion met Windsor's requirements (4,421 RECs) by purchasing general obligation recs and retiring 244 SEPA hydro RECs. Dominion's REPS compliance report further states that Dominion met its 2019 solar set-aside requirement (8,336 RECs) and the Town of Windsor's requirements (94 RECs) by purchasing solar RECs. Pursuant to the Commission's October 8, 2019 Order in Docket No. E-100, Sub 113, Dominion met the 0.02% swine waste set-aside component by purchasing 834 swine waste RECs. Windsor's swine waste set-aside requirements were delayed until 2019. Finally, Dominion's REPS compliance report states that Dominion met its 2018 poultry waste set-aside requirements for both itself (9,932 RECs) and Windsor (114 RECs) and anticipates fulfillment of the 2019 and 2020 requirement for itself and the Town of Windsor. Approval of Dominion's 2019 REPS compliance plan is pending before the Commission.

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 bank 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. On February 4, 2019, the Commission held a required Public Hearing on Dominion's 2018 REPS compliance plan and 2018 IRP. On August 27, 2019, the Commission issued an Order accepting 2018 Integrated Resource Plans, accepting 2018 REPS compliance plans, and accepting Dominion's 2018 REPS compliance plan.

On August 29, 2019, in Docket No. E-100, Sub 157, Dominion filed its 2019 REPS compliance plan as part of its 2019 IRP Update Report. Dominion states that, during the 2019-2021 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 2021 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 2019 through 2021. Dominion states that it will continue to make all reasonable efforts to satisfy these requirements during the 2019-2021 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 2019-2021 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 bank any excess RECs for future compliance years. Dominion states that it has sufficient in-state RECs for Windsor compliance with the full Poultry Set-Aside in 2019 and 2020. At this time, Dominion is reasonably confident that the Town of Windsor will be in compliance with the full Poultry Set-Aside in 2021. Dominion has also continued to search for opportunities to purchase poultry waste RECs in North Carolina and throughout the continental United States. These efforts yielded multiple poultry waste REC contracts and sufficient delivered volume to comply with both the Dominion and Windsor's requirements for years 2019, 2020 and 2021. This matter is still 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. NCEMC also serves as a utility compliance aggregator for 23 of its members⁵; the Town of Oak City, a wholesale customer of Edgecombe - Martin EMC; the Town of Fountain, a wholesale customer of Pitt & Green EMC; the Town of Enfield, a wholesale customer of Halifax EMC; Mecklenburg EC, headquartered in Chase, Virginia; and Broad River EC, headquartered in Gaffney, South Carolina. Tennessee Valley Authority (TVA) serves as utility compliance aggregator for four

⁵ On December 18, 2017, the Commission issued an Order authorizing NCEMC to serve as utility compliance aggregator on behalf of NCEMC's REPS Compliance Customers and to assume the REPS compliance services and related functions currently being performed by GreenCo effective January 1, 2018.

wholesale customers serving retail customers in North Carolina: Blue Ridge Mountain EMC; Mountain Electric Coop, Inc.; Tri-State EMC; and Murphy Electric Power Board⁶. DEC serves as utility compliance aggregator for wholesale customers: Blue Ridge EMC; Rutherford EMC; the Towns of Dallas, Forest City, and Highlands; as well as the Cities of Concord and Kings Mountain.⁷ EnergyUnited files its own REPS compliance plans and REPS compliance reports.

In addition, there are seventy-two 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 or utility compliance aggregator. Fifty-one of the North Carolina municipalities are participants in either NCEMPA or NCMPA1, municipal power agencies that provide wholesale power to and serve as utility compliance aggregators for their members⁸. FPWC and the Town of Waynesville file their own REPS compliance plans and reports. Six university-related members are not subject to the REPS reporting requirements and the remaining municipal members are referenced elsewhere in this section.

On September 3, 2019, NTE Carolina’s, LLC, filed a Motion for Authorization to serve as a Utility Compliance Aggregator for seven municipalities which is currently pending before the Commission.

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

⁶ On September 7, 2010, the Commission 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.

⁷ DEC’s contracts to provide REPS compliance services for the Cities of Concord and Kings Mountain end in December 2018.

⁸ By Orders issued August 27, 2008, the Commission allowed the fifty-one municipal members of the power agencies to file through NCEMPA and NCMPA1.

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.⁹

Electric Membership Corporations

North Carolina Electric Membership Corporation (NCEMC)

By Orders issued in Docket No. E-100, Sub 118, the Commission authorized NCEMC to serve as utility compliance aggregator on behalf of 25

⁹ 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.

EMCs.¹⁰ Those orders also authorized NCEMC to serve as utility compliance aggregator on behalf of Mecklenburg Electrical Cooperative, Broad River Electrical Cooperative, Oak City, and the Town of Fountain, which is a wholesale customer of Pitt & Greene EMC. As detailed in the Commissions prior reports, the role of utility compliance aggregator was previously provided by GreenCo Solutions Inc.

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 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. On August 13, 2019, the Commission issued an Order approving NCEMC's 2017 REPS compliance report, 2018 REPS compliance plan and retiring the RECs in the associated 2017 compliance sub account.

On August 29, 2019, in Docket No. E-100, Sub 163, NCEMC filed its 2018 REPS compliance report and 2019 REPS 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 2019 poultry and swine 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 2018 REPS compliance report, NCEMC states that it retired a total of 1,297,338 RECs to meet the REPS compliance requirements of its REPS compliance members and those of Mecklenburg and Broad River EMCs, which included 25,948 solar RECs to meet

¹⁰ NCEMC's REPS Compliance Members include Albemarle EMC, Brunswick EMC, Cape Hatteras EMC, Carteret-Craven EMC, Central EMC, Edgecombe-Martin EMC, Four County EMC, 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.

the solar set-aside requirements and 29,433 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 266,580 RECs, that are attributed to EE and DSM programs. Approval of NCEMC's 2018 REPS compliance report, and 2019 REPS compliance plan is pending with the Commission.

EnergyUnited Electric Membership Corporation (EnergyUnited)

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. On August 13, 2019, the Commission issued an Order approving Energy United's 2017 REPS compliance report, 2018 REPS compliance plan and retiring the RECs in the associated 2017 compliance sub account.

On August 28, 2019, in Docket No. E-100, Sub 163, EnergyUnited filed its 2018 REPS compliance report and 2019 REPS compliance plan. In its report, EnergyUnited states that it met its 2018 general REPS requirement (251,713 RECs), its solar set-aside requirements (5,035 RECs), and its poultry waste set-aside requirement (5,473 RECs). EnergyUnited's swine waste set-aside requirement was deferred until 2019. EnergyUnited has developed two approved Energy Efficiency Programs, and continues to purchase RECs and consider development of PPAs in order to promote new renewable generation. In its plan, Energy United states 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; however, within the past year, EnergyUnited was informed that the swine and poultry operation that was expected to deliver significant RECs to meet EnergyUnited requirements will not come to fruition, will not generate any swine energy at the current time and has no certainty with regard to swine REC viability in the future. EnergyUnited has contracted for the purchase of a significant number of out-of-state swine RECs that could be used to meet a portion of its future swine waste set-aside requirements for several years, but despite these efforts, EnergyUnited does not anticipate meeting its portion of the swine waste set-aside requirement for calendar year 2019 and will again be seeking a deferral from the Commission. EnergyUnited has contracted for the purchase of out-of-state poultry RECs which are banked for future requirements and have re-negotiated a contract to significantly increase the potential annual purchase of poultry RECs. Depending on production with the contracted party, which is expected to begin in the fall of 2019, EnergyUnited anticipates meeting poultry waste set-aside compliance requirements for future years. For compliance with the modified poultry set-aside requirements in 2015 through 2018, EnergyUnited made one-time purchases of in-state poultry RECs from other utilities across the state, which allowed it, in combination with banked in-state and out-of-state poultry RECs, to achieve compliance with the modified requirements of N.C.G.S. § 62-133.8(f) for 2018. In order to meet the statewide requirement in 2019 of 700,000 poultry RECS, EnergyUnited will need to purchase additional poultry RECS in 2019. EnergyUnited displayed its anticipated annual REPS riders for compliance years 2019-2021 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. EnergyUnited's 2018 REPS compliance report and 2019 compliance plan are 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 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. On August 13, 2019, the Commission issued an Order approving TVA's 2017 REPS compliance report, 2018 REPS compliance plan and retiring the RECs in the associated 2017 compliance sub account.

On August 23, 2019, TVA, acting as utility compliance aggregator on behalf of Blue Ridge Mountain EMC, Mountain Electric Cooperative, Tri-State EMC, and Murphy Electric Power Board, filed a motion for an extension of time in which to file its 2019 REPS compliance plan and 2018 REPS compliance report. On August 27, 2019, the Commission issued an Order granting TVA's requested extension of time, allowing TVA to file its 2018 REPS compliance report and 2019 REPS compliance plan in this docket on or before November 1, 2019.

Halifax Electric Membership Corporation (Halifax)

On September 1, 2016 in Docket No. E-100, Sub 149, Halifax filed with the Commission its 2015 REPS compliance report and 2016 REPS compliance plan which included the Town of Enfield (Enfield). In its REPS 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. On April 16, 2019, the Commission issued an Order approving Halifax's 2015 REPS compliance report and accepting Halifax's 2016 REPS compliance plan and approving Halifax's 2016 REPS compliance plan.

On September 1, 2017, in Docket No. E-100, Sub 152, Halifax filed with the Commission its 2016 REPS compliance report and 2017 REPS compliance plan which included Enfield. 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 was under consideration. On April 16, 2019, the Commission issued an Order approving Halifax's 2016 REPS compliance report and accepting Halifax's 2017 REPS compliance plan and approving Halifax's 2017 REPS compliance plan.

On September 4, 2018, in Docket No. E-100, Sub 159, Halifax filed its 2017 REPS compliance report and 2018 REPS compliance plan which included Enfield. Halifax's report indicates that Halifax's 2016 total retail sales were 186,153 MWh; therefore Halifax's general REPS obligation of six percent of 2016 retail sales is 11,170 RECs, and its solar set-aside requirement, based on 0.14 percent of 2016 sales, is 261 solar RECs. Further, Halifax's share of the 2017 poultry waste requirement is 251 poultry waste RECs. Halifax's 2017 compliance sub-account in NC - RETS demonstrates that Halifax met its 2017 REPS requirements by submitting the required number of RECs for retirement based upon the foregoing sales levels and REPS requirements. Halifax earned EECs from the following programs: (1) CFL Program – Halifax provides free CFLs to its members, but claims EECs only from installations occurring in 2010 and 2011; (2) Heat Pump Rebate Program – this program provides rebates to encourage the installation of high efficiency heat pump and air conditioning systems; (3) Residential Appliance Credit Program – Customers who have an energy audit and implement the recommendations will receive a credit on their electric bill; and (4) LED Street Lights and Outdoor Lights – Savings from the replacement of less efficient lights with LEDs earn EECs. On August 13, 2019, the Commission approved Halifax's 2017 REPS compliance report, accepted Halifax's 2018 REPS compliance plan and approved Halifax's 2018 REPS compliance plan.

On November 30, 2018, in Docket No. EC-67, Sub 40, the North Carolina Electric Membership Corporation (NCEMC) filed a petition, requesting that the Commission authorize NCEMC to serve as the utility compliance aggregator for Halifax and Enfield, waive Halifax and Enfield's obligations to file a REPS compliance plan and REPS compliance report so long as NCEMC serves as utility compliance aggregator for Halifax and Enfield, and to waive the provisions of Commission Rule R8-67(d)(1) to allow NCEMC to purchase the renewable energy certificates (RECs) held in bank by Halifax, notwithstanding that the RECs were earned more than three years ago.¹¹ On December 17, 2018, the Commission issued an Order authorizing NCEMC to serve as utility compliance aggregator on behalf of Halifax and Enfield, granting a continuing waiver of the requirements in

¹¹ Pursuant to Commission Rule R8-67(d)(1), RECs must have been purchased by the electric supplier within three years of the date that the RECs were earned. NCEMC cites the Commission's Orders issued on December 18, 2017, in Docket Nos. E-100, Sub 118; EC-67, Sub 36; and EC-83, Sub 2, and on December 3, 2014, in Docket No. E-100, Sub 113, as precedent for granting such a waiver in nearly identical circumstances.

Commission Rule R8-67 to annually file individual REPS compliance plans and REPS compliance reports so long as NCEMC continues to serve as utility compliance aggregator on behalf of Halifax and Enfield; and granting a waiver of the requirement of Commission Rule R8-67(d)(1) that RECs used for REPS compliance be purchased within three years of the date that they were earned so that NCEMC can complete the one-time purchase of the RECs currently owned by Halifax and retire these RECs for future REPS compliance. NCEMC will therefore include Halifax and Enfield in its 2018 REPS compliance report and 2019 REPS compliance plan and for future years.

Municipally-Owned Electric Utilities

North Carolina Eastern Municipal Power Agency (NCEMPA)

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 REPS 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, and the low number of RECs actually produced. 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 has 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 REPS compliance report, NCEMPA states that it met its 2017 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 2017 solar set-aside requirement (10,100 RECs) by purchasing solar RECs and its 2017 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 2017 actual incremental compliance costs were well below the per-account cost cap. On August 13, 2019, the Commission approved NCEMPA's 2017 REPS compliance report, accepted NCEMPA's 2018 REPS compliance plan and approved NCEMPA's 2018 REPS compliance plan.

On August 28, 2019, in Docket No. E-100, Sub 163, NCEMPA filed, on behalf of its members, its 2019 REPS compliance plan and 2018 REPS compliance report. In its REPS 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, and the low number of RECs actually produced. 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 2021, and its pro rata share of the statewide aggregate of the poultry waste set-aside requirement through 2021. With regard to the swine waste set-aside requirements, NCEMPA states that it contracted for swine waste RECs and has 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 REPS compliance report, NCEMPA states that it met its 2018 general REPS requirement (701,304 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 2018 solar set-aside requirement (14,027 RECs) by purchasing solar RECs and its 2018 poultry waste set-aside requirement (16,098 RECs) by purchasing poultry RECs and RECs available under S.L. 2011-279 (Senate Bill 886). NCEMPA shows in its REPS compliance report that its 2018 actual incremental compliance costs were well below the per-account cost cap. NCEMPA's 2018 compliance report and 2019 REPS compliance plan are pending before the Commission.

North Carolina Municipal Power Agency No. 1 (NCMPA1)

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 will continue to investigate the market for unbundled RECs as a cost-effective means of REPS compliance. In its REPS 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 REPS 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. On August 13, 2019, the Commission approved NCEMPA's 2017 REPS compliance report, accepted NCEMPA's 2018 REPS compliance plan and approved NCEMPA's 2018 REPS compliance plan.

On August 28, 2019, in Docket No. E-100, Sub 163, NCMPA1 filed its 2019 REPS compliance plan and 2018 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 will continue to investigate the market for unbundled RECs as a cost-effective means of REPS compliance. In its REPS compliance plan, NCMPA1 states that it had entered into contracts for enough RECs to satisfy the solar set-aside requirements through 2021, and contracts for enough RECs to satisfy the poultry waste set-aside requirements through 2021. With regard to the swine waste set-aside requirements, NCMPA1 states that continued delays among counterparties, terminated REC agreements with counterparties, and material delays and terminations 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 2019 or beyond. In its REPS compliance report, NCMPA1 states that it met its 2018 general REPS requirement (493,303 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 2018 solar set-aside requirement (9,867 RECs) by purchasing electricity from solar generating facilities and through the purchase of solar RECs, and met its 2018 poultry set-aside requirement (11,235 RECs) through the purchase of RECs. NCMPA1 states that its 2018 incremental costs were below the annual limit on incremental costs for REPS compliance. Approval of NCMPA1's 2018 REPS compliance report and 2019 REPS compliance plan 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 REPS compliance report

and 2017 REPS 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. On April 2, 2019, the Commission issued an Order extending the November 21, 2018 Protective Order to all FPWC filings in pending and future proceedings involving compliance with N.C.G.S. § 62-133.8., and required supplemental comments from the Public Staff addressing FPWC's 2018 REPS compliance plan and 2017 REPS compliance report. On January 23, 2019, the Public Staff filed supplemental comments addressing FPWC's REPS filings stating that FPWC submitted a sufficient number of RECs into its 2016 compliance sub-account in the NC - RETS to meet its REPS obligations for the calendar year 2016. On August 13, 2019, in Docket No. E-100, Sub 152, the Commission approved FPWC's 2016 REPS compliance report, accepted FPWC's 2017 REPS compliance plan and approved FPWC's 2017 REPS compliance plan.

On August 31, 2018, in Docket No. E-100, Sub 159, FPWC filed its 2017 REPS compliance report and 2018 REPS compliance plan. In its REPS 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 REPS 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. On August 13, 2019, in Docket No. E-100, Sub 159, the Commission approved FPWC's 2017 REPS compliance report, accepted FPWC's 2018 REPS compliance plan and approved FPWC's 2018 REPS compliance plan.

On August 30, 2019, in Docket No. E-100, Sub 163, FPWC filed its 2019 REPS compliance plan and 2018 REPS compliance report. In its REPS 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 DSM/EE programs, and through the purchase of RECs. 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 2019 through 2021. In its REPS compliance report, FPWC states that it is required to meet a 2018 general REPS requirement of 196,733 RECs, solar set-aside requirements of 3,935 solar RECs and poultry waste set-aside requirements of 4,668 poultry RECs. This matter is pending before the Commission.

Town of Waynesville (Waynesville)

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, RECs 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. On August 13, 2019, the Commission approved Waynesville's 2017 REPS compliance report, accepted Waynesville's 2018 REPS compliance plan and approved Waynesville's 2018 REPS compliance plan.

On September 16, 2019, in Docket No. E-100, Sub 163, Waynesville filed its 2018 REPS compliance report and 2019 REPS compliance plan. In its plan, Waynesville states that it intends to use its allocations from SEPA, RECs purchases, and EE savings from approved EE programs to meet its REPS requirements. In its 2018 REPS compliance report, Waynesville states that it retired a total of 8,554 RECs to meet its REPS compliance requirements, which included 172 solar RECs to meet the solar set-aside requirements and 207 poultry waste RECs to meet the poultry waste set-aside requirements. This matter is currently pending before the Commission.

NTE Carolinas, LLC (NTE)

On August 31, 2018, in Docket No. E-100, Sub 159, NTE filed a letter stating that, effective January 1, 2018, the Towns of Black Creek, Lucama, Sharpsburg, Stantonsburg, and Winterville are full requirements power supply customers of NTE, and that the Cities of Concord and Kings Mountain will similarly become full requirements customers of NTE on January 1, 2019. NTE states that these municipalities were previously wholesale power customers of Duke Energy Carolinas, LLC, or Duke Energy Progress, LLC, and that during the transition period these municipalities were uncertain of the number of RECs that would be transferred from the respective Duke utility. Therefore, NTE filed the 2018 REPS compliance plans on behalf of these municipalities belatedly. Approval of these 2018 REPS compliance plans is pending before the Commission.

On September 3, 2019, in Docket Nos. E-100 Sub 118, 159 and 163, NTE filed a motion requesting authorization to serve as the utility compliance aggregator and petition for waivers on behalf of the Towns of Winterville, Stantonsburg, Sharpsburg, Lucama, Black Creek, and the Cities of Concord, and Kings Mountain (NTE Municipalities). In conjunction with the request to become the utility compliance aggregator on behalf of the NTE Municipalities, and in anticipation of the Commission granting that request, NTE filed a motion for an extension of time in which to file its 2019 REPS compliance plan and 2018 REPS compliance report, which will include data for the NTE Municipalities. On September 4, 2019, the Commission issued an Order allowing NTE until November 1, 2019, to file its 2018 REPS compliance reports and 2019 REPS compliance plans. NTE's motion requesting authorization to serve as the NTE Municipalities' utility compliance aggregator and petition for waivers are pending before the Commission.

CONCLUSIONS

All of the electric power suppliers have met or appear to have met the 2018 general REPS requirements and appear on track to meet the 2019 general REPS requirements. All of the electric power suppliers have met the 2018 solar set-aside requirements and appear to be on track to meet the 2019 solar set-aside requirement. The Commission granted a joint motion to delay implementation of the 2018 swine waste set-aside requirement for one year - except for the electric public utilities – requiring them to meet a 0.02% swine waste set-aside for 2018. The electric public utilities met the 0.02% swine waste set-aside for 2018. Most electric power suppliers do not appear to be on track to meet the swine waste set-aside requirements for 2019 and have indicated they will request a modification in these requirements for 2019, as well as a delay in future increases in these requirements. In addition, after meeting the poultry waste set-aside requirement for the first time in 2014, the electric power suppliers met the poultry waste set-aside requirement of 170,000 MWh level each year since then. In 2018, electric power suppliers met an increased poultry waste set-aside requirement of 300,000 MWh. Despite this improvement, most electric power suppliers do not appear on track to fully meet the swine waste set-asides for 2019 and indicate they will be requesting modifications to the 2019 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 improvement in future compliance with the swine and poultry waste set-aside requirements.

APPENDICES

APPENDICES

1. Environmental Review

- Letter from Chair Charlotte A. Mitchell, North Carolina Utilities Commission, to Secretary Michael S. Regan, North Carolina Department of Environmental Quality (July 8, 2019)
- Letter from Assistant Secretary for Environment Shelia Holman, North Carolina Department of Environmental Quality, to Chair Charlotte A. Mitchell, North Carolina Utilities Commission (September 10, 2019)

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 8, 2018)

3. Renewable Energy Facility Registrations

- Order Revoking Registration of Renewable Energy Facilities and New Renewable Energy Facilities, Docket No. E-100, Sub 130 (October 30, 2018)
- Order Giving Notice of Intent to Revoke Registration of Renewable Energy Facilities and New Renewable Energy Facilities, Docket No. E-100, Sub 130 (September 4, 2019)

APPENDIX 1



State of North Carolina Utilities Commission

COMMISSIONERS

CHARLOTTE A. MITCHELL, CHAIR
TONOLA D. BROWN-BLAND
LYONS GRAY
DANIEL G. CLODFELTER

July 8, 2019

Secretary Michal 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, established a Renewable Energy and Energy Efficiency Portfolio Standard (REPS) for this State. As part of this legislation, the General Assembly requires the Utilities 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 3, 2019, is appreciated so that the Commission may meet its deadline.

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

Sincerely,

Charlotte A. Mitchell

cc: Sheila Holman, Assistant Secretary for the Environment, DEQ
Bill Lane, General Counsel, DEQ
Mike Abraczinskas, Director, Division of Air Quality

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NORTH CAROLINA
Environmental Quality

ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

September 10, 2019

Ms. Charlotte A. Mitchell, Chair
North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, NC 27699-4325

Re: Renewable Energy and Energy Efficiency Portfolio Standard

Dear Madam Chair Mitchell:

The following information is being provided in response to your letter dated July 8, 2019 to the Department of Environmental Quality (DEQ). It consists of an update to the September 25, 2018 report 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 (RE) resources including hydroelectric, biomass, biogas, solar and wind, along with energy efficiency measures, are eligible resources under the REPS.¹ Figure 1 shows North Carolina's net electric power generation from the utility and independent power producer sectors for 2007, the year the REPS became effective.² In 2007, only 2.8% of electric power was generated by renewable sources, primarily hydroelectric power. By 2018, 11% of electricity (14 million MWh) was generated by RE with 4.6% generated by solar and 4.9% generated by hydroelectric power. The significant increase in RE generation is due to the monetary incentives and favorable regulatory environment for these sources provided by the REPS, federal and state tax credits, declining costs of RE technologies, and favorable requirements in North Carolina under the federal Public Utility Regulatory Policies Act of 1978 (PURPA).

In addition to this change in renewable electric generation, there was also a shift in the use of fossil fuels. In 2007, 62% of the electric power was generated by coal, while natural gas only accounted for 4% of the electric power generation.³ By 2018, natural gas generated 33% and coal only generated 24% of the electric power in North Carolina. In eleven years, coal generation decreased

¹ Solar consists of solar photovoltaic (PV) and solar thermal. Biomass includes waste wood, wood residue, black liquor solids and biosolid fuels such as poultry litter. Biogas includes landfill gas and biogas from swine operations.

² Energy Information Administration (EIA) Form 923 Detailed Data, retrieved from <https://www.eia.gov/electricity/data/eia923/>. 2018 data represents Form 923 Early Release Data dated June 24, 2019.

³ Energy Information Administration (EIA) Form 923 Detailed Data, <https://www.eia.gov/electricity/data/eia923/>.



from about 80 million MWh to 32 million MWh, while natural gas generation increased from about 5 MWh to 43 million MWh. The notable increase in natural gas generation between 2007 and 2018 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.

Figure 1: Utility and Independent Power Producers: 2007 and 2018 Generation (MWh)

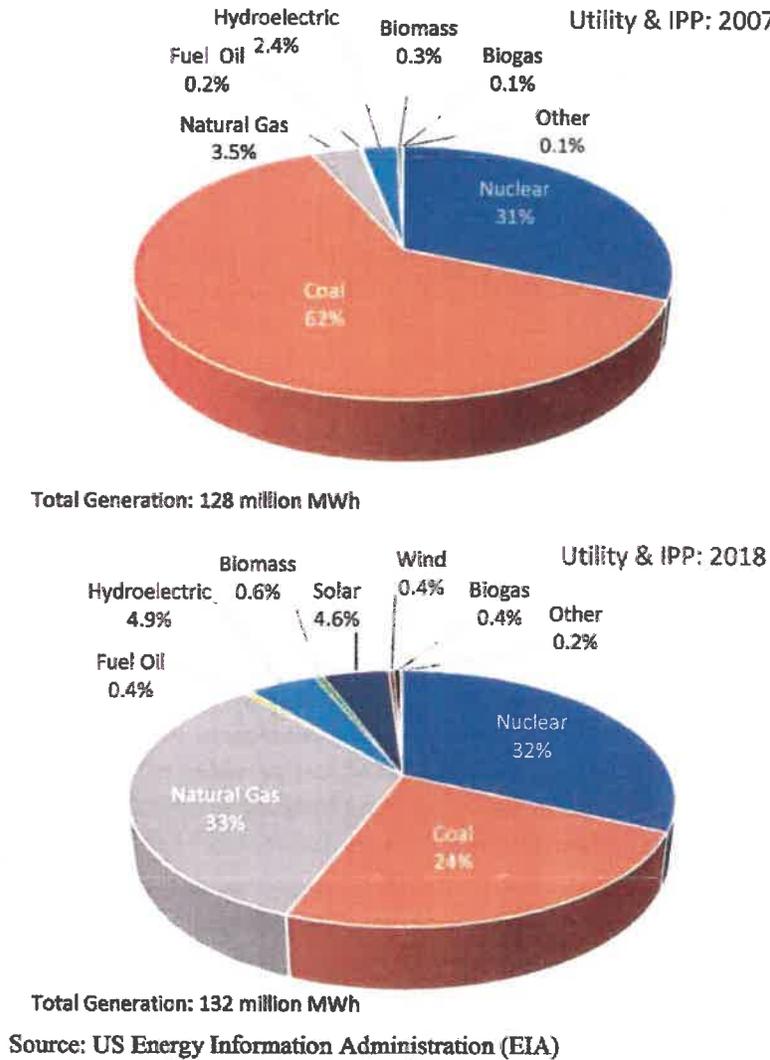


Table 1 shows the changes in generation for hydroelectric, biomass, biogas, solar and wind from 2007 to 2018 for the utility and independent power producers.⁴ Solar energy represented 6 million MWh (4.6% of total generation) in 2018. It is now at a similar level as hydroelectric power.⁵ There are now over 3,700 MW of utility-scale solar projects operating in North Carolina. A 208 MW onshore wind facility began operating in 2017 providing almost half a million MWh of generation. Biomass and biogas now represent about 1% of total generation.

Table 1. Change in Renewable Energy Electricity Generation in North Carolina from 2007 to 2018 in MWh

Resource	2007	2010	2012	2014	2016	2018
Hydroelectric	2,974,677	4,743,466	3,341,500	4,741,591	4,403,380	6,465,309
Solar PV		11,340	13,8430	652,464	3,296,077	6,049,188
Wind					6,233	542,772
Biomass	85,745	192,310	296,035	438,747	520,665	810,658
Biogas	432,033	573,393	931,386	892,194	695,942	473,357

Electricity generation from RE is expected to grow with the passing of House Bill 589 in 2017, which has the potential to add 2,660 MW of solar capacity, or approximately 4.6 million MWh per year of electricity generation in 2021.^{6,7} This would mean cumulative solar generation growing to over 10 million MWh of generation per year, compared to the 6 million MWh generated in 2018 per Table 1.

B. Air Pollutant Emissions Reductions

Figure 2 presents emissions reductions from 2007 to 2018. Based on the generation profile shown in Figure 1, it is estimated that the electric power sector had emission reductions of 96%, 47%, and 32% for sulfur dioxide (SO₂), nitrogen oxides (NO_x), and carbon dioxide (CO₂), 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.

⁴ EIA Form 923 Detailed Data, retrieved from <https://www.eia.gov/electricity/data/eia923/>. 2018 data represents Form 923 Early Release Data dated June 24, 2019.

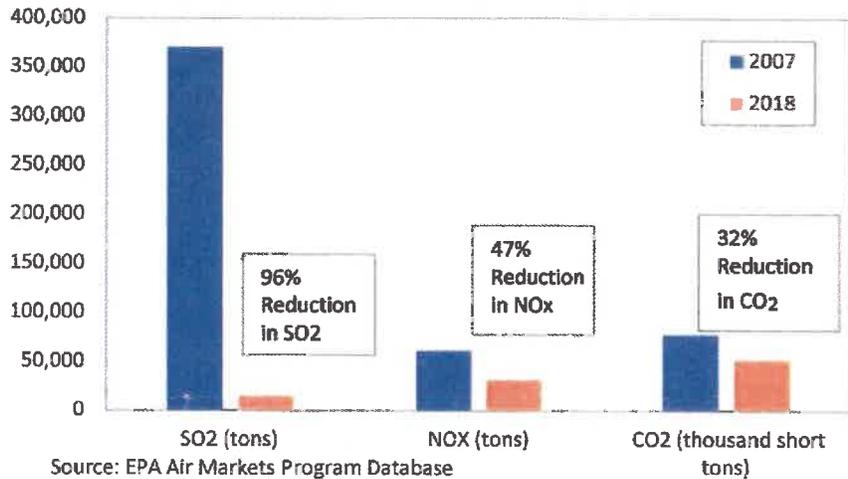
⁵ Hydroelectric generation varies from year to year based on the annual rainfall.

⁶ Session Law 2017-192, "An Act to Reform North Carolina's Approach to Integration of Renewable Electricity Generation Through Amendment of Laws Related to Energy Policy and to Enact the Distributed Resources Access Act," July 27, 2017, <https://www.ncleg.net/Sessions/2017/Bills/House/PDF/H589v6.pdf>.

⁷ Assuming a 20% capacity factor for solar photovoltaic generation.



Figure 2. North Carolina Power Plant Emissions in 2007 and 2018



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 electricity retailers subject to the REPS.⁸ These EE programs are focused on residential and small commercial facilities.⁹ Table 2 shows the number of energy efficiency certificates (EECs) issued for each year from the NC RETS publicly available data. In 2018, North Carolina issued 5,572,279 MWh of EECs, which reduced retail sales of electricity by approximately 4%. This is the equivalent of a small coal utility power plant not operating.

The North Carolina Division of Air Quality (DAQ) estimated the CO₂, NO_x, and SO₂ 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 overestimate 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. Environmental Protection Agency (EPA) has developed average CO₂, NO_x, and SO₂ emission factors for power plants located in the State of North Carolina using the Emissions & Generation Resource

⁸ North Carolina Renewable Energy Tracking System, <http://www.ncrets.org>.

⁹ Larger commercial and industrial facilities implement EE without assistance from the electricity retailers, therefore, avoided generation by these facilities is not tracked in NC RETS.



Integrated Database (eGRID).¹⁰ 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.¹¹

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

Year	EECs Or Avoided Generation (MWh)	CO ₂ Not Emitted (tons)	NO _x Not Emitted (tons)	SO ₂ Not Emitted (tons)
2008	22,907	14,145	12	69
2009	80,008	46,266	29	79
2010	504,289	297,798	212	481
2011	1,134,040	669,685	478	1,081
2012	1,288,141	680,137	537	671
2013	2,119,916	1,119,313	885	1,105
2014	2,722,860	1,333,839	937	937
2015	6,218,251	3,046,116	2,139	2,139
2016	4,069,988	1,765,237	1,136	906
2017	4,812,048	2,087,084	1,343	1,071
2018	5,572,279	2,416,812	1,555	1,240

* Note that EECs are reconciled each year; therefore, values presented in the above table may be different from the values presented in Table 2 of the 2018 report submitted to the North Carolina Utilities Commission on September 25, 2018.

The data in Table 2 show the maximum reduction in emissions due to EE savings achieved through REPS. In 2018, EE measures resulted in 1,555 tons of NO_x and 1,240 tons of SO₂ not being emitted. The CO₂ not emitted due to EE measures is approximately 2.4 million tons, which is 4.6% of the total CO₂ 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.

Emission Reductions Due to Non-Emitting Renewable Energy Measures

The NC RETS also tracks the estimated amount of RE generation in MWh from projects receiving Renewable Energy Certificates (RECS). As of 2018, 93% of the installed RE capacity is 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. The 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. In 2018, non-emitting RE sources generated a total of 5,779,669 MWh of electricity while RE

¹⁰ eGRID2016 Technical Support Document, Prepared for: Clean Air Markets Division, Office of Atmospheric Programs, U.S. Environmental Protection Agency, February 2018.

¹¹ Note that the avoided generation includes electricity transmission line losses.



sources that emit air pollution generated 4,723,120 MWh of electricity. This combined generation of over 10 million MWh of electricity is equivalent to a mid-sized utility coal power plant.

The 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. The DAQ assumed that all the emissions reductions would occur in North Carolina; however, this is an overestimate 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 2018, non-emitting RE electricity generation resulted in 1,683 tons of NOx and 1,286 of SO₂ not being emitted in the air. In addition, avoided CO₂ emissions are estimated at 2.5 million tons.

Table 3. Annual RECS Generated and Estimated Avoided Air Pollution Emissions

Year	RECS from Emitting RE Sources* (MWh)	RECS from Non-Emitting RE Sources** (MWh)	CO2 Not-Emitted (tons)	NOx Not-Emitted (tons)	SO2 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	4,841,801	4,848,953	2,103,090	1,353	1,079
2018	4,723,120	5,779,669	2,506,761	1,613	1,286

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

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

The annual avoided emissions in 2018 from both EE measures (shown in Table 2) and non-emitting RE (shown in table 3) are summarized in Table 4.

Table 4. Total Avoided Emissions Due to REPS in 2018

REPS Program	RE & EE RECS (MWh)	CO2 Not Emitted (tons)	NOx Not Emitted (tons)	SO2 Not Emitted (tons)
Non-Emitting RE	5,779,669	2,506,761	1,613	1,286
EE Measures	5,572,279	2,416,812	1,555	1,240
Total	11,351,948	4,923,573	3,167	2,526



C. Air Quality Permit Reviews

North Carolina General Statute § 62-133.8(g) requires a biomass combustion process at any new RE 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 considering energy, environmental, and economic impacts, and other costs. The DAQ continues to review air permit applications and make case-by-case BACT determinations for new RE facilities.

As of August 23, 2019, 36 facilities permitted or registered with the DAQ received RE credits under the REPS program. Since 2017, three facilities stopped operating while one facility came online. Most of the permitted facilities capture and utilize landfill gas at municipal solid waste landfills as shown 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	2
Landfills	17
Swine Waste	9
Poultry Litter	1
Biomass & Poultry Litter	7
Total	36

The 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 SO₂ ambient air quality standard. Using its existing authority, the DAQ entered a Special Order by Consent (SOC) with the facility to address the associated air quality violations and non-compliance status. In addition, this facility revised their permit to address the SO₂ issues and began operating an SO₂ control system in April 2018. The DAQ is also addressing exceedances of BACT limits at several facilities fueled by poultry litter based on initial stack testing results.

Proposed Modifications to Air Quality Permits

In 2018, DAQ met with Duke Energy regarding proposed permit modifications at four facilities to support solar photovoltaic (PV) generation on the electricity grid. Solar PV generation can be an intermittent and variable generation resource on the grid, although battery storage devices that allow flexible grid operations are entering the market place. Duke Energy has stated that an alternate resource that is highly flexible is needed and new technologies provide the following;

- Load following generation during solar ramp up and ramp down,
- Power reliability during periods of intermittent solar generation, and
- Maintain power quality via voltage support.

Duke Energy states that natural gas combustion turbines (CTs) are the best resource to meet this need.



Duke Energy evaluated alternatives to CTs which included:

- 1) The sale of excess energy,
- 2) Curtailing dispatch of coal plants,
- 3) Curtailing dispatch of nuclear plants,
- 4) Curtailing dispatch of solar PV,
- 5) Energy storage and
- 6) Demand side management.

Duke Energy states in its permit applications that “none of these alternatives can substitute for near-term need for increased natural gas operational flexibility.”

To date, DAQ has received applications to modify the permits at the HF Lee and Rockingham County facilities. These applications are requesting that the operating hours for eight natural gas-fired simple cycle CTs be increased from 23% and 34% of the total hours per year (8,760 hours) to 100% and 74% of the total hours per year. The DAQ is currently reviewing these applications. The Western North Carolina Regional Air Quality Agency in Buncombe County received an application from Duke Energy to modify the permit for its Asheville power plant. This modification does not address specific operational changes to the CTs, but it would allow for increased emissions from these units. After reviewing the information, the agency is requiring changes to the application. It is currently unknown how emissions from these units may change.

The facilities requesting the permit modifications are in areas designated as “attainment” for the National Ambient Air Quality Standards. The impact of the proposed permit modification on the attainment status is being evaluated as part of the permit application process.

Table 6 presents the emissions increases for select air pollutants. The increase in CT operating hours at the HF Lee and Rockingham County facilities has the potential to increase NO_x emissions by 2,700 tons and CO₂ emissions by 5.5 million tons each year. The increase in CO₂ emissions is greater than the CO₂ emissions reductions estimated from both EE and RE avoided generation shown in Table 4. The increase in NO_x emissions is 85% of the NO_x emissions reductions estimated from both EE and RE avoided generation.



Table 6. Increase in Emissions due to Proposed Permit Modifications at Duke Energy HF Lee and Rockingham County Facilities (tons)

	Operating Hours	PM2.5	CO	VOC	NOx	SO2	CO2
HF Lee (3 natural gas CTs)							
Baseline Emissions	2,000	11.7	61.8	17.4	84.1	2.6	243,624
Projected Emissions	8,760	136.0	737.1	210.1	1,278	16.6	2,871,823
Emissions Increase*		124.3	675.2	192.7	1,194	14.0	2,628,200
Rockingham County (5 natural gas CTs)							
Baseline Emissions	3,000	10.5	168.5	11.8	264.16	4.3	670,097
Projected Emissions	6,500	99.5	1770.0	98.2	1,777	30.7	3,591,565
Emissions Increase*		89.0	1601.5	86.4	1,513	26.4	2,921,468
Total Emissions Increase from HF Lee and Rockingham Co. CTs		213	2,277	279	2,707	40	5,549,668

* The projected emissions represent the worst-case potential to emit from the increase in CT operating hours.

PM2.5 = particulate matter less than or equal to 2.5 microns in diameter.

CO = carbon monoxide.

VOC = volatile organic compounds.

In its permit applications, Duke Energy included modeling of emissions increases for toxic air pollutants (TAPs) regulated under North Carolina’s Toxic Air Pollutant Procedures (15A NCAC 02Q .0700). Duke Energy’s modeling analysis indicated that “the maximum optimized TAP emissions from the facility would not result in predicted ambient concentrations that exceed the acceptable ambient level (AAL) for any modeled pollutant”, including formaldehyde, acrolein and benzene. This conclusion, however, must still be evaluated by the DAQ during the permit review. Note that the permit applications did not report increases in federal hazardous air pollutants (HAP) because the CTs are not subject to any HAP emission limits.¹²

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 RE 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. Currently two projects are under development that will clean the landfill gas to pipeline quality and inject the gas into the pipeline for transportation and future sale.

¹² The combustion turbines at the Duke Energy HF Lee and Rockingham County facilities are subject to 40 CFR 63 Subpart YYYY National Emission Standards for Hazardous Air Pollutants: Stationary Combustion Turbines. However, the CTs are not subject to emissions limits due to either their age or permitted operating limits for oil combustion.



E. Swine Waste to Bioenergy

According to NC RETS, 19 facilities are registered as using biogas derived from swine waste. Of these facilities, 5 use direct biogas (which may or may not have been produced in North Carolina); 7 are swine waste-to-energy facilities operating in North Carolina; and 7 are swine waste to energy facilities operating outside of North Carolina. The most recent facility to come online in 2018 is located out of state. It is likely that all 19 facilities participate in the production of RE 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 contributors 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 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.

RTI International is leading an analysis with Duke University and East Carolina University to quantify the biogas opportunities within North Carolina. The analysis will look at the effects of biogas use on the climate, environment, societal impacts, and economics and will recommend policy measures for biogas development, including the best uses for biogas.

F. Wind Energy

Onshore Wind Energy Development and Regulatory Environment

There is one wind turbine project registered in NC RETS as of August 2019: the Broyhill Wind Turbine located at Appalachian State University. As designed, the turbine has a capacity of 0.1 MW and can produce up to 147 MWh annually. As of May 2018, one utility-scale wind energy facility (WEF) is in operation in the State. Located in Perquimans and Pasquotank counties near Elizabeth City, Avangrid's Amazon Wind Farm, US East,¹³ operates 104 2-MW wind turbines. According to Avangrid, the facility spans 22,000 acres, and is leased from approximately 60 local landowners. Table 7 presents the actual generation from these facilities in 2018.^{14,15}

Table 7. Wind Power Capacity and Generation in North Carolina

Facility	Summer Capacity (MW)	2018 Actual Generation (MWh)
Broyhill Wind Turbine	0.1	91
Amazon Wind Farm	208	542,772

¹³ Avangrid Renewables. (2017). Amazon Wind Farm US East. Retrieved from http://www.avangridrenewables.us/cs_amazon-wind-farm-us-east.html.

¹⁴ North Carolina Renewable Energy Tracking System, <http://www.ncrets.org/>.

¹⁵ EIA Form 923 Detailed Data, retrieved from <https://www.eia.gov/electricity/data/eia923/>. 2018 data represents Form 923 Early Release Data dated June 24, 2019.



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 grows the economy. This analysis of the REPS rule indicates that there have been substantial decreases in air pollutants between 2007 and 2018 due to avoided fossil fuel generation resulting from the implementation of the REPS. However, the DEQ received two permit applications from Duke Energy requesting increases in the use of CTs to support solar PV generation that have the potential to negate the emissions reductions realized under the REPS. The DEQ is currently reviewing these applications as well as alternative approaches for supporting solar PV generation that do not result in environmental negative impacts.

Sincerely,



Sheila Holman
Assistant Secretary for Environment

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



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 September 7, 2018, a verified motion to modify and delay the 2018 requirements of N.C.G.S. § 62-133.8(e) and (f) was filed jointly by Duke Energy Carolinas, LLC (DEC); Duke Energy Progress, LLC (DEP); Virginia Electric and Power Company, d/b/a Dominion Energy North Carolina (Dominion); North Carolina Electric Membership Corporation (NCEMC); 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; the Town of Windsor; North Carolina Eastern Municipal Power Agency (NCEMPA); and North Carolina Municipal Power Agency Number 1 (NCMPA1) (hereinafter referred to collectively as the Joint Movants).¹ The Joint Movants seek Commission approval of the following requests: 1) to modify the requirements of N.C.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), as those requirements apply to DEC, DEP, and Dominion, by lowering the 2018 compliance requirement to 0.02% of prior-year retail sales, delaying the scheduled increase to 0.07% of prior-year retail sales to begin in calendar year 2019, and delaying future increases by one year; 2) to modify the requirements of N.C.G.S. § 62-133.8(e), as those requirements apply to all other electric power suppliers, by delaying those requirements until calendar year 2019 and by delaying future increases in those requirements by one year; 3) to modify the requirements of N.C.G.S. § 62-133.8(f) (Compliance With REPS Requirement Through Use of Poultry Waste Resources) by lowering the 2018 requirement to 300,000 MWh and delaying subsequent increases in the requirement to 700,000 MWh in 2019 and 900,000 MWh in

¹ DEC states that it is also acting in its capacity as REPS compliance aggregator for Blue Ridge Electric Membership Corporation, Rutherford Electric Membership Corporation, the City of Dallas, the Town of Forest City, the City of Concord, the Town of Highlands, and the City of Kings Mountain. TVA states that it is acting in its capacity as REPS compliance aggregator for Blue Ridge Mountain Electric Membership Corporation, Mountain Electric Cooperative, Tri-State Electric Membership Corporation and Murphy Electric Power Board. NCEMPA states that it is acting in its capacity as REPS compliance aggregator for its 32 member municipalities, which are electric power suppliers. NCMPA1 states that it is acting in its capacity as REPS compliance aggregator for its 19 member municipalities, which are electric power suppliers.

2020; 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 2018 with other compliance measures in accordance with N.C.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 swine and poultry waste set-aside requirements, and argue that the relief sought is in the public interest. 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 September 13, 2018, the Commission issued an Order Requesting Comments. Between September 27, 2018 and September 28, 2018, NC WARN, Inc. (NC WARN), the North Carolina Poultry Federation (NCPF), the North Carolina Pork Council (NCPC), the North Carolina Sustainable Energy Association (NCSEA), 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, NC WARN cites progress on the development of swine waste-to-energy projects and states that it believes that "Duke Energy will never comply because the technology is not predictable or sustainable enough to produce a significant amount of energy from hog waste." NC WARN further states that the uncertainty is why the Commission established a pilot program for directed biogas. In addition, NC WARN states that it is "important that we help eliminate the grief and suffering that local neighbors are experiencing from open hog waste lagoons." With regard to the Joint Movants' motion, NC WARN seems to agree with the Joint Movants that operational challenges in bringing swine waste-to-energy projects online has made it unlikely that the electric power suppliers will be able to comply with the swine waste set-aside requirements in 2019 and 2020. In conclusion, NC WARN argues that the Commission should "consider increasing the portion of the REPS requirement to produce energy from solar energy resources to make up for not meeting the swine waste requirement."

In its comments, NCPF states that it "does not oppose" the portion of the joint motion requesting to modify the requirements of N.C.G.S. § 62-133.8(f) by lowering the 2018 compliance requirement to 300,000 MWh and delaying the subsequent increases to 700,000 MWh in 2019 and to 900,000 MWh in 2020. NCPF limits its comments to the motion and its application to N.C.G.S. § 62-133.8(f), and takes no position with regard to banking poultry waste RECs and substituting other types of RECs for 2018 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. More specifically, NCPC expresses support for the request that the swine waste set-aside requirements be modified to 0.02% of prior year sales for 2018, resulting in the first ever retirement of swine waste RECs for compliance with the requirements of N.C.G.S. § 62-133.8(e). NCPC states that it is aware of impediments to achieving compliance with the swine waste set-aside requirements and notes that the Joint Movants referenced the Commission's June 19, 2018 Order issued in Docket No. G-9, Sub 698, as introducing some uncertainty surrounding the future of swine and poultry waste-derived directed biogas projects. NCPC then expresses some concern that the electric power suppliers' collective efforts have become too reliant on DEC, DEP, and Dominion while other electric power suppliers' efforts have "stalled with the apparent expectation that waivers and modifications will be routinely issued." Thus, NCPC urges the Commission to again emphasize the importance of the set-asides and the need to see real efforts by all electric power suppliers to comply." In conclusion, NCPC expresses support for granting the Joint Movants' requests without an evidentiary hearing.

In its comments, NCSEA states that it does not object to the modifications to the swine and poultry waste set-aside requirements for 2018 as requested by the Joint Movants and commends DEC, DEP, and Dominion for seeking to partially comply with the swine waste set-aside requirements as opposed to seeking to delay the requirement entirely. NCSEA does not take a position as to the Joint Movants' requested authorization to bank RECs for future compliance. NCSEA also states that it agrees with the Joint Movants' comments regarding the uncertainty created by the Alternative Gas Order. In addition, NCSEA states that prompt implementation of the provisions of S.L. 2017-192 (requiring establishment of an expedited interconnection review process for swine and poultry waste facilities that are two MW or less in size) could also resolve some of the uncertainty surrounding future swine and poultry waste-to-energy project development. In conclusion, NCSEA requests that the Commission modify the swine and poultry waste set-aside requirements and address the issues raised in its comments.

The Public Staff, in its comments, states that the electric power suppliers' semiannual reports indicate that they are making good faith efforts to comply with the swine waste set-aside requirements, but will be unable to comply in 2018. The primary issue, in the Public Staff's view, is whether the required retirement of swine waste RECs to meet a 0.02% requirement as proposed in the Joint Motion will excessively deplete the supply of RECs and make compliance excessively difficult in subsequent years. The Public Staff then details the reasons why it believes that conditions have now changed such that the Joint Movants' request can be granted without making compliance in future years impractical.² Based upon its review of this data, the Public Staff recommends that the Commission grant the Joint Movants' requested modifications to the swine and poultry waste set-aside requirements.

² The Public Staff's comments includes data that is of a confidential nature, and is appropriately redacted from the public version of its comments. The Public Staff also filed under seal a version of its comments that includes the data in un-redacted form.

DISCUSSION

Pursuant to N.C.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 N.C.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; the March 26, 2014 Final Order Modifying the Poultry and Swine Waste Set-Aside Requirements and Providing Other Relief; the November 13, 2014 Order Modifying the Swine Waste Set-Aside Requirement and Providing Other Relief; the December 1, 2015 Order Modifying the Swine and Poultry Waste Set-Aside Requirements and Providing Other Relief; the October 17, 2016 Order Modifying the Swine and Poultry Waste Set-Aside Requirements and Providing Other Relief; and the October 16, 2017 Order Modifying the Swine and Poultry Waste Set-Aside Requirements and Providing Other Relief (2017 Delay Order) (collectively, Delay Orders).

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 2017 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 or requesting an evidentiary hearing. 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 appropriately be decided without an evidentiary hearing.

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 finds that the State's electric power suppliers have made a reasonable effort to comply with the 2018 statewide swine waste set-aside requirements established by N.C.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, and that swine waste-to-energy projects have experienced operational difficulties. No party presented evidence that the aggregate 2018 swine waste set-aside requirement established by the 2017 Delay Order could be met. However, DEC, DEP, and Dominion argued that they are in a position to meet a modified swine waste set-aside requirement of 0.02% of prior retail sales even though the other electric power suppliers in the state are not in a similar position. The Public Staff agreed that DEC, DEP, and Dominion could meet such a modified requirement without making future compliance impractical. NCSEA and NCPD also agreed with, and expressed support for, this proposed modification.

The Commission's Delay Orders have noted the electric power suppliers' reporting encouraging developments in the technology of power production from swine waste that, combined with the availability of RECs banked from current and prior years, would increase the likelihood that compliance with the swine waste set-aside requirements will be achieved at some point. The Commission finds that the verified joint motion demonstrates that the point of achieving partial compliance with the swine waste set-aside requirements has now arrived. In addition, the Commission's Delay Orders permitted the Joint Movants to bank RECs for several consecutive years. The Commission further finds that the cumulative effect of this banking has resulted in the ability for DEC, DEP, and Dominion to comply with the modified swine waste set-aside requirement as requested by the Joint Movants. The Commission, therefore, concludes that the Joint Movants' requested modifications to the swine waste set-aside requirements, as applied to DEC, DEP, and Dominion, is in the public interest. To require the other electric power suppliers to meet a similar requirement, however, would result in wiping the slate clean for compliance purposes in future years and make these smaller electric power suppliers' future compliance difficult or impossible. Therefore, consistent with the 2017 Delay Order, the Commission determines that it is in the public interest to delay entirely the 2018 swine waste set-aside requirements for one additional year, as applied to electric power suppliers other than DEC, DEP, and Dominion. Also consistent with its Delay Orders, the Commission determines that it is in the public interest to delay future increases in the swine waste set-aside requirement as requested by the Joint Movants, and to allow electric power suppliers that have acquired swine waste RECs for 2018 REPS compliance 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 2018 statewide poultry waste set-aside requirement established by N.C.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 and projects have experienced operational challenges. No party presented evidence that the aggregate 2018 poultry waste set-aside requirement of 700,000 MWh could be met; however, the parties agree that a modified compliance requirement of 300,000 MWh for 2018, 700,000 MWh for 2019, and 900,000 MWh for 2020 is achievable. The Commission determines that it is in the public interest to modify the requirements of N.C.G.S. § 62-133.8(f) as requested in the Joint Motion. 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 swine waste set-aside requirements of N.C.G.S. § 62-133.8(e) for electric public utilities shall be, and are hereby, modified according to the following schedule:

<u>Calendar Year</u>	<u>Requirement for Swine Waste Resources</u>
2018	0.02%
2019-2020	0.07%
2021-2023	0.14%
2024 and thereafter	0.20%

Electric public utilities 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 2018 with other compliance measures pursuant to N.C.G.S. § 62-133.8(b) and (c), including the use of solar RECs beyond the requirements of N.C.G.S. § 62-133.8(d);

2. That the swine waste set-aside requirements of N.C.G.S. § 62-133.8(e) for electric membership corporations and municipalities shall be, and are hereby, modified according to the following schedule:

<u>Calendar Year</u>	<u>Requirement for Swine Waste Resources</u>
2018	0.00%
2019-2020	0.07%
2020-2023	0.14%
2024 and thereafter	0.20%

Electric membership corporations and municipalities 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 2018 with other compliance measures pursuant to N.C.G.S. § 62-133.8(b) and (c), including the use of solar RECs beyond the requirements of N.C.G.S. § 62-133.8(d);

3. That the poultry waste set-aside requirements of N.C.G.S. § 62-133.8(f) shall be, and are hereby, modified according to the following schedule:

<u>Calendar Year</u>	<u>Requirement for Poultry Waste Resources</u>
2018	300,000 MWh
2019	700,000 MWh
2020 and thereafter	900,000 MWh

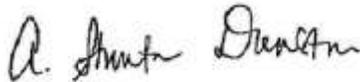
Electric power suppliers shall be allowed to bank any poultry waste RECs previously or subsequently acquired for use in future compliance years and to replace compliance with the poultry waste set-aside requirement in 2018 with other compliance measures pursuant to N.C.G.S. § 62-133.8(b) and (c), including the use of solar RECs beyond the requirements of N.C.G.S. § 62-133.8(d); and

4. 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.

ISSUED BY ORDER OF THE COMMISSION.

This the 8th day of October, 2018.

NORTH CAROLINA UTILITIES COMMISSION



A. Shonta Dunston, Acting Deputy Clerk

APPENDIX 3

**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

DOCKET NO. E-100, SUB 130
DOCKET NO. SP-4929, SUB 0
DOCKET NO. SP-1156, SUB 0
DOCKET NO. SP-3277, SUB 1
DOCKET NO. EMP-17, SUB 0
DOCKET NO. EMP-30, SUB 0
DOCKET NO. EMP-61, SUB 0
DOCKET NO. SP-161, SUB 1
DOCKET NO. SP-482, SUB 1
DOCKET NO. SP-1210, SUB 1
DOCKET NO. SP-1324, SUB 0
DOCKET NO. SP-1377, SUB 0
DOCKET NO. SP-3167, SUB 0
DOCKET NO. SP-3190, SUB 1
DOCKET NO. SP-4463, SUB 0
DOCKET NO. SP-5002, SUB 0
DOCKET NO. SP-5003, SUB 0
DOCKET NO. SP-5154, SUB 0
DOCKET NO. SP-5235, SUB 0
DOCKET NO. SP-6372, SUB 1
DOCKET NO. SP-6372, SUB 4
DOCKET NO. SP-6529, SUB 0
DOCKET NO. SP-6832, SUB 0
DOCKET NO. SP-6842, SUB 0
DOCKET NO. SP-7460, SUB 1
DOCKET NO. SP-7729, SUB 0
DOCKET NO. SP-7817, SUB 0
DOCKET NO. SP-7986, SUB 0
DOCKET NO. SP-8013, SUB 0
DOCKET NO. SP-8356, SUB 0
DOCKET NO. SP-8469, SUB 0
DOCKET NO. SP-8545, SUB 0
DOCKET NO. SP-8600, SUB 0
DOCKET NO. SP-8638, SUB 0
DOCKET NO. SP-8692, SUB 0
DOCKET NO. SP-8845, SUB 0
DOCKET NO. SP-9494, 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) – 2018) ENERGY FACILITIES

BY THE COMMISSION: On August 7, 2018, the Commission issued an Order giving notice of its intent to revoke the registration of 137 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’s records, and records maintained in North Carolina Renewable Energy Tracking System (NC-RETS), the owners of the 36 new and renewable energy facilities listed in Appendices A and B did not complete their annual certification on or before October 1, 2018, as required by the Commission’s August 7, 2018 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 registrations of the 36 facilities listed in Appendices A and B effective October 1, 2018.

IT IS, THEREFORE, ORDERED as follows:

1. That the registration previously approved by the Commission for the 36 facilities listed in Appendices A and B shall be, and are hereby, revoked effective October 1, 2018;
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, 2018 or later;
4. That any RECs dated October 1, 2018 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 30th day of October, 2018.

NORTH CAROLINA UTILITIES COMMISSION

A handwritten signature in cursive script, appearing to read "Linnetta Threatt", written in black ink.

Linnetta Threatt, Deputy Clerk

Revocation of Registered Facilities
(NC-RETS Participants)

Docket Number	Facility Owner	State
SP-4929, SUB 0	Dave Minnich	NC
SP-1156, SUB 0	GE Aviation	NC
SP-3277, SUB 1	McFarland Septic, LLC	NC

Revocation of Registered Facilities (Non NC-RETS Participants)		
Docket Number	Facility Owner	State
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
SP-161, Sub 1	Coastal Carolina Clean Power, LLC	NC
SP-482, Sub 1	Raylen Vineyards, Inc.	NC
SP-1210, Sub 1	Concepts by Gary, LLC	NC
SP-1324, Sub 0	Norman Fortier	NC
SP-1377, Sub 0	FLS Solar 60, LLC	NC
SP-3167, Sub 0	Woodland 258 Farm, LLC	NC
SP-3190, Sub 1	Bethel Price Solar, LLC	NC
SP-4463, Sub 0	Staley Solar, LLC	NC
SP-5002, Sub 0	Upper Piedmont Renewables, LLC	NC
SP-5003, Sub 0	Foothills Renewables, LLC	NC
SP-5154, Sub 0	Rowan Solar, LLC	NC
SP-5235, Sub 0	Sanchez 18 Solar, 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-7460, Sub 1	ESA Sherrills Ford, 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-8356, Sub 0	Varken Bioenergy, LLC	NC
SP-8469, Sub 0	ESA Sun Farming NC, LLC	NC
SP-8545, Sub 0	ESA Winton Solar, LLC	NC
SP-8600, Sub 0	ESA Sun Farming, 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-9494, Sub 0	Storm Energy North Carolina, 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) - 2019) 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, 9 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, 2019. In addition, 78 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, 2019.

The Commission, therefore, finds good cause to notice its intent to revoke, as of October 5, 2019, 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 5, 2019, 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 2019 annual certification requirement in Rule R8-66(b) for recently-registered facilities that received orders accepting a registration statement after January 1, 2019.

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 5, 2019, 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 5, 2019, 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;

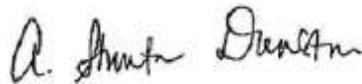
5. That the Chief Clerk shall distribute a copy of this Order to all of the parties in Docket No. E-100, Sub 113.; and

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 4th day of September, 2019.

NORTH CAROLINA UTILITIES COMMISSION



A. Shonta Dunston, Deputy Clerk

Registered Facilities Pending Revocation (NC-RETS Participants)		
Docket Number	Facility Owner	State
SP-332, Sub 0	Barkley Sexton Energy, LLC	NC
SP-1330, Sub 0	Lemuel D. Black	NC
SP-3630, Sub 1	SAIA Charlotte Terminal	NC
SP-523, Sub 1	Chapel Hill Tire	NC
SP-294, Sub 0	Hamlin Family, LLC	NC
SP-445, Sub 0	Inman Mills	NC
SP-404, Sub 0	Landfair Farms, LLC	NC
SP-64, Sub 1	Ray Ward	NC
SP-85, Sub 1	South Yadkin Power, Inc.	NC

Registered Facilities Pending Revocation (Non NC-RETS Participants)		
Docket Number	Facility Owner	State
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
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-27, Sub 0	Gaston County Schools	NC
SP-833, Sub 0	Tony Smith	NC
SP-833, Sub 1	Tony Smith	NC
SP-891, Sub 0	Criterion Powers Partners, LLC	NC
SP-1012, Sub 0	Public Library of Charlotte & Mecklenburg County	NC
SP-1506, Sub 0	Fibrominn, LLC	NC
SP-2811, Sub 0	Mark and Janet Hosey	NC
SP-2921, Sub 0	Bladenboro Farm 2, LLC	NC
SP-2962, Sub 0	Lucky Clay Farms, LLC	NC
SP-2962, Sub 1	Lucky Clay Farms, LLC	NC
SP-2962, Sub 2	Lucky Clay Farms, LLC	NC
SP-2962, Sub 3	Lucky Clay Farms, LLC	NC
SP-3116, Sub 1	Wayne Cooley	NC
SP-3241, Sub 0	Sun-Power Systems, Inc.	NC
SP-3345, Sub 1	Duke University	NC
SP-3473, Sub 0	Palmetto Solar, LLC	NC
SP-3590, Sub 0	Soluga Farms IV, LLC	NC
SP-3687, Sub 0	Innovative Solar 53, LLC	NC
SP-3868, Sub 1	Pleasant Grove Solar, LLC	NC
SP-4001, Sub 0	Harvest Solar 1, LLC	NC
SP-4042, Sub 0	SolarGreen Ahoskie-North, LLC	NC
SP-4446, Sub 0	Warrenton Solar 1, LLC	NC
SP-4563, Sub 0	Achilles Farm, LLC	NC
SP-4607, Sub 0	Northern Cardinal Solar, LLC	NC
SP-4693, Sub 0	Harvest Greenville I, LLC	NC

SP-4912, Sub 0	Soy Solar, LLC	NC
SP-4927, Sub 0	Daniela & Thomas Doyle	NC
SP-5070, Sub 0	Icarus Solar, LLC	NC
SP-5098, Sub 1	Shine Solar I, LLC	NC
SP-5100, Sub 1	Fire Solar I, LLC	NC
SP-5108, Sub 0	Doug Stuber	NC
SP-5195, Sub 0	Red Toad Powhatan Phase 2, LLC	NC
SP-5196, Sub 0	Lane Solar Farm, LLC	NC
SP-5241, Sub 0	Red Toad Phase 2 Buffalo Road, LLC	NC
SP-5344, Sub 0	Sadiebrook Solar, LLC	NC
SP-5422, Sub 0	North 301 Solar, LLC	NC
SP-5440, Sub 0	Five Forks Solar, LLC	NC
SP-5650, Sub 0	HCE Moore 1, LLC	NC
SP-5701, Sub 0	David Rubinow	NC
SP-6225, Sub 0	Pinesage Solar Farm, LLC	NC
SP-6533, Sub 0	Page Solar Farm, LLC	NC
SP-6991, Sub 0	Old Road Solar, LLC	NC
SP-7010, Sub 0	Jackson Solar, LLC	NC
SP-7200, Sub 0	Lucky Clays Farm & Forestry, LLC	NC
SP-7214, Sub 0	Atkinson Solar II, LLC	NC
SP-7718, Sub 0	Hopskin Solar, LLC	NC
SP-7781, Sub 0	Bear Poplar Solar, LLC	NC
SP-7785, Sub 0	Norris Solar Farm, LLC	NC
SP-7844, Sub 0	Spencer Mountain Hydropower, LLC	NC
SP-7984, Sub 0	Hwy 97 Solar, LLC	
SP-8023, Sub 0	Freedom Solar, LLC	NC
SP-8120, Sub 0	Warren Solar Farm, LLC	NC
SP-8149, Sub 0	Quarter Horse Farm, LLC	NC
SP-8170, Sub 0	Flatwood Farm, LLC	NC
SP-8203, Sub 0	C&C Solar, LLC	NC
SP-8288, Sub 0	Marigold Solar, LLC	NC
SP-8336, Sub 0	NJC Solar, LLC	NC
SP-8427, Sub 0	Mt. Olive Solar 2, LLC	NC
SP-8468, Sub 0	Eversfield Solar Farm, LLC	NC
SP-8518, Sub 0	Three Bridge Farm, LLC	NC
SP-8684, Sub 0	Independence Solar, LLC	NC
SP-8921, Sub 1	Stacy Pontarollo	NC

SP-9392, Sub 0	Ellington Branch Farm Solar, LLC	NC
SP-9418, Sub 2	Lenova (United States), Inc.	NC
SP-9418, Sub 3	Lenova (United States), Inc.	NC
SP-9418, Sub 4	Lenova (United States), Inc.	NC
SP-9418, Sub 6	Lenova (United States), Inc.	NC
SP-9418, Sub 7	Lenova (United States), Inc.	NC
SP-9898, Sub 0	Cape Holiday Solar, LLC	NC
SP-10425, Sub 0	Gray Rock Solar, LLC	NC
SP-11169, Sub 0	TES Kinston Kinston Solar 23, 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