



Your Touchstone Energy® Partner

September 1, 2009

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Clerk's Office
N.C. Utilities Commission

VIA HAND DELIVERY

Renne Vance, Chief Clerk
North Carolina Utilities Commission
430 North Salisbury Street
Dobbs Building
Raleigh, NC 27603-5918

OFFICIAL COPY

Re: **GreenCo Solutions, Inc.**
2008 Compliance Report / 2009 Compliance Plan
Docket No. E-100, Sub 123 124

Dear Ms. Vance:

Pursuant to N.C. Gen. Stat. § 62-133.8 and Commission Rules R8-60 and R8-67, please find enclosed for filing GreenCo Solutions, Inc.'s Renewable Energy and Energy Efficiency Portfolio Standard 2009 Compliance Plan and 2008 Compliance Report for filing in connection with the above-captioned matter.

The 2008 Compliance Report / 2009 Compliance Plan contains confidential information, the unauthorized disclosure of which could adversely impact the ability of GreenCo members to comply with the requirements of North Carolina's REPS statute or otherwise further its purposes. Therefore, an original and 15 copies of the Plan are being filed under **SEAL** and should be treated confidentially and protected from public disclosure pursuant to N.C. Gen. Stat. § 132-1.2.

Also enclosed are an original and thirty (30) copies of the **public** version for filing with the Commission. The confidential information has been redacted from the public copies. Upon filing, please return one file-stamped copy to me in the self-addressed envelope.

Should you have any questions, please do not hesitate to contact me at 919.875.3121.

Sincerely,

Richard M. Feathers
Associate General Counsel

Wery
AG
7comm
Bennin
Wiley
Watson
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cc: Parties of Record

Enclosures

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GreenCo Solutions, Inc.
Renewable Energy and
Energy Efficiency Portfolio Standard
2009 Compliance Plan and
2008 Compliance Report

DOCKET NO. E-100, SUB ~~125~~ 124

September 1, 2009

GreenCo Solutions, Inc.
Renewable Energy and
Energy Efficiency Portfolio Standard
2009 Compliance Plan and
2008 Compliance Report

Rule R8-67(b) Compliance Plan

(i) Description of Planned Actions to Comply with G.S. 62-133.8 (c), (d), (e), and (f)

On September 12, 2008, GreenCo Solutions, Inc. (GreenCo) filed its Renewable Energy and Energy Efficiency Portfolio Standard Compliance Plan (2008 Plan). The 2008 Plan outlined activities commenced during 2008 as well as activities planned for 2009 and 2010. The strategy to comply with the REPS requirements presented in the 2009 REPS Compliance Plan (2009 Plan) has not changed substantially from the 2008 Plan.

GreenCo intends to continue to develop and pilot test energy efficiency programs designed to provide energy savings to meet a portion of the REPS obligation. At this time, GreenCo has not requested Commission approval of any energy efficiency programs but anticipates doing so later this year. GreenCo will evaluate DSM programs, including smart grid applications, for their potential to provide energy savings.

GS § 133.8 (c) (2) c allows cooperative power suppliers to meet up to 30% of their annual REPS target with energy received from their allocation of power marketed by the Southeastern Power Administration (SEPA). GreenCo member cooperatives' allocation of SEPA (within the 30% limitation) will be used to meet future REPS requirements.

GreenCo will additionally utilize the RECs provided by both in-state and out-of-state renewable energy facilities, subject to the 25% limitation on out-of-state resources, for REPS compliance.

(ii) List of Executed Contracts to Purchase RECs

1. QVC solar energy facility (Docket # SP-362 Sub 1) located near Rocky Mount, NC.

Type of Resource

Solar

Expected MWh

Approximately (BEGIN CONFIDENTIAL) [REDACTED] (END CONFIDENTIAL) MWh per year

Contract duration

Through December 31, 2018

2. NextEra wind energy facility located in Story County, Iowa

Type of Resource

Wind

Expected MWh

Approximately (BEGIN CONFIDENTIAL) [REDACTED] (END CONFIDENTIAL) MWh per year

Contract duration

10 years

(iii) List of Planned or Implemented Energy Efficiency Measures

In the 2008 Plan, GreenCo reported that GDS was engaged to investigate the potential for energy savings from several energy efficiency programs. The ultimate result of the GDS study was the lifetime levelized costs of more than 60 energy efficiency measures in the residential, agricultural, and business sectors. Through additional screening and analysis, GreenCo selected the following energy efficiency programs to pilot test:

1. Energy Star Lighting
2. Water Heater Retrofit
3. Energy Cost Monitor
4. Community Efficiency Campaign
5. Energy Star Appliances
6. Energy Star New Construction
7. Commercial Energy Efficient Equipment
8. Agricultural Energy Efficiency

Energy Star Lighting

After the results of the various marketing approaches described in the 2008 Plan were compiled, GreenCo recommended that each member-cooperative consider a direct mail of two (2) CFLs to each of their member-consumers at no cost to the consumer. When considering the program costs, this approach proved to be the most effective method to reduce lighting energy use and thereby produce RECs for compliance with REPS obligations. At this time, 62,000 kits of two (2) CFLs per kit have been delivered to the residential member-consumers of four (4) GreenCo member-cooperatives. Another 66,000 kits are planned to be delivered to residential member-consumers by the end of 2009.

Water Heating Retrofit

The Water Heating Retrofit program is now referred to as the Water Heating Efficiency Program. Four (4) energy savings measures (water heater insulation wrap, pipe insulation, low-flow aerators, and shower heads) were combined and marketed as a kit in the pilot study. Advertising was developed and published in the *Carolina Country* magazine, a cooperative publication commonly furnished to cooperative member-consumers. The total cost of each kit was approximately \$25, and during the pilot study, GreenCo members tested various price points for sales to their member-consumers. One GreenCo member-cooperative provided installation of the kits at no cost to the member-consumer during the pilot test.

During the pilot test, residential member-consumers showed substantial interest in the water heating efficiency kits. Sales of the kits were strong at each of the GreenCo-member cooperative that participated in the test. Follow up with the member-consumers that purchased the kits indicated that the kits were easily installed and that the consumer was satisfied with the product. Based on the results of the pilot study, GreenCo recommended that the kits be sold directly to member-consumers at a price of \$12.95. Member-consumers would be responsible for installation of the components of the kit, and advertising would run in early winter and late spring of each year in the *Carolina Country* magazine. At this time, approximately 4,400 kits have been sold to the residential consumers of 10 GreenCo member-cooperatives.

Energy Cost Monitor

The GDS study reported that overall household electricity consumption can be reduced by the use of devices that provide the consumer with direct feedback on energy consumption. As reported in the 2008 Plan, GreenCo purchased 400 devices and distributed them among three (3) GreenCo member-cooperatives that then offered them to their residential member-consumers at a price of \$49.95. Sales of the device have been very slow.

While GreenCo believes that providing residential consumers with energy consumption information will result in a reduction in household energy use, the device tested during the pilot study will probably not be incorporated into an energy efficiency program. The ultimate energy efficiency program, which focuses on consumer energy use information, will probably consist of

pre-paid devices, smart meter solutions, in-home displays, and other measures. While this energy efficiency program is still under development, over 6,000 member-consumers of GreenCo member-cooperatives are now participating in pre-pay energy programs that utilize in-home displays.

GreenCo will continue to evaluate this technology and its application for providing energy savings for residential member-consumers.

Community Efficiency Campaign

This program targets duct leaks, attic insulation, and air leakage. The program, as described in the 2008 Plan, was pilot tested at three (3) GreenCo member-cooperatives. The differences in the demographics at each member-cooperative provided a good cross section of residential member-consumers for the test. A total of 17 homes were retrofit during the pilot test. Preliminary analysis of the results indicates that the program is more cost effective in areas where the concentration of homes is greater than in those areas tested. Many homes in the pilot test required energy conservation measures beyond the scope of the Community Efficiency Campaign to make them energy efficient. Data from the pilot study suggests that to decrease the overall cost, additional upfront work is required to identify communities or neighborhoods for the campaign.

GreenCo continues to believe that the Community Efficiency Campaign can provide energy savings for residential member-consumers. After the data from the pilot test is reviewed more thoroughly, GreenCo will evaluate modifications to the program that will improve its cost effectiveness.

Energy Star Appliances

This program focuses on increasing the saturation of appliances such as clothes washers, dish washers, and refrigerators that have an Energy Star rating. GreenCo anticipates using incentives to reward member-consumers who chose an Energy Star appliance over a standard model. GreenCo representatives, along with other power providers in the state, have attended meetings called by the North Carolina Department of Commerce to discuss the marketing of Energy Star appliances.

Energy Star New Construction

This program is targeted at improving the energy efficiency in new residential construction. A workshop to discuss Energy Star new construction techniques and requirements was offered for GreenCo member-cooperatives in late August 2009.

Commercial Energy Efficient Equipment

Although the residential class constitutes the majority of energy sales by GreenCo member-cooperatives, there is significant potential for energy savings from member-consumers in the commercial class. GreenCo is testing a program to replace the existing lighting in commercial refrigeration cases with energy savings LED lighting. This type of lighting was successfully installed at a grocery store in the territory of one GreenCo member-cooperative. GreenCo will analyze the energy use of the store to determine the savings. GreenCo member-cooperatives have identified many other opportunities for lighting upgrades within the commercial class.

Agricultural Energy Efficiency

Several GreenCo member-cooperatives serve farming operations. This program will focus on improving the efficiency of lighting, ventilation, and irrigation in agricultural applications. GreenCo member-cooperatives have identified several poultry operations that could reduce energy usage by improving the energy efficiency of their lighting.

(iv) Projected NC Retail Sales and Year-End Number of Customer Accounts by Class

Year	Customers			Total	Sales (MWh)
	Res	Com	Ind		Total
2009	726,323	81,593	101	808,017	13,548,679
2010	742,197	83,224	101	825,522	13,849,084
2011	758,586	84,892	101	843,579	14,153,596
2012	775,537	86,595	101	862,234	14,467,305
2013	793,024	88,322	101	881,448	14,790,172
2014	811,062	90,095	101	901,258	15,123,474
2015	829,606	91,899	102	921,607	15,466,523
2016	848,749	93,738	102	942,588	15,818,474
2017	868,497	95,612	102	964,211	16,181,287
2018	888,938	97,541	102	986,580	16,555,851

(v) Current and Projected Avoided Costs Rates

GreenCo used \$0.05 per kWh as the avoided cost for all of its member-cooperatives in all analysis supporting the information reported in the 2009 Plan. Given that GreenCo's member-cooperatives secure wholesale power from several different entities, this number serves as an aggregate proxy for the actual avoided cost of each member.

(vi) Projected Total and Incremental Compliance Plan Costs

(BEGIN CONFIDENTIAL)

(END CONFIDENTIAL)

(vii) Compare Projected Costs to Annual Cost Caps

Comparison provided in the table above.

(viii) Not Applicable

(ix) Registration Information

All renewable energy facilities from which RECs will be used for compliance have been registered with the Commission except for the following. The owner has assured GreenCo that registration will be filed within the next few months.

Story Wind LLC

Wind generation facility

Story County, Iowa

12 MW portion purchased by GreenCo

Estimated production of (BEGIN CONFIDENTIAL) (END CONFIDENTIAL) MWh per year

Rule R8-67 (c) REPS Compliance Report

(i) Sources, Amounts, and Costs of RECs Used to Comply with G.S. 133.8 (c), (d), (e), and (f)

Source	Quantity	Costs
Solar		
Wind		
Total		

(ii) NC Retail Sales and Year-End Number of Customers by Customer Class

Customer Class	Customers	Retail Sales (MWh)
Residential	707,441	9,761,982
Commercial	62,917	2,364,482
Industrial	106	826,461
Total	770,464	12,952,926

(iii) Current Avoided Costs Rates and Avoided Costs Rates Applicable to Energy Derived From Long-Term PPAs

GreenCo uses \$0.05 per kWh (\$50 per MWh) as the avoided cost for all of its members. Given that the members of GreenCo secure power supply from several different entities under different contract terms and costs, \$0.05 per kWh serves as an aggregate proxy for the actual avoided costs of each individual member.

(iv) Total and Incremental Costs to Comply with G.S. 62-133.8 (c), (d), (e), and (f)

GreenCo member-cooperatives incurred costs of \$2,096,229 for REPS compliance in 2008. The costs of RECs from renewable energy resources, the total program costs of energy efficiency programs, and the GreenCo administrative expenses paid by each individual GreenCo member-cooperative are included in the total value. The incremental costs, in excess of the avoided costs of energy, incurred by GreenCo members in 2008 for REPS compliance is \$1,424,751.

(v) Compare Actual Compliance Costs to Annual Cost Caps

Customer Class	Year-end Number of Customers	Annual Per-Account Cost Cap	Total Annual Cost Cap
Residential	707,441	\$10	\$7,074,410
Commercial	62,917	\$50	\$3,145,850
Industrial	106	\$500	\$53,000
2008 Total	770,464		\$10,273,260

The total annual cost cap is \$10,273,260, and the actual incremental costs incurred by GreenCo member-cooperatives in 2008 for REPS compliance is \$1,424,751.

(vi) Status of Compliance with G.S. 62-133.8 (c), (d), (e), and (f)

GS §62-133.8(c) (1) specifies that the REPS requirement for electric power suppliers commences in calendar year 2010 for solar resources and in 2012 for all other resources. While there is no REPS target percentage for the time period covered by this Report (calendar year 2008), GreenCo intends to follow the strategy described in the Renewable Energy and Energy Efficiency Portfolio Standard Compliance Plan filed with the Commission on September 12, 2008 to meet the REPS requirements of future reporting periods.

(vii) Identification of any RECs to be Carried Forward Pursuant to G.S. 133.8 (b) (2) f or (c) 2 f

REC	Quantity
QVC Solar Project	
Hamlin Solar Project	
Story County Wind Project	
Total	

(viii) For Renewable Energy Facilities which Provide RECs

Per GS §62-133.8(c) (1) the REPS requirement for Electric Membership Corporations does not commence during the time period covered by this Report (calendar year 2008). As a result, no RECs produced by renewable energy facilities were used for compliance.

(ix) Reduced Energy Consumption Achieved after January 1, 2008

Energy Efficiency Programs

Per GS §62-133.8(c) (1) the REPS requirement for Electric Membership Corporations does not commence during the time period covered by this Report (calendar year 2008). As a result, no RECs produced by energy efficiency programs were used for compliance.

GreenCo member-cooperatives initiated several energy efficiency pilot programs during 2008. A list of those programs and the estimated energy savings from those pilot studies during the test period is shown below.

Program	Estimated Energy Savings (MWh)
Miscellaneous Programs	724
Energy Star Lighting	7,750
Power Cost Monitor	5,798
Community Efficiency Campaign	210
Residential Water Heating	603
Energy Star Homes	-
Community Efficiency Campaign Low Income	113
Energy Star Appliances	49
Commercial Energy Efficiency	12,042
Energy Efficiency Agriculture	2,576
Total	29,865

DSM Programs

GreenCo members did not implement any new demand-side management programs during calendar year 2008. As a result, there is no reduction in energy from demand-side management programs to report.

(x) Propose Methodology for Determining Cap on Incremental Costs to Comply with G.S. 62-133.8 (c), (d), (e), and (f) and Fund Research Including Determination of Year-End Number of Customer Accounts

GreenCo member-cooperatives report their year-end number of consumers served by class to the Rural Utilities Service (RUS) using RUS Form 7. A compilation of these data was used by GreenCo to calculate the total number of consumers served in each class by GreenCo member-cooperatives. Classes include:

- **Residential**
 - Residential
 - Residential seasonal
- **Commercial**
 - Commercial accounts with less than 1000 kVA transformer capacity
 - Public street and highway lighting
 - Sales for resale
- **Industrial**
 - Industrial accounts with greater than 1,000 kVA transformer capacity

The total cost cap is based on applying the total member count in each class as reported on RUS Form 7 by the annual cost cap for each respective class.

Appendix I—Members of GreenCo Solutions, Inc.

Albemarle EMC

Blue Ridge EMC

Brunswick EMC

Cape Hatteras EMC d/b/a Cape Hatteras Electric Cooperative

Carteret-Craven EMC d/b/a Carteret-Craven Electric Cooperative

Central EMC

Edgecombe-Martin County 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 d/b/a Roanoke Electric Cooperative

South River EMC

Surry-Yadkin EMC

Tideland EMC

Tri-County EMC

Union EMC d/b/a Union Power Cooperative

Wake EMC