



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

Presented to
Energy Policy Council
Low Carbon Energy Supply Subcommittee

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Who We Are

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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



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 issue 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



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



Implementation Issues Resolved by the Commission (cont'd)

- 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
- 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



Implementation Issues Resolved by the Commission (cont'd)

- Thermal RECs (CHP steam, solar) from an out-of-state facility are limited by the 25% out-of-state limit, while the RECs associated with electric power delivered to an electric public utility are not
- 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
- Used tires qualify as 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



Implementation Issues Resolved by the Commission (cont'd)

- Because the cost of new DSM and EE programs must be assigned only to the class or classes of customers that directly benefit from the programs, such costs should not be assigned to wholesale customers, who only benefit indirectly
- No costs of any new DSM or EE program may be recovered from an industrial or large commercial customer that has implemented its own DSM or EE programs and opted out under the statute, even where the utility has implemented a program solely under its control, such as a distribution system voltage control program, for which the customer cannot elect whether or not to participate



Implementation Issues Yet to Be Resolved by the Commission

- Issues continue to be raised as renewable energy developers and electric power suppliers attempt to comply with the statute



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
- 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



REC Tracking System (cont'd)

- On September 4, 2008, the Commission issued an Order providing draft system requirements, allowing parties to file comments, convening a stakeholder group, and scheduling presentations by potential REC tracking system providers
- On October 19, 2009, following extensive discussion with stakeholders, the Commission issued a Request for Proposals (RFP)
- Two responses to the RFP were received in December 2009
- The Commission is currently reviewing the responses and intends to select a vendor by February 1, 2010, in order to have the REC tracking system operational 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 than 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



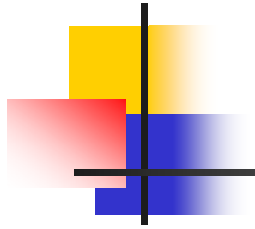
Current Net Metering Policy

- 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?

