Union of Concerned Scientists
Citizens and Scientists for Environmental Solutions

NEW HAMPSHIRE
RENEWABLE PORTFOLIO STANDARD SUMMARY

A. SUMMARY: New Hampshire's renewable portfolio standard (RPS) begins in 2008 with 4 percent of total retail sales to be derived from renewable energy sources, and gradually increases to 23.8 percent by 2025. There are four renewable energy classes, defined by technology and vintage, and including a 0.3 percent class for new solar energy sources. Compliance is achieved through the acquisition of renewable energy certificates that are issued and tracked through the New England Generation Information System (NE-GIS). Obligated electric service providers may also fulfill their annual requirements by making alternative compliance payments to a Renewable Energy Fund. Monies collected through the fund will be used to support new renewable energy development.

B. AUTHORIZING LEGISLATION/REGULATION

1. **Legislative/Regulatory Intent:** "Renewable energy generation technologies can provide fuel diversity to the state and New England generation supply through use of local renewable fuels and resources that serve to displace and thereby lower regional dependence on fossil fuels. This has the potential to lower and stabilize future energy costs by reducing exposure to rising and volatile fossil fuel prices. The use of renewable energy technologies and fuels can also help to keep energy and investment dollars in the state to benefit our own economy. In addition, employing low emission forms of such technologies can reduce the amount of greenhouse gases, nitrogen oxides, and particulate matter emissions transported into New Hampshire and also generated in the state, thereby improving air quality and public health, and mitigating against the risks of climate change. It is therefore in the public interest to stimulate investment in low emission renewable energy generation technologies in New England and, in particular, New Hampshire, whether at new or existing facilities."

2. **Part of a Broader Package:** No

3. **Applicable Legislation/Regulation**
   Legislation:
   4/07 – H.B. 873, An Act establishing minimum renewable standards for energy portfolios.

   6/08 – H.B. 1628, An Act relative to renewable energy generation incentive programs

   Regulation:
   8/08 – New Hampshire Public Utilities Commission (PUC) approves final rule, Chapter PUC 2500 Electric Renewable Portfolio Standard

4. **Date Enacted:** May 11, 2007

5. **Date Effective:** Sections 1-5 effective July 11, 2007, and remainder effective May 11, 2007

C. RULEMAKING

1. **Implementing/rulemaking Authority:** The New Hampshire Public Utilities Commission is the RPS rulemaking authority.

2. **Rulemaking Completed to Date:**
   8/07 – PUC approves Proposed Interim Rule

   4/08 – PUC approves final rule, Chapter PUC 2500 Electric Renewable Portfolio Standard

D. TARGETS AND TIMETABLES

1. **Brief Overview:** For each calendar year from 2008 through 2025, each provider of electricity shall obtain and retire Class I, Class II, Class III and Class IV certificates sufficient in number to meet or exceed the percentages of total megawatt-hours (MWh) of electricity supplied by the provider to its end-use customers for each year, except to the extent that the provider makes alternative compliance payments. Combined, the four classes begin at 4 percent in 2008 and increase to 23.8 percent by 2025.

2. **Schedule:**

Compliance Year	Total Percent Renewable (Class I thru Class IV)	Class I	Class II	Class III	Class IV
2008	4.0%	0.0%	0.0%	3.5%	0.5%
2009	6.0%	0.5%	0.0%	4.5%	1.0%
2010	7.5%	1.0%	0.04%	5.5%	1.0%
2011	9.6%	2.0%	0.08%	6.5%	1.0%
2012	10.7%	3.0%	0.15%	6.5%	1.0%
2013	11.7%	4.0%	0.2%	6.5%	1.0%
2014	12.8%	5.0%	0.3%	6.5%	1.0%
2015	13.8%	6.0%	0.3%	6.5%	1.0%
2016	14.8%	7.0%	0.3%	6.5%	1.0%
2017	15.8%	8.0%	0.3%	6.5%	1.0%
2018	16.8%	9.0%	0.3%	6.5%	1.0%
2019	17.8%	10.0%	0.3%	6.5%	1.0%
2020	18.8%	11.0%	0.3%	6.5%	1.0%
2021	19.8%	12.0%	0.3%	6.5%	1.0%
2022	20.8%	13.0%	0.3%	6.5%	1.0%

2023	21.8%	14.0%	0.3%	6.5%	1.0%
2024	22.8%	15.0%	0.3%	6.5%	1.0%
2025	23.8%	16.0%	0.3%	6.5%	1.0%

3. **Treatment of Existing Capacity**: Existing biomass facilities with a gross nameplate capacity of 25 megawatts (MW) or less, and existing methane gas facilities are allowed to meet Class III obligations. Existing hydroelectric facilities with a gross nameplate capacity of 5 MW or less, and meeting certain sustainability criteria are allowed to meet Class IV obligations. All other Classes must be met with resources generated by facilities that began operation after January 1, 2006.

   However, the production of electricity from an existing facility using class III or IV resources may be eligible as a Class I new resource if the generation is incremental or if the facility owners can demonstrate that 80 percent of its resulting tax basis of the source's plant and equipment, but not its property and intangible assets, is derived from capital investment directly related to restoring generation or increasing capacity including department permitting requirements for new plants. If such a determination is made, production from the facility shall not qualify for class III or IV certificates.

4. **Sunset Clause:** There is nothing in statute or regulations that indicate the annual targets will continue beyond 2025.

E. ELIGIBLE RESOURCES AND TECHNOLOGIES

1. Eligible Resources:

Class I (New) renewable energy sources include:

- Wind energy
- Geothermal energy
- Hydrogen derived from biomass fuel or methane gas
- Ocean thermal, wave, current, or tidal energy
- Methane gas, defined as "biologically derived methane gas from anaerobic digestion of organic materials from such sources as yard waste, food waste, animal waste, sewage sludge, septage, and landfill waste"
- Eligible biomass technologies, defined as "generating technologies that use biomass fuels as their primary fuel, provided that the generation unit: (a) Has a quarterly average nitrogen oxide (NOx) emission rate of less than or equal to 0.075 pounds/million British thermal units (lbs/Mmbtu), and an average particulate emission rate of less than or equal to 0.02 lbs/Mmbtu as measured and verified; and (b) Uses any fuel other than the primary fuel only for start-up, maintenance, or other required internal needs." Biomass fuels is defined as "plant-derived fuel including clean and untreated wood such as brush, stumps, lumber ends and trimmings, wood pallets, bark, wood chips or pellets, shavings, sawdust and slash, agricultural crops, biogas, or liquid biofuels, but

shall exclude any materials derived in whole or in part from construction and demolition debris."
- Solar hot water heating
- Solar energy to the extent the resources are not being used to meet the Class II targets
- Incremental biomass, methane, and hydro from existing facilities, defined as a facility "licensed or exempted by Federal Energy Regulatory Commission (FERC), regardless of gross nameplate capacity, over its historical generation baseline, provided the commission certifies demonstrable completion of capital investments attributable to the efficiency improvements, additions of capacity, or increased renewable energy output that are sufficient to, were intended to, and can be demonstrated to increase annual renewable electricity output."
- Electricity produced from a Class III or IV source that has begun operating as a new facility after "demonstrating that 80 percent of its resulting tax basis of the source's plant and equipment, but not its property and intangible assets, are derived from capital investment directly related to restoring generation or increasing capacity including department permitting requirements for new plants."

Class II (New) renewable energy sources include:
- Production of electricity from solar technologies

Class III (Existing) renewable energy sources include:
- Existing eligible biomass technologies having gross nameplate capacity of 25 MW or less
- Methane gas

Class IV (Existing) renewable energy sources include:
- Existing hydroelectric energy, provided the source "has a gross nameplate capacity of 5 MWs or less, has installed upstream and downstream diadromous fish passages that have been required and approved under the terms of its license or exemption from the Federal Energy Regulatory Commission, and when required, has documented applicable state water quality certification pursuant to section 401 of the Clean Water Act for hydroelectric projects."

2. **Special Incentives:** The RPS includes set-aside requirements for electricity production from new solar technologies (Class II), existing biomass/methane (Class III), and existing small (5 MW or less) hydro resources (Class IV).

3. **Exclusions:** An electrical generating facility, while selling its electrical output at long-term rates established before January 1, 2007 by orders of the PUC under PURPA (RSA 362-A:4) shall not be considered a renewable source under the RPS.

In addition, any materials derived in whole or in part from construction and demolition debris are explicitly excluded from the definition of biomass fuels.

4. **Self-generation:** The PUC recognizes as eligible, certificates produced by customer-sited renewable energy resources, including behind the meter production, provided such sources are located in New Hampshire. The production shall be monitored and verified by an independent entity designated by the PUC, which may include electric distribution companies.

5. **Location of Generating Facilities:** Any eligible renewable generation within the Independent System Operator-New England (ISO-NE) service area qualifies for the RPS, with the exception of behind the meter (customer-sited) or off-grid renewable generation units, which must be located within the state. Renewable energy generated outside the ISO-NE area is eligible if it is located in a control area adjacent to the ISO-NE area *and* delivered in the ISO-NE service area, and meets other certain qualifications. Energy delivered into the New England control area by sources adjacent, but not within the control area shall be verified by unit-specific bilateral contract for sale of energy, confirmation from ISO-NE, confirmation from the North American Electric Reliability Corporation, and any other verification later deemed appropriate by the PUC.

6. **Eligibility of Green Pricing Programs:** According to the RPS legislation, a certificate "may not be used for compliance if it has been or will be used for compliance with any similar requirements of another non-federal jurisdiction, or otherwise sold, retired, claimed, or represented as part of any other electrical energy output or sale." Therefore, certificates sold under voluntary green power programs are not eligible to be used for RPS compliance.

F. COVERED UTILITIES

1. **Classes of Retailers Covered:** The annual requirements apply to the electricity supplied by each electric service provider (Public Service Company of New Hampshire, Granite State Electric Company, Unitil Energy Systems, Inc., and the New Hampshire Electric Cooperative, Inc.) in the state to its end-use customers.

2. **Share of State Sales/Capacity/Delivered power Covered by Program?**
~ 100 percent of state electric sales are covered by the RPS.

3. **Apportionment of Obligation among retailers:** The RPS is applied separately to each obligated provider of electricity.

4. **Exemptions by Customer Class:** Sales from the following customers are exempted from the annual requirements: (1) A generating facility taking station service at wholesale from the regional market administered by the independent

system operator or self-supplying from its other generating stations; and (2) Prior to January 1, 2010, a customer who purchases retail electricity supply, other than default service under a supply contract executed prior to January 1, 2007.

G. COST PROVISIONS

1. **Cost Cap for Retailers:** The alternative compliance payment (ACP) mechanism serves as a de facto cost cap. In addition, the PUC, after notice and hearing, may accelerate or delay by up to one year, any given year's incremental increase in class I or II requirement for "good cause".

   PUC rules state that the term "good cause" means that the acceleration or delay would reasonably be expected to: (1) increase investment in renewable energy generation in New Hampshire; or (2) mitigate cost increases to retail electric rates for New Hampshire customers without materially hindering the development of renewable resources.

2. **Cost Cap for Customers:** None

3. **Cost Recovery Mechanism:** Any prudently incurred costs arising from RPS compliance for default service or purchased power agreements shall be recovered through the default service charge.

4. **Supply Contract Requirements:** There are no specified contract requirements in the RPS statute or final rules. However, upon request of an electric distribution company, the PUC may authorize multi-year purchase agreements for renewable energy certificates, in conjunction with or independent of purchased power agreements from the renewable energy facility, if it finds that the agreement is in the public interest.

5. **Special Funds:** The RPS legislation and final rules establish a Renewable Energy Fund, which is supported by the ACP mechanism. The money paid into this non-lapsing fund shall be used by the PUC—after deducting expenses for administering the RPS and renewable energy fund—to support thermal and electrical renewable energy initiatives. Class II alternative compliance payment funds shall only be used to support solar energy technologies in New Hampshire. No less than 20 percent of Class I, II, III and IV ACP revenues received annually shall be distributed to customer-sited thermal and renewable energy projects of up to 100 kilowatt in gross nameplate capacity or the equivalent thermal output. Up to 10 percent of the funds shall be used as part of a rebate program ($3 per watt, up to $6,000) for residential owners of small (up to 5 kilowatts) Class I and II renewable generation facilities.

H. COMPLIANCE AND ENFORCEMENT

1. **Certification, Tracking and Trading:** Electric service providers must meet targets by acquiring renewable energy certificates (REC) issued by the New England Generation Information System (GIS). A certificate is defined as "the record that identifies and represents each megawatt-hour generated by an eligible renewable energy generating source." The issuance, qualification, sales, exchanges, and retirement of RECs shall be conducted through the NEPOOL GIS according to its operating rules.

   A REC may only be used once for compliance with the annual requirements, and may not be used for compliance if it already has been or will be used to meet a similar requirement of another non-federal jurisdiction.

   The PUC's final rules defines "generation attributes" as "the non-price characteristics of the electrical energy output of a generation unit including, but not limited to, the unit's location, fuel type, actual emissions, vintage and portfolio standard eligibility."

   Renewable energy credit ownership will be conveyed to the owner of the generation unit that receives designation as an eligible renewable source. For customer-sited sources, the PUC shall issue RECs to the owner of the customer-sited source or their designee, regardless of whether the source has received assistance from the renewable energy fund.

2. **Flexibility Mechanisms:** Banked Compliance - RECs may be used for compliance in the year in which the generation represented by the REC was produced, and during the next two calendar years following the year in which the energy was produced.

   Borrowed Compliance – A provider may apply unused certificates obtained in the first quarter of a calendar year to the compliance requirements of the preceding calendar year. In no case may a provider of electricity use banked or borrowed certificates to comply with more than 30 percent of its annual obligation.

   Alternative Compliance Payment Mechanism - In lieu of meeting the annual requirement in a given year, and to the extent sufficient RECs are not otherwise available at a price below the ACP price, an electricity provider may make payment to the PUC at the following 2008 rates for each megawatt-hour not met for a given class obligation through the acquisition of RECs:(a) Class I - $58.58, (b) Class II - $153.84, (c) Class III - $28.72, and (d) Class IV - $28.72. Each year through 2026, the PUC will adjust for inflation the ACP prices for each requirement class.

3. **Penalties:** In addition to the alternative compliance payment, the PUC is authorized to assess fines against, revoke the registration of, and prohibit from

doing business in the state, any competitive electricity supplier which violates the annual renewable portfolio standard requirements.

4. **Treatment of Emissions Allowances or Reduction Credits:** Not addressed.

5. **Escape Clauses:** The PUC, after notice and hearing, may accelerate or delay by up to one year, any given year's incremental increase in class I or II requirement for "good cause".

   PUC rules state that the term "good cause" means that the acceleration or delay would reasonably be expected to: (1) increase investment in renewable energy generation in New Hampshire; or (2) mitigate cost increases to retail electric rates for New Hampshire customers without materially hindering the development of renewable resources.

I. ADMINISTRATION

1. **Administering Entities and Contact Information:** The New Hampshire PUC administers the program.

   New Hampshire Public Utilities Commission
   21 South Fruit Street, Suite 10
   Concord, NH 03301-2429
   Phone (603) 271-2431
   http://www.puc.state.nh.us/

2. **Source of Administrative Funding:** The PUC is authorized to use a portion of the funds collected from the ACP mechanism to pay for administering the RPS and the renewable energy fund.

J. REPORTING REQUIREMENTS and PROGRAM STATUS

1. **Retailer Reporting Requirements:** On or before July 1, 2009, and each year thereafter through 2026, each provider of electricity shall submit a report to the PUC documenting its compliance with the renewable energy requirements for the prior year. The PUC may investigate compliance and collect any information necessary to verify and audit the information provided to the PUC by providers of electricity.

2. **Administrative Reporting Requirements:** The PUC shall make an annual report by October 1 of each year, beginning in 2009, to the legislative oversight committee on electric utility restructuring detailing how the renewable energy fund is being used and any recommended changes to such use.

   Commencing in January 2011, 2018, and 2025 the PUC shall conduct a review of

the class requirements and other aspects of the electric renewable portfolio standard program. Thereafter, the PUC shall make a report of its findings to the general court by November 1, 2011, 2018, and 2025, respectively, including any recommendations for changes to the class requirements or other aspects of the electric renewable portfolio standard program.

3. **Cost Information:** The first compliance year of the RPS is not until 2008, so no actual cost data is available. However, the PUC and the Department of Environmental Services completed a fiscal impact assessment of the RPS, which is attached to the end of the final legislation.