



## NORTH CAROLINA RENEWABLE ENERGY PORTFOLIO STANDARD SUMMARY

**A. SUMMARY:** North Carolina's Renewable Energy and Energy Efficiency Portfolio Standard (REPS) became law in August 2007. The standard applies to retail electric service providers, including all investor-owned and rural electric cooperatives, as well as municipal utilities serving load in North Carolina. However, the type of provider determines the target level it is obligated to meet, the schedule for achieving it, and other compliance provisions. The state's investor-owned utilities are required to meet 3 percent of 2011 sales by 2012, and continue ramping up in increments over time to 12.5 percent of 2020 sales by 2021 and each year thereafter. The remaining electric service providers (rural electric cooperatives and municipal utilities) begin with the same 2012 target, but ramp up instead to 10 percent of 2017 sales by 2018, and for each year thereafter. The REPS also includes specific technology requirements for solar energy, swine waste, and poultry waste. The North Carolina Utilities Commission is responsible for tracking and ensuring compliance with the REPS, including the use of renewable energy credits.

### **B. APPLICABLE AUTHORIZING LEGISLATION/REGULATION**

**1. Part of Broader Energy Package?** Yes. North Carolina's REPS was adopted as part of broader legislation that also allowed for advanced recovery of cost associated with the construction of conventional (coal and nuclear) power facilities.

**2. Legislative/Regulatory Intent:** To promote the development of renewable energy and energy efficiency through the implementation of an REPS that will do all of the following:

- Diversify the resources used to reliably meet the energy needs of consumers in the State.
- Provide greater energy security through the use of indigenous energy resources available within the State.
- Encourage private investment in renewable energy and energy efficiency.
- Provide improved air quality and other benefits to energy consumers and citizens of the State.

### **3. Applicable Legislation/Regulation:**

#### Legislation

8/07 – [Session Law 2007-397](#) (Senate Bill 3) adopting a Renewable Energy and Energy Efficiency Portfolio Standard (REPS)

#### Regulation

2/08 – NCUC issued order adopting final rules, [Docket No. E-100, Sub 113](#)

**4. Date Enacted:** 8/20/07

**5. Date Effective:** 1/1/08

### **C. RULEMAKING**

**1. Implementing/Rulemaking Authority:** The North Carolina Utilities Commission (NCUC) has primary rulemaking authority under the REPS. The North Carolina Environmental Management Commission (EMC) may adopt rules to implement emissions control and may also establish a procedure and regulatory program for evaluating renewable energy technologies that may be used to meet the REPS in order to ensure that they do not harm the environment, natural resources, cultural resources, or public health, safety, or welfare of the state. Contact information is:

North Carolina Utilities Commission  
430 North Salisbury Street  
Dobbs Building  
Raleigh, NC 27603-5918  
Phone: (919) 733-7328  
Website: <http://www.ncuc.commerce.state.nc.us/>

North Carolina Environmental Management Commission  
512 North Salisbury Street  
Raleigh, NC 27604  
Phone: (919) 733-7015  
Website: <http://h2o.enr.state.nc.us/admin/emc/>

#### **2. Rulemaking Completed to Date:**

8/07 – North Carolina Utilities Commission (NCUC) issued an Order Initiating Rulemaking Proceeding in [Docket No. E-100, Sub 113](#) soliciting proposed rules, rule revisions, or any other comments or suggestions from interested persons to assist the Commission in drafting proposed rules to implement Session Law 2007-397.

10/07 – NCUC issued [proposed rules](#) for comment

2/08 – NCUC issued order adopting final rules, [Docket No. E-100, Sub 113](#)

### **D. TARGETS AND TIMETABLES**

**1. Overview:** Under the North Carolina REPS, the type of electric service provider determines both the target level it is obligated to meet and the schedule for achieving it. The state's IOUs are required to meet an initial target of 3 percent (of year 2011 sales) by 2012, and the target continues ramping up in increments over time to 12.5 percent (of 2020 sales) by 2021, and for each year thereafter. The remaining electric

service providers in the state—rural electric cooperatives (coops) and municipal utilities (Munis)—begin with the same 3 percent by 2012 target, but ramp up instead to 10 percent (of 2017 sales) by 2018, and for each year thereafter.

**2. Schedule:**

Year	Requirement for IOUs <sup>1</sup>	Requirement for Coops and Munis <sup>1</sup>	Technology-specific Requirements (All electric service providers)		
			Solar Energy	Swine Waste	Poultry Waste
2010			0.02%		
2011			0.02%		
2012	3%	3%	0.07%	0.07%	170,000 MWh
2013	3%	3%	0.07%	0.07%	700,000 MWh
2014	3%	3%	0.07%	0.07%	900,000 MWh
2015	6%	6%	0.14%	0.14%	900,000 MWh
2016	6%	6%	0.14%	0.14%	900,000 MWh
2017	6%	6%	0.14%	0.14%	900,000 MWh
2018	10%	10%	0.20%	0.20%	900,000 MWh
2019	10%	10%	0.20%	0.20%	900,000 MWh
2020	10%	10%	0.20%	0.20%	900,000 MWh
2021, onward	12.5%	10%	0.20%	0.20%	900,000 MWh

<sup>1</sup>Annual targets are based on the previous year's retail sales.

- 3. Treatment of Existing Capacity:** To be eligible to meet the REPS targets established for IOUs, facilities must have been placed into service on or after January 1, 2007. A limited vintage exception is provided for hydroelectric power facilities with a generation capacity of 10 megawatts or less that delivers power to an electric power supplier, and for eligible renewable energy facilities that are under contract with the North Carolina GreenPower Corporation prior to January 1, 2007.

For munis and coops, both existing and new renewable energy facilities may be used to meet the REPS annual targets.

- 4. Sunset Provision:** None

**E. DEFINITION OF ELIGIBLE RESOURCES AND TECHNOLOGIES**

**1. Eligible Resources:**

- Solar electric, or solar thermal
- Wind
- Hydropower, other than a hydroelectric power facility with a generating

capacity of more than 10 megawatts

- Geothermal
- Ocean current or wave energy
- Biomass – including agricultural waste, animal waste, wood waste, spent pulping liquors, combustible residues, combustible liquids, combustible gases, energy crops.

A biomass combustion process at any new renewable energy facility that delivers electric power to an electric power supplier shall meet Best Available Control Technology (BACT), an emissions limitation based on the maximum degree a reduction in the emission of air pollutants that is achievable for a facility, taking into account energy, environmental, and economic impacts and other costs. The EMC shall determine on a case-by-case basis the BACT for a facility that would not otherwise be required to comply with BACT pursuant to the Prevention of Significant Deterioration emissions program. The EMC may adopt rules to implement this process.

- Landfill gas
- 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
- Hydrogen derived from a renewable energy resource
- Energy efficiency measures (which includes combined heat and power derived from non-renewable resources to the extent the system: (i) Uses waste heat to produce electricity or useful, measurable thermal or mechanical energy at a retail electric customer's facility; and (ii) Results in less energy used to perform the same function or provide the same level of service at a retail electric customer's facility.)
- Demand-side management (for munis and coops only)

Though municipal solid waste (MSW) facilities are not explicitly included in the definition of eligible biomass, the NCUC—in the final REPS rule—stated that a determination of whether a resource is eligible shall be made on a “case-by-case basis.” Therefore, MSW may be deemed eligible by the NCUC at a later date.

For any facility that uses both renewable and nonrenewable energy resources to produce energy, the facility shall only count as eligible the energy derived from renewable energy resources in proportion to the relative energy content of the fuels used.

**2. Treatment of Self-Generation:** Self generation is eligible under the REPS.

**3. Special Incentives:** The REPS includes specific set-aside requirements for solar energy, swine waste, and poultry waste.

IOUs may use energy efficiency measures to meet up to 25 percent of their annual

requirements through compliance year 2020. Beginning in 2021, the limit on energy efficiency measures is increased to 40 percent of the annual requirement. Munis and coops have no limits on energy efficiency or demand-side management measures.

4. **Exclusions:** Peat, fossil fuels, and nuclear energy resources are specifically excluded from the definition of renewable energy resources.
5. **Rules Governing Location of Generating Facilities:** For IOUs, electricity from new renewable energy facilities located outside the state is eligible if the power is delivered to an IOU that provides electric power to retail electric customers in the state (provided that any renewable energy certificates (RECs) created by this facility are not sold to another utility). An IOU may also acquire RECs from any out-of-state new renewable energy facilities to meet the REPS, but this method of compliance is limited to 25 percent of the annual requirements for IOUs with more than 150,000 customers as of December 31, 2006.

For munis and coops, RECs derived from out-of-state renewable energy facilities may be used to meet up to 25 percent of the annual requirements.

6. **Eligibility of Green Pricing Programs:** Energy credited toward compliance with the standard may not be credited toward any other purpose, including another renewable energy portfolio standard or voluntary renewable energy purchase program in North Carolina or in any other state.

## F. COVERED UTILITIES

1. **Classes of Retailers Covered:** The requirement applies to retail electric service providers, including all investor-owned and rural electric cooperatives, as well as municipal utilities serving load in North Carolina. However, the type of electric service provider determines the level of the targets, the schedule, and other compliance provisions.
2. **Share of state sales/capacity/delivered power covered:** 100 percent of state electric sales are covered by the REPS.
3. **Apportionment of obligation among utilities:** The annual requirements are applied separately to each obligated electric service provider.
4. **Exemptions by Customer Class:** None.

## G. COST PROVISIONS

1. **Cost Cap for Retailers:** None

**2. Cost Cap for Consumer:** An electric service provider's incremental compliance costs may be passed on to consumers, but are capped at a per-account charge, as set by the NCUC for each customer class (residential, commercial, and industrial). Session Law 2007-397 establishes the initial per-account annual charges, but the NCUC has instructed each electric service provider to establish a procedure for an assessment of the charges in their annual compliance reports. The initial per-account annual charges are as follows:

Residential - \$10 from 2008-2011, \$12 from 2012-2014, and \$34 for 2015 and thereafter.

Commercial - \$50 from 2008-2011, \$150 from 2012-2014, and \$150 for 2015 and thereafter.

Industrial - \$500 from 2008-2011, \$1,000 from 2012-2014, and \$1,000 for 2015 and thereafter.

Electric service providers may include—as part of their annual REPS rider—costs associated with research that encourages the development of renewable energy, energy efficiency, or improved air quality, provided those costs do not exceed \$1,000,000 per year.

**3. Cost Recovery Mechanisms:** The incremental costs of compliance with the REPS, if they are determined to be reasonable and prudent, may be recovered through the rate base, up to the per-account caps established by the NCUC.

**4. Supply Contract Requirements:** Each electric power supplier shall include appropriate language in all agreements for the purchase of RECs—whether or not bundled with electric power—prohibiting the seller from remarketing the RECs being purchased by the electric power supplier.

In addition, the terms of any contract entered into between an electric power supplier and a new solar electric facility or new metered solar thermal energy facility shall be of sufficient length to stimulate development of solar energy. In the final REPS rule, the NCUC opted not to include an explicit minimum contract length, but did state in its ruling that “a decision by an electric power supplier not to enter into long-term contracts will not be allowed as an excuse for failing to meet the REPS requirement if sufficient resources are otherwise available.”

**5. Special Funds:** Session Law 2007-397 allows each electric power provider to fund research that encourages the development of renewable energy. Funds are recoverable through the rate base (subject to the REPS cost cap), but cannot exceed \$1 million per year.

## H. COMPLIANCE AND ENFORCEMENT

**1. Certification, tracking, and trading mechanism[s]:** The NCUC is responsible for tracking and ensuring compliance with the REPS. Compliance with the REPS can be

achieved by investor-owned utilities through the generation or purchase of electric power from a renewable energy facility, reduced energy consumption through an energy efficiency measure (subject to certain limitations), or the acquisition of RECs. Munis and coops may also comply using demand-side management measures. The NCUC is initially relying on facility registrations, certified attestations, contract terms and compliance reports by utilities and generators to track RECs and REPS compliance. In addition, the NCUC is in the process of identifying an appropriate REC tracking and trading system, which electric power providers can use on a voluntary basis.

A REC is defined as a tradable instrument equal to one megawatt-hour of electricity or equivalent energy supplied by a renewable energy facility or reduced by implementation of an energy efficiency measure that is used to track and verify compliance with the standard. REC ownership lies with the owner of the eligible renewable energy generation facility.

RECs may begin accruing after January 1, 2008. A megawatt-hour of renewable electricity and/or its associated REC that is used for REPS compliance may not be used for any other purpose.

- 2. Flexibility Mechanisms:** Banked Compliance – Electric power supplied by a new renewable energy facility or saved due to the implementation of an energy efficiency measure that exceeds the requirements of the standard in a given calendar year may be used toward the requirements of the standard in the following calendar year.

RECs must be purchased by an electric power provider within 3 years of the date in which they were generated. Once acquired by an electric power provider, a REC must then be used within 7 years that the cost of the REC was recovered through rates.

Early compliance – RECs may begin accruing after January 1, 2008, though the first year of compliance is not until 2010.

- 3. Penalties:** Neither Session Law 2007-397 nor the NCUC's final REPS rule establish explicit penalties for non-compliance with the annual requirements. However, the NCUC does have the authority to impose penalties (including fines up to \$1,000 per day for each violation of the requirements) as part of its normal regulatory oversight.
- 4. Treatment of Emissions Allowances or Reduction Credits:** Session Law 2007-397 states that a REC does not include the related emissions reductions, including but not limited to, reductions of sulfur dioxide, oxides of nitrogen, mercury, or carbon dioxide.
- 5. Escape Clauses:** An electric power supplier is in compliance with the REPS if its total annual incremental compliance costs incurred equals the cap on the per-account

annual customer charges.

In addition, in any year, an electric power supplier or other interested party may petition the NCUC to modify or delay the REPS. The NCUC may grant the petition if it finds that it is in the public interest to do so (though “public interest” is not defined in the legislation or rule). If an electric power supplier is the petitioner, it must demonstrate that it has made a reasonable effort to meet the annual requirements of such provisions. Retroactive modification or delay of the requirements is not allowed. The NCUC shall allow a modification or delay only with respect to the electric power supplier or group of electric power suppliers for which a need has been demonstrated.

## **I. ADMINISTRATION**

- 1. Administering Entities, Duties, Powers, and Contact Information:** The NCUC is responsible for administering and ensuring compliance with the REPS. The EMC is responsible for administering emissions control and evaluating renewable energy technologies that may be used to meet the REPS in order to ensure that they do not harm the environment, natural resources, cultural resources, or public health, safety, or welfare of the state. Contact information is:

North Carolina Utilities Commission  
430 North Salisbury Street  
Dobbs Building  
Raleigh, NC 27603-5918  
Phone: (919) 733-7328  
Website: <http://www.ncuc.commerce.state.nc.us/>

North Carolina Environmental Management Commission  
512 North Salisbury Street  
Raleigh, NC 27604  
Phone: (919) 733-7015  
Website: <http://h2o.enr.state.nc.us/admin/emc/>

- 2. Source of Administrative Funding:** Not specified

## **J. REPORTING REQUIREMENTS and PROGRAM STATUS**

- 1. Reporting Requirements for Retailers:** On or before September 1 of each year, beginning in 2008, each electric power supplier is required to file a compliance plan with the NCUC. The plan must cover at least the current and immediately subsequent two calendar years. In addition, each year, beginning in 2009, each electric power supplier is required to file with the NCUC a report describing its compliance with the REPS requirements during the previous calendar year. The NCUC is required to consider each electric public utility’s REPS compliance report

at a public hearing and determine whether the electric public utility is in compliance.

- 2. Reporting Requirements for Administering Entities:** The NCUC shall submit annual reports to the Governor, the Environmental Review Commission, and the Joint Legislative Utility Review Committee no later than October 1 of each year with the first report due in 2008. Reports are required to cover activities taken by the NCUC to implement, and by electric power suppliers to comply with, the REPS. The report shall also include any public comments received regarding direct, secondary, and cumulative environmental impacts of REPS implementation. In developing the report, the NCUC is required to consult with the Department of Environment and Natural Resources.

In addition, on or before September 1 of odd-numbered years, the NCUC is required to submit a report to the Governor and the Joint Legislative Utility Review Committee that summarizes any proceedings during the preceding two fiscal years on cost recovery for demand-side management and energy efficiency measures.

- 3. Cost Information:** The first year of compliance is not until 2008, so no actual cost data is currently available. However, in December 2006, the NCUC commissioned a report by La Capra Associates, [Analysis of a Renewable Portfolio Standard for the State of North Carolina](#), which examines the costs and benefits of a RPS for North Carolina.