Implementation of Senate Bill 3 (Session Law 2007-397)

Presented to

Environmental Review Commission

Edward S. Finley, Jr., Chairman

Who We Are

NORTH CAROLINA UTILITIES COMMISSION

Commissioners

Edward S. Finley, Jr., Chairman

Lorinzo L. Joyner
William T. Culpepper, III
Bryan E. Beatty

Susan W. Rabon
ToNola D. Brown-Bland

Dobbs Building, 430 North Salisbury Street 27603-5918
4325 Mail Service Center 27699-4325
Phone: (919) 733-4249 Fax: (919) 733-7300
www.ncuc.net

Renewable Energy and Energy Efficiency Portfolio Standard (REPS)

- In 2007, North Carolina became the first State in the Southeast to adopt a renewable portfolio standard – Session Law 2007-397 (Senate Bill 3)
- REPS requirement may be met through combination of renewable energy generation and energy efficiency savings
- REPS compliance costs are recovered through a rate rider
- Legislation further provides timely cost recovery for new demand-side management (DSM) programs and energy efficiency (EE) measures by electric public utilities, including the opportunity for appropriate utility incentives

Reports to the General Assembly Regarding REPS, DSM/EE

- 2008 Annual Report Regarding Renewable Energy and Energy Efficiency Portfolio Standard in North Carolina, October 1, 2008
- 2009 Annual Report Regarding Renewable Energy and Energy Efficiency Portfolio Standard in North Carolina, October 1, 2009
- Biennial Report on Proceedings for Electric Utilities involving Energy Efficiency and Demand-Side Management Programs, Cost-Recovery and Incentives, September 1, 2009
- The Results of Cost Allocations for Electric Utilities, October 1, 2009

REPS Compliance Requirement

- REPS requirement applies to investor-owned electric utilities (electric public utilities), electric membership corporations (EMCs), and municipally-owned electric suppliers
- General REPS requirement increases from 3% in 2012 to 12.5% by 2021 (for electric public utilities)
- Specific set-asides established for energy derived from the sun (beginning in 2010) and from poultry and swine waste
- Cap imposed on incremental cost of compliance

REPS Implementation by the Commission

- On August 23, 2007, the Commission issued an Order initiating a rulemaking proceeding to adopt rules to implement Senate Bill 3
- On February 29, 2008, the Commission issued an Order addressing 105 issues (identified in the comments received from 24 entities) and adopting final rules
- Subsequently, the Commission has issued numerous additional orders resolving questions of statutory interpretation

Issues in Interpreting Senate Bill 3

G.S. 62-133.8(b)(2)(d) allows an electric public utility to count towards REPS compliance power purchased from a new renewable energy facility located outside of North Carolina if the power is delivered to the North Carolina utility. G.S. 62-133.8(b)(2)(c) allows the electric public utility to count toward REPS compliance RECs derived from out-of-state facilities, but only up to 25% of its REPS requirement.

A renewable generator in South Carolina generates electricity and produces steam. It contracts to sell the electricity and associated RECs to a North Carolina utility. It sells the steam to an industrial host, but sells the RECs associated with the steam to the North Carolina utility under the same contract. Do all REC's purchased count toward REPS compliance?

The Commission concluded that all RECs may count toward REPS compliance. However, the RECs associated with the steam were limited by the 25% out-of-state cap, while the RECs associated with the electric power were not.

Issues in Interpreting Senate Bill 3

G.S. 62-133.8(b)(2)(b) allows an electric public utility to meet its REPS obligation by using "a renewable energy resource to generate electric power at a generating facility other than the generation of electric power from waste heat derived from the combustion of fossil fuel." G.S. 62-133.8(a)(8) includes hydropower as a "renewable energy resource."

May the electric public utility count toward REPS compliance all of the power generated at its own hydroelectric power facilities?

The Commission concluded that an electric public utility may not count all of its own hydroelectric generation toward REPS compliance. Only increments of capacity 10 MW or less installed after January 1, 2007, qualify for REPS compliance. G.S. 62-133.8(a)(5)(a) and (7) limit the utility's use of hydroelectric power for REPS compliance to that produced by "new" hydroelectric generating capacity of 10 MW or less. Also, the Commission concluded that a "facility" is not the individual units in a combined hydroelectric generating station.

Issues in Interpreting Senate Bill 3

G.S. 62-133.8(a)(8) defines “renewable energy resource” to include “a biomass resource, including agricultural waste, animal waste, wood waste, spent pulping liquors, combustible residues, combustible liquids, combustible gases, energy crops, or landfill methane.”

Among the fuel sources a renewable generator seeks to use is shredded used tires. Are used tires a renewable energy resource so that the generator earns RECs that may be used for REPS compliance?

The Commission concluded that used tires are a renewable biomass resource, but only to the extent that the generator can demonstrate that natural rubber from rubber trees is used to produce the tires.

Issues in Interpreting Senate Bill 3

G.S. 62-133.9(e) requires the Commission to assign DSM and EE costs and to "assign the costs of programs only to the class or classes of customers that directly benefit from the programs." "Directly benefit" is not defined.

Wholesale customers benefit from DSM and EE through reductions in demand and resultant rates that are lower than they otherwise would be. Should DSM and EE costs be assigned to wholesale customers?

The Commission concluded that such costs should not be assigned to wholesale customers. The benefits to those customers are not direct. A direct benefit is a benefit to a program participant, e.g., an incentive for installing home insulation or allowing the utility to turn off an air conditioner or hot water heater.

Issues in Interpreting Senate Bill 3

G.S. 62-133.9(f) states: “None of the costs of new DSM or energy efficiency measures of an electric power supplier shall be assigned to any industrial customer that notifies the industrial customer's electric power supplier that, at the industrial customer's own expense, the industrial customer has implemented at any time in the past or … will implement alternative DSM and energy efficiency measures and that the industrial customer elects not to participate in DSM or energy efficiency measures under this section.”

An industrial customer that implements its own alternative DSM and EE programs notifies its electric power supplier that it elects not to participate in any of the utility’s DSM or EE measures. Subsequently, the utility implements a program under its sole control that results in distribution system voltage reductions on the utility’s side of the electric meter. All of the utility’s customers, including this industrial customer, arguably participate and benefit. May the costs of the program be assigned to this industrial customer?

The Commission concluded that such costs could not be assigned to an industrial customer that has opted out. Even though that customer cannot elect whether or not to participate in the program, the word “none” means that the customer is exempt from paying for all of the utility’s DSM and EE “measures.”

Other Implementation Issues Resolved by the Commission

- Each electric power supplier's REPS obligation, both the set-aside requirements and the overall REPS requirement, should be based on its prior year's actual North Carolina retail sales, i.e., the percentage requirements only change in the years stated, but the actual compliance requirements may vary each year based upon the prior year's actual North Carolina retail sales
- Tennessee Valley Authority's distributors making retail sales in North Carolina and electric membership corporations headquartered outside of North Carolina that serve retail electric customers with the State must comply with the REPS requirement, but university-owned electric suppliers do not

Other Implementation Issues Resolved by the Commission (cont'd)

- The 25% limitation on the use of out-of-state RECs applies to the general REPS obligation and each of the individual set-aside provisions; Dominion is expressly exempted from the 25% limitation
- 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
- The electric power suppliers are charged with collectively meeting the aggregate swine and poultry waste set-aside requirements, and they may agree among themselves how to collectively satisfy those requirements

REPS Compliance by the Electric Power Suppliers

- Required to file annual REPS compliance plan, a forward-looking forecast of its REPS requirement and plan for meeting that requirement
- Also required to file annual REPS compliance report, a look back at the RECs earned or purchased and energy savings actually realized during the prior calendar year
- Electric public utilities recover REPS compliance costs through rate rider
- Electric public utilities also allowed to recover costs of new DSM and EE programs through rate rider

Progress Energy Carolinas

- Has entered into a number of contracts for renewable energy and RECs, and has begun implementing a number of DSM/EE programs approved by the Commission
- Current monthly REPS rider charge of $0.65 per residential account, $3.22 per commercial account, and $32.20 per industrial account
- Based on estimated number of customer accounts in 2010, REPS incremental cost cap approximately $20.8 M in 2010, $66 M in 2015

Progress Energy Carolinas (cont'd)

- Cost recovery mechanism for new DSM/EE programs based on a "sharing of the savings" model approved by Orders dated June 15, 2009, and November 25, 2009
- Projects spending of almost $430 M between 2007 and 2013 on new DSM/EE programs, $260 M for Distribution System Demand Response (DSDR) program
- Current DSM/EE rider charge of $0.00055 per kWh for residential customers ($0.55 for 1000 kWh), $0.00063 per kWh for commercial and industrial customers

Duke Energy Carolinas

- Has entered into a number of contracts for renewable energy and RECs, has begun installing up to 10 MW of utility-owned distributed solar photovoltaic generation, and has begun implementing a number of DSM/EE programs approved by the Commission
- Current monthly REPS rider charge of $0.16 per residential account, $0.86 per commercial account, and $8.56 per industrial account
- Based on estimated number of customer accounts in 2010, REPS incremental cost cap approximately $31.7 M in 2010, $99 M in 2015

Duke Energy Carolinas (cont'd)

- Save-a-watt cost recovery mechanism for new DSM/EE programs based on a "percentage of avoided cost" model, with a variable cap on actual earnings, approved by Notice of Decision on December 14, 2009; full order pending
- Projects spending of almost $200 M between 2009 and 2013 on new DSM/EE programs,
- Current DSM/EE rider charge of $0.000382 per kWh for residential customers ($0.38 for 1000 kWh), $0.000068 per kWh for commercial and industrial customers

REPS Opportunities for Electric Generators

- Senate Bill 3 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 for REPS compliance
- G.S. 62-110.1 requires a renewable generator to file with the Commission either an application for a certificate of public convenience and necessity or a report of proposed construction

REPS Opportunities for Electric Generators (cont'd)

- To qualify RECs for REPS compliance, Commission rules require a renewable generator to file a registration statement and annual reports
- As of September 30, 2009, the Commission had issued orders accepting registration of 72 generating facilities as renewable energy facilities or new renewable energy facilities; 106 as of January 1, 2010, including over 30 MW new solar photovoltaic generating capacity

REC Tracking System

- G.S. 62-133.8(i)(1) requires the Commission to provide for the monitoring of compliance with and enforcement of the REPS requirements
- G.S. 62-133.8(i)(3) requires the Commission to ensure that energy credited toward REPS compliance not be credited toward any other purpose
- G.S. 62-133.8(i)(7) requires the Commission to develop procedures to track and account for RECs

REC Tracking System (cont'd)

- G.S. 62-133.8(k), added by Session Law 2009-475 (S960), requires the Commission to, no later than July 1, 2010, develop, implement, and maintain an Internet web site for the online tracking of RECs in order to verify REPS compliance and to facilitate the establishment of a market for the purchase and sale of RECs
- Following extensive discussion with stakeholders, the Commission selected APX, Inc., to develop a REC tracking system for North Carolina by July 1, 2010

REC Trading System

- Session Law 2009-475 (S960) further requires the Energy Policy Council and the Commission to jointly study and design an online REC trading exchange to facilitate the establishment of a market for purchase and sale of RECs
- The study shall explore how to implement an exchange that will not require appropriated funds from the State and shall examine all costs to the consumer
- The Energy Policy Council and the North Carolina Utilities Commission are required to report their findings and recommendations to the General Assembly by April 1, 2010

Generator Interconnections

- G.S. 62-133.8(i)(4) requires the Commission to "establish standards for interconnection of renewable energy facilities and other nonutility-owned generation with a generation capacity of 10 megawatts or less to an electric public utility's distribution system; provided, however, that the Commission shall adopt, if appropriate, federal interconnection standards"
- Commission issued Orders on September 19, 2007, and November 20, 2007, seeking comments on whether it should adopt the federal small generator interconnection standard for use in North Carolina, and, if so, with what modifications, if any
- Commission issued Orders on June 9, 2008, and December 16, 2008, approving a revised interconnection standard modeled on the federal small generator interconnection standard and addressing numerous issues, including fees, insurance, liability, contracts

Generator Interconnections (cont'd)

- Applicable to any size generator, and not limited to generators up to 10 MW
- Incorporates streamlined procedures for smaller generators
  - "Fast Track Process" for interconnecting certified (i.e., equipment meets national IEEE/UL standards) generators no larger than 2 MW
  - "10 kW Inverter Process" for interconnecting certified inverter-based generators no larger than 10 kW
- Utility may require the installation of an external disconnect switch (at the utility's expense) for certified inverter-based generators no larger than 10 kW

Net Metering

- A customer that owns and operates an electric generating facility is billed or credited for the difference between the amount of electricity consumed and the amount of electricity generated over the entire month
- Any time the customer is generating more electricity than it is then using, the utility takes the excess electricity and credits the customer
- When the customer later needs more electricity that it is then generating, the utility “returns” the electricity previously generated by the customer
- There is no actual storage of electricity by the utility, merely an accounting of the excess electricity generated and that consumed

Net Metering (cont'd)

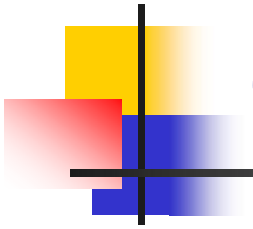
- G.S. 62-133.8(i)(6) requires the Commission to "consider whether it is in the public interest to adopt rules for electric public utilities for net metering of renewable energy facilities with a generation capacity of one megawatt or less"
- Commission issued Orders on June 9, 2008, and August 29, 2008, scheduling public hearings in Charlotte and Raleigh and allowing parties to file testimony on any aspect of the then-current net metering policy
- On March 31, 2009, the Commission issued an Order amending its net metering policy

Current Net Metering Policy

- Available to any customer that owns and operates a renewable energy facility (solar, wind, hydro, biomass, etc.) that generates electricity with a capacity of up to 1 MW
- Customer may elect to take retail electric service pursuant to any rate schedule available to other customers in the same rate class
- Customer may not be assessed any standby, capacity, metering or other fees other than those approved for all customers on the same rate schedule
  - Standby charges waived for any residential customer with electric generating capacity up to 20 kW, non-residential up to 100 kW

Current Net Metering Policy (cont'd)

- Net excess generation carried forward month-to-month, but reset to zero at the beginning of each summer billing season
- If the customer chooses to take retail electric service pursuant to a TOU-demand rate schedule, it shall retain ownership of all RECs associated with its electric generation
- If the customer chooses to take retail electric service pursuant to any other rate schedule, RECs associated with all electric generation by the facility shall be assigned to the utility as part of the net metering arrangement



Questions?