

**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

DOCKET NO. E-7, SUB 1086
DOCKET NO. E-7, SUB 1087

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of
Application of Duke Energy Carolinas, LLC,) ORDER ACCEPTING REGISTRATION
for Registration of New Renewable Energy) OF NEW RENEWABLE ENERGY
Facilities) FACILITIES

HEARD: Tuesday, November 3, 2015, at 2:00 p.m., in Commission Hearing Room 2115,
Dobbs Building, 430 North Salisbury Street, Raleigh, North Carolina

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

APPEARANCES:

For Duke Energy Carolinas, LLC:

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For Optima KV, LLC:

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For the Using and Consuming Public:

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BY THE COMMISSION: On June 8, 2015, in Docket No. E-7, Sub 1086 and June 9, 2015, in Docket No. E-7, Sub 1087, Duke Energy Carolinas, LLC (DEC), filed registration statements as new renewable energy facilities for its Buck and Dan River combined-cycle generating facilities, respectively. DEC stated that Buck and Dan River “will be combusting directed biogas derived from swine waste and other biomass to generate electricity for DEC’s customers.” DEC further stated that it “has entered into two contracts to purchase directed biogas produced by a swine waste renewable development company and a poultry processing plant in the Midwest.” Finally, DEC noted that the Commission determined that directed biogas is a renewable energy resource in its March 21, 2012 Order on Request for Declaratory Ruling in Docket No. SP-100, Sub 29. On July 9, 2015, DEC filed amendments to the Buck and Dan River registration statements in response to a request by the Public Staff for additional information.

In the Buck and Dan River registration statements, DEC states that it has entered into contracts to purchase directed biogas produced by two waste processors that produce swine waste renewable fuel: High Plains Bioenergy, LLC (High Plains), and Roeslein Alternative Energy of Missouri, LLC (RAE) (collectively, directed biogas suppliers). High Plains will produce biogas by anaerobic digestion of swine waste and other biomass at three covered anaerobic lagoons located in Guymon, Oklahoma. RAE will produce biogas by anaerobic digestion of 100% swine waste produced at nine hog farms in northern Missouri. The biogas produced by both directed biogas suppliers will be cleaned to pipeline quality, metered, injected into the interstate pipeline system, and nominated for use by DEC at Buck and Dan River. DEC states that it will secure contract paths and storage to ship the biogas in the interstate gas pipeline system to Buck and Dan River. DEC states that the Directed Biogas Fuel Producer Attestation form, Attachment 3 to each of the registration statements, will be used monthly by its directed biogas suppliers to: (1) represent, warrant, and attest to the quantity of directed biogas produced, and (2) confirm that all environmental attributes of the biogas being sold and delivered to DEC to be fired at Buck and Dan River remains intact and has not been resold.

The registration statements also include certified attestations that: (1) the facilities are in substantial compliance with all federal and state laws, regulations and rules for the protection of the environment and conservation of natural resources; (2) the facilities will be operated as new renewable energy facilities; (3) DEC will not remarket or otherwise resell any renewable energy certificates sold to an electric power supplier to comply with G.S. 62-133.8; and (4) DEC will consent to the auditing of its books and records by the Public Staff insofar as those records relate to transactions with North Carolina electric power suppliers, the purchase of fuel for the facilities or the generation of electricity at the facilities, and DEC agrees to provide the Public Staff and Commission with access to those books and records wherever they are located, as well as access to the facilities.

Petitions to intervene in both of the above-captioned dockets were granted by the Commission for the North Carolina Pork Council (NCPC); the North Carolina Sustainable Energy Association (NCSEA); GreenCo Solutions Inc.; the North Carolina Farm Bureau; Optima KV, LLC; and North Carolina Eastern Municipal Power Agency and North Carolina Municipal Power Agency Number 1.

On July 24, 2015, the Public Staff filed its recommendation as required by Commission Rule R8-66(e) stating that DEC's registration statements as new renewable energy facilities should be considered to be complete and that Buck and Dan River should be considered new renewable energy facilities. Additionally, the Public Staff stated that it had reviewed DEC's multi-fuel calculations and recommended that they be accepted.

On July 29, 2015, NCPC filed comments and requested a hearing in both of the above-captioned dockets. In summary, NCPC noted that "[t]he directed biogas combusted at Buck and Dan River would be generated primarily from swine waste collected from locations in Oklahoma and Missouri." NCPC stated that the swine waste set-aside requirement is intended to promote in-state goals and objectives and that DEC's proposal "will not advance those goals and in fact, could seriously impede the development of the in-state industry and infra-structure needed for those objectives and goals to be reached." NCPC recited the legislative history of the Renewable Energy and Energy Efficiency Portfolio Standard (REPS), in particular, that of the swine waste set-aside requirement, and noted prior Commission Orders stating that the "legislature's intent [for the set-aside requirements was] to foster local economic development and the use of indigenous renewable energy resources." NCPC also acknowledged the Commission's determination in Docket No. SP-100, Sub 29 that directed biogas is a renewable energy resource, but stated that the Commission did not "resolve the question of whether RECs [renewable energy certificates] generated from the directed biogas would be subject to the out-of-state limits." NCPC noted that in Docket SP-100, Sub 29 the Commission stated that "the definition of renewable energy resource is not geographically dependent." NCPC requested that the Commission determine that RECs produced at Buck and Dan River "be deemed out-of-state RECs subject to the limits in [G.S.] 62-133.8(b)(2)e and (c)(2)d beginning in compliance year 2018." NCPC stated that the suggestion to wait until compliance year 2018 "is intended to permit DEC to recoup costs invested to date in the projects and recognizes that in-state sources are unlikely to meet demand in the short term." Alternatively, NCPC requested that the Commission delay acceptance of DEC's registration statements "for 6 to 12 months to allow time for the projects that are now taking form to come to fruition or to a point in development that shows they will commence production in the short-term."

On August 3, 2015, NCSEA filed comments in support of NCPC's requests. NCSEA opined that Buck and Dan River are different from the two directed biogas facilities previously approved by the Commission, stating:

First, DEC's proposed "new renewable energy facilities" will not address resources or issues indigenous to the State; DEC's facilities will actually impede indigenous resource use and create, rather than resolve, an issue.

Second, DEC's proposed "new renewable energy facilities" will not actually foster new development of renewable energy facilities.

On August 18, 2015, RAE filed a letter in support of DEC's registration of Buck and Dan River. In summary, RAE described its project with Murphy-Brown of Missouri, LLC, in which RAE will harvest biogas from swine waste using anaerobic digesters developed by RAE. In addition, RAE stated that this project can be a model for North Carolina and other states to use in developing similar systems.

On August 18, 2015, DEC filed a response to NCPC's comments. In summary, DEC asserted that its registration statements for Buck and Dan River meet the requirements of G.S. 62-133.8 and the Commission's rules for registration as a new renewable energy facility. Further, DEC stated that NCPC's position should be rejected because it would impose on DEC restrictions that are beyond the REPS requirements and would adversely affect DEC's compliance with the REPS. Further, DEC maintained that registration of Buck and Dan River represents an interim step in DEC's ongoing compliance strategy to achieve and maintain full compliance with the REPS. According to DEC, these transactions would allow it to achieve at least partial compliance with the swine waste set-aside requirement while it continues to seek a diversified portfolio of multiple contracts with developers in North Carolina. Finally, DEC stated that it was opposed to NCPC's request for a hearing because there were no factual or legal issues in dispute.

On October 15, 2015, the Commission issued an Order scheduling an oral argument on November 3, 2015, regarding NCPC's request that RECs produced at Buck and Dan River be deemed out-of-state RECs subject to the limits in G.S. 62-133.8(b)(2)e and (c)(2)d. On November 3, 2015, the oral argument was held as scheduled.

On November 6, 2015, RAE filed additional comments in response to three contentions made during the oral argument. In summary, RAE stated that: (1) RAE's project is not being subsidized by federal or state funds or unrecovered costs, (2) the project is on target to be completed in a timely manner, and (3) depending on the success of its project in Missouri, RAE intends to be active in similar projects in North Carolina.

DISCUSSION

Registration as New Renewable Energy Facilities

Pursuant to G.S. 62-133.8(a)(5), a "new renewable energy facility" is a renewable energy facility that was placed into service on or after January 1, 2007. A "renewable energy facility" includes a facility that generates electric power by the use of a "renewable energy resource," G.S. 62-133.8(a)(7), which includes "a biomass resource, including agricultural waste, animal waste," and various other biomass resources. G.S. 62-133.8(a)(5).

In previous orders, the Commission has concluded that biogas derived from the anaerobic digestion of animal waste is a renewable energy resource. See, e.g., Order

Accepting Registration of New Renewable Energy Facility, In re Application of Orbit Energy, Inc., Docket No. SP-297, Sub 0 (June 19, 2008); Order Accepting Registration of New Renewable Energy Facility, In re Application of Green Energy Solutions NV, Inc., Docket No. SP-578, Sub 0 (Jan. 20, 2010).

Further, in Docket No. SP-100, Sub 29, the Commission concluded that such biogas, produced outside of North Carolina, injected into the natural gas pipeline, and nominated for use by a natural gas-fueled electric generating facility is a renewable energy resource pursuant to G.S. 62-133.8(a)(5). On March 21, 2012, at the request of Bloom Energy Corporation, the Commission issued a declaratory ruling that such “directed biogas” qualifies as a renewable energy resource where, on a case-by-case basis, a proper showing can be made that the biogas is displacing natural gas and retains all required environmental attributes that make the gas renewable. Order on Request for Declaratory Ruling, In re Request of Bloom Energy Corporation, Docket No. SP-100, Sub 29 (March 21, 2012) (Bloom Order). The Commission stated:

[B]y purchasing the Directed Biogas and nominating it for delivery to the Facility, an Owner is displacing, or offsetting, conventional natural gas that would have otherwise been injected into the pipeline. The Commission, therefore, concludes that, as long as appropriate attestations are made and records kept regarding the source and amounts of biogas injected into the pipeline and used by the Facility to ensure that no biogas is double-counted, the Directed Biogas would be a renewable energy resource and the resulting electric generation would be eligible to earn RECs that may be used for REPS compliance.

Bloom Order, at 4. In addition, the Commission emphasized that the “definition of renewable energy resource is not geographically dependent” and that issues regarding the production of in-State versus out-of-State RECs are “irrelevant to the question of whether the Directed Biogas is a renewable energy resource.” Id. at 5.

Subsequent to the Bloom Order, the Commission approved registration statements for two facilities fueled by directed biogas as eligible for REPS compliance. On December 10, 2012, in Docket No. SP-1642, Sub 1, the Commission approved Apple Inc.’s request to register a 10 MW fuel cell generating facility as a new renewable energy facility. On May 5, 2014, in Docket No. SP-2014, Sub 1, the Commission approved a facility fueled by directed biogas for the production of combined heat and power as a new renewable energy resource.

Applying the plain language of the above statutes, as the Commission has done in the Bloom Order and in subsequent orders, the Commission concludes that DEC has met the requirements of the REPS statute and Commission Rule R8-66 for registration of Buck and Dan River as new renewable energy facilities. Buck was placed into service in 2011; Dan River in 2012. Further, each facility utilizes, at least in part, directed biogas, a renewable energy resource, to generate electricity. The geographic location from which the biogas is sourced is irrelevant to the determination of whether Buck and Dan River

are new renewable energy facilities, which only considers the dates on which the facilities began operations and the type of fuel used, at least in part, to generate electricity. In addition, based upon the Public Staff's review and unopposed recommendation, the Commission accepts DEC's multi-fuel calculations.

Use of Renewable Energy Certificates for REPS Compliance

No party disagrees that Buck and Dan River should be registered as new renewable energy facilities or that the biogas used at these facilities to generate electricity is a renewable energy resource. NCPC, however, has urged the Commission to allow the use of electricity derived from out-of-State directed biogas to meet no more than 25% of the REPS swine waste set-aside requirement. G.S. 62-133.8(e).

Pursuant to G.S. 62-133.8(b)(2), an electric public utility such as DEC may comply with the REPS requirements by any one or more of the following:

- (a) Generate electricity at a new renewable energy facility;
- (b) Use a renewable energy resource at a generating facility, other than waste heat derived from the combustion of a fossil fuel;
- (c) Reduce energy consumption through implementation of an energy efficiency measure;
- (d) Purchase electricity from a new renewable energy facility, including such a facility located outside North Carolina if the power is delivered to a public utility that provides retail electricity to customers within North Carolina;
- (e) Purchase unbundled renewable energy certificates (RECs) derived from a new renewable energy facility, with the use of unbundled RECs derived from out-of-State facilities limited to 25% of the public utility's REPS requirements;
- (f) Use banked RECs; or
- (g) Electricity demand reduction.

A REC is defined, in pertinent part, as a

tradable instrument that is equal to one megawatt hour of electricity or equivalent energy supplied by a renewable energy facility, a new renewable energy facility, or reduced by implementation of an energy efficiency measure that is used to track and verify compliance with the requirements of this section as determined by the Commission.

G.S. 62-133.8(a)(6). Thus, the owner of a renewable energy facility earns one REC for every megawatt-hour of energy generated by a renewable energy resource. RECs, however, are not required to be bundled, or sold together with the associated renewable energy, but may also be unbundled and sold separately from the energy. This allows the energy to be sold to a local utility or other purchaser and the REC to be sold to a different, often remote entity.

On September 22, 2009, the Commission issued an Order in Docket No. E-100, Sub 113 in response to a request by Dominion North Carolina Power to clarify the use of unbundled out-of-State RECs purchased to meet the REPS solar, swine waste, and poultry waste set-aside requirements. G.S. 62-133.8(d)-(f). The Commission concluded that allowing the electric power suppliers to use the same compliance methods to meet the REPS general obligation and set-aside requirements best harmonizes the provisions of the REPS. Thus, pursuant to G.S. 62-133.8(b)(2)e and (c)(2)d, unbundled RECs derived from out-of-State renewable and new renewable energy facilities can be used to meet no more than 25% of the solar, swine waste, and poultry waste set-aside requirements.

The NCPC urges the Commission to deem all of the RECs earned by DEC at Buck and Dan River from the use of out-of-State directed biogas to be out-of-State RECs, thus limiting their usage for compliance to not more than 25% of the applicable REPS requirements, including the swine waste set-aside requirement, beginning in compliance year 2018. NCPC contends that the General Assembly included the swine waste set-aside requirement to address the need of North Carolina farmers to utilize swine waste in a way that would eliminate or greatly reduce the environmental impacts presently being experienced in this State. NCPC recounts the history of problems with hog lagoon/spray field treatment systems and the General Assembly's decision in 2007, the same year as the REPS, to make permanent the previously temporary moratorium on lagoon/spray field treatment systems. NCPC maintains that these two actions by the General Assembly signify the legislature's intent to use the swine waste set-aside requirement to help resolve North Carolina's swine waste problem and to promote the expansion of environmentally compatible hog production in North Carolina. NCPC contends that this goal will be severely hampered or defeated if DEC and other electric power suppliers are allowed to use RECs associated with energy derived from directed biogas to fulfill their total swine waste set-aside requirement.

DEC effectively counters NCPC's position by providing a step-by-step analysis of (1) the manner in which DEC intends to earn RECs from directed biogas at Buck and Dan River, and (2) the application of G.S. 62-133.8(a) and (b) in determining the guidelines for earning RECs, in particular in-State versus out-of-State RECs. In addition, DEC states that the General Assembly chose not to place any geographic limits on the source of renewable energy resources. DEC notes that the General Assembly obviously knew how to expressly impose such geographic limits when it intended to do so, citing the 25% limitation on the use of unbundled out-of-State RECs. Moreover, DEC points to some of the practical difficulties that would result if the Commission attempted to define and regulate geographic limits on the renewable energy resources used by electric power suppliers. For example, DEC states that the Commission would be hard pressed to determine whether waste wood used by a renewable energy facility was derived from building projects and timber operations in North Carolina or was trucked in from a bordering state, such as Virginia or South Carolina. The same practical considerations would apply to attempts to track the location at which swine and poultry waste was produced. In addition, DEC submits that it has worked with NCPC and other stakeholders to develop cost-effective swine waste-to-energy facilities in North Carolina and will continue to do

so. Lastly, DEC contends that the development of swine waste-to-energy facilities by RAE and High Plains in Missouri and Oklahoma, respectively, will produce new and improved technologies that will help jump-start the development of such projects in North Carolina.

NCPC's public policy argument is compelling. There is little doubt that the General Assembly's main purpose in enacting the swine waste set-aside requirement was to incentivize the utilization of new technologies in North Carolina for environmentally friendly uses of swine waste in the production of electricity. Nevertheless, NCPC's position that the REPS is ambiguous is not persuasive.

The Commission's first task in carrying out the legislature's intent is to interpret the plain meaning of the words of a statute, rule or regulation. See Lenox, Inc. v. Tolson, 353 N.C. 659, 664, 548 S.E.2d 513, 518 (2001). The Commission can consider the legislative history of a statute, particularly when there is ambiguity in the statute. However, the Commission finds no ambiguity in the provisions of G.S. 62-133.8 that are at issue in this docket.

As described above, under G.S. 62-133.8(b)(2), there are numerous methods by which electric public utilities can meet their REPS obligations. The statute is very specific in describing each method separately and in plain language, and it allows an electric public utility to meet its REPS obligations by any one or more of the methods. In the present docket, DEC is planning to meet all or a portion of its swine waste set-aside obligation by generating electricity at two new renewable energy facilities located in North Carolina. This method complies with G.S. 62-133.8(b)(2)a. As the fuel used to generate the electricity is derived from swine waste, the RECs may be used to meet the swine waste set-aside requirement of G.S. 62-133.8(e).

In addition, it is possible that DEC will sell some of the swine waste RECs earned at Buck and Dan River to other electric power suppliers for their own use in meeting the REPS swine waste set-aside requirement. For example, if DEC has more swine waste RECs than it needs, it might sell a portion of the swine waste RECs to Duke Energy Progress, LLC (DEP). In that event, DEP could meet its own REPS swine waste set-aside obligation, or a portion of that obligation, by purchasing unbundled RECs from in-State new renewable energy facilities, as allowed under 62-133.8(b)(2)e. Based on the plain meaning of G.S. 62-133.8(b)(2)a, the swine waste RECs produced at Buck and Dan River would be RECs derived from generating electricity at in-State new renewable energy facilities and, therefore, not subject to the 25% limitation of 62-133.8(b)(2)e and (c)(2)d on unbundled out-of-State RECs.

Lastly, it is clear that NCPC's requested relief is not based on an interpretation of the language of the REPS statute, but on a public policy argument. Otherwise, the limitation urged for the use of the RECs derived from out-of-State directed biogas would be effective for all REPS compliance and not applicable only in compliance years beginning at some future time. The Commission is not persuaded that it should adopt NCPC's policy argument in this case to so distort the plain meaning and intent of the legislature. Rather, the policy argument advocated by NCPC is properly a subject for the

legislature which can impose additional limitations, if desired, on the use for REPS compliance of RECs associated with the generation of energy at in-State new renewable energy facilities by out-of-State swine waste-derived directed biogas.

CONCLUSIONS

Based on the registration statements filed by DEC and the record as a whole in these dockets, including the source of fuel stated in the registration statements, the Commission finds good cause to accept registration of Buck and Dan River as new renewable energy facilities. DEC shall annually file the information required by Commission Rule R8-66 on or before April 1 of each year and shall be required to participate in the NC-RETS REC tracking system (<http://www.ncrets.org>) in order to facilitate the issuance of RECs. Pursuant to Commission Rule R8-67(d)(2), because DEC is using multiple fuels to generate electricity at Buck and Dan River, it shall earn RECs based only upon the energy derived from the renewable energy resources in proportion to the relative energy contents of the fuels used. Consistent with the Commission's January 20, 2010 Order on Motion for Clarification issued in Docket No. E-100 Sub 113, if any organic material other than swine waste is used to produce the directed biogas, only that portion of the electricity generated from the directed biogas that is derived from swine waste is eligible to earn RECs that may be used to meet the REPS swine waste set-aside requirement. Lastly, 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.

IT IS, THEREFORE, ORDERED as follows:

1. That the registration statements filed by DEC for Buck and Dan River as new renewable energy facilities shall be, and the same hereby are, accepted.
2. That DEC shall annually file the information required by Commission Rule R8-66 on or before April 1 of each year.

ISSUED BY ORDER OF THE COMMISSION.

This the 11th day of March, 2016.

NORTH CAROLINA UTILITIES COMMISSION

Gail L. Mount

Gail L. Mount, Chief Clerk