

Renewable Energy and Energy Efficiency Portfolio Standard in North Carolina

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Outline

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North Carolina Utilities Commission

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Senate Bill 3 (Session Law 2007-397)

- **Signed into law on August 20, 2007**
- **Establishes Renewable Energy and Energy Efficiency Portfolio Standard (REPS) in North Carolina**
 - Codified at N.C. Gen. Stat. § 62-133.8
- **First state in the Southeast to do so**



REPS Requirement

- **Applicable to investor-owned electric utilities (electric public utilities), electric membership corporations (EMCs), and municipal electric suppliers**
- **REPS requirement initially 3% in 2012, increasing to 6% by 2015 and 10% by 2018**
 - For electric public utilities, REPS requirement increases to 12.5% by 2021
- **Excess credits may be carried forward**



Set-asides

- **Set-asides for solar, hog waste, and poultry waste resources**
 - Solar: at least 0.02% of retail sales by 2010 (~10-20 MW), increasing to 0.2% by 2018 (~120-240 MW)
 - Swine waste: in the aggregate, at least 0.07% of retail sales by 2012 (~12-15 MW), increasing to 0.2% by 2018 (~40-45 MW)
 - Poultry waste: in the aggregate, at least 170,000 MWh (~20-25 MW) by 2012, increasing to 900,000 MWh by 2014 (~115-130 MW)



Definition - Renewable Energy Resource

- **“Renewable energy resource” means a solar electric, solar thermal, wind, hydropower, geothermal, or ocean current or wave energy resource; a biomass resource, including agricultural waste, animal waste, wood waste, spent pulping liquors, combustible residues, combustible liquids, combustible gases, energy crops, or landfill methane; waste heat derived from a renewable energy resource and used to produce electricity or useful, measurable thermal energy at a retail electric customer's facility; or hydrogen derived from a renewable energy resource.**
- **“Renewable energy resource” does not include peat, a fossil fuel, or nuclear energy resource.**



Definition - Renewable Energy Facility

- **“Renewable energy facility” means a facility, other than a hydroelectric power facility with a generation capacity of more than 10 megawatts, that either:**
 - a) Generates electric power by the use of a renewable energy resource.
 - b) Generates useful, measurable combined heat and power derived from a renewable energy resource.
 - c) Is a solar thermal energy facility.
- **“New renewable energy facility” includes a renewable energy facility that was placed into service on or after January 1, 2007**



Definition - Renewable Energy Certificate

- **“Renewable energy certificate” (REC) means**
 - a tradable instrument
 - that is equal to one megawatt hour of electricity or equivalent energy
 - supplied by a renewable energy facility, 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.

- **A REC does not include the related emission reductions, including, but not limited to, reductions of sulfur dioxide, oxides of nitrogen, mercury, or carbon dioxide.**



REC Tracking System

- **“[T]he Commission is persuaded 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.”**
- **“The Commission will begin immediately to identify an appropriate REC tracking system for North Carolina.”**
- **“The Commission is not persuaded at this time, however, that it should develop or require participation in a REC trading platform.”**



REPS Compliance

- **An electric public utility may meet the requirements of this section by any one or more of the following:**
 - a) Generate electric power at a new renewable energy facility.
 - b) 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.
 - c) Reduce energy consumption through the implementation of an energy efficiency measure; provided, however, an electric public utility subject to the provisions of this subsection may meet up to twenty-five percent (25%) of the requirements of this section through savings due to implementation of energy efficiency measures. Beginning in calendar year 2021 and each year thereafter, an electric public utility may meet up to forty percent (40%) of the requirements of this section through savings due to implementation of energy efficiency measures.

REPS Compliance (cont'd)

- **An electric public utility may meet the requirements of this section by any one or more of the following:**
 - d) 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 renewable energy certificates created pursuant to this paragraph to another electric public utility.
 - e) Purchase renewable energy certificates 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 twenty-five percent (25%) of the requirements of this section, provided that this limitation shall not apply to an electric public utility with less than 150,000 North Carolina retail jurisdictional customers as of December 31, 2006.

REPS Compliance (cont'd)

- **An electric public utility may meet the requirements of this section by any one or more of the following:**
 - f) Use electric power that is supplied by a new renewable energy facility or saved due to the implementation of an energy efficiency 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 renewable energy certificates.

- **Slightly modified requirements apply to EMCs and municipal electric suppliers**



REPS Cost Cap

- **Cost cap on incremental cost of compliance – up to an estimated \$305 million by 2018, \$325 million by 2021**

| Customer Class (\$ per account per year) | 2008 - 2011 | 2012 - 2014 | 2015- thereafter |
|---|-------------|-------------|---------------------|
| Residential | \$10 | \$12 | \$34 |
| Commercial | \$50 | \$150 | \$150 |
| Industrial | \$500 | \$1000 | \$1000 |

- **Derived from analysis performed by La Capra Associates, Inc.**
- **Other costs recovered through annual DSM rider and annual fuel charge adjustment**

Enforcement, Penalties for REPS Noncompliance

- **No alternative compliance payment (ACP)**
- **Commission rejected proposals to define specific penalties for noncompliance**
- **“[T]he electric power suppliers are expected to comply with this statute as they would any other.”**



Additional Information

North Carolina Utilities Commission

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