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CHAPTER Puc 2500 ~~ELECTRIC~~ RENEWABLE PORTFOLIO STANDARDS

## PART Puc 2501 PURPOSE AND APPLICABILITY

Puc 2501.01 Purpose. The purpose of Puc 2500, pursuant to the mandate of RSA 362-F:13, is to provide for the administration of New Hampshire's ~~electric~~ renewable portfolio standards.

Puc 2501.02 Applicability. Puc 2500 shall apply to:

- (a) Providers of electricity in New Hampshire;
- (b) Persons trading renewable energy certificates issued in compliance with RSA 362-F:6 and RSA 362-F:7;
- (c) Persons who qualify for incentive payments, rebates or grants ~~financial assistance~~ from the renewable energy fund established by RSA 362-F:10; and
- (d) Renewable energy sources and eligible customer-sited sources.

## PART Puc 2502 DEFINITIONS

~~Puc 2502.01 "Acquire new certificates" means to cause the NEPOOL generation information system or the commission, as appropriate, to issue new certificates in connection with energy generated or displaced by a renewable energy source.~~

Puc 2502.~~01~~02 "Alternative compliance payment" means a payment that a provider of electricity must remit to the commission for each renewable energy certificate in lieu of meeting the portfolio ~~standards requirement~~ of Puc 2503 for a given ~~calendar~~ year as required by RSA 362-F:10, II.

Puc 2502.~~02~~03 "Began operation" means, except where more specifically defined in RSA 362-F:4, I(j) and I(5):

(a) For a new renewable energy source that has never previously operated as an electric generation facility, the date that it was first placed in service as a capital asset for the purpose of beginning depreciation under the regulations of the Internal Revenue Code of 1986, as amended; and

(b) For an electric generation facility that has repowered as a renewable energy source, the date that the facility or a capital addition thereto, for the purpose of repowering to renewable energy, is first placed in service as a repowered facility and as a capital asset for the purpose of beginning depreciation under the Internal Revenue Code of 1986, as amended.

Puc 2502.~~03~~04 "Biomass fuels" means "biomass fuels" as defined in RSA 362-F:2, II, namely "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 ~~not~~ shall exclude any materials derived in whole or in part from construction and demolition debris."

Puc 2502.~~04~~05 "Capital investment" means investment in new plant and equipment directly related to restoring generation or increasing generating capacity including department permitting requirements for new plants, ~~provided that such investment represents at least 80 percent of the federal~~

~~income tax basis of the source's total plant and equipment, not including the source's real property and intangible assets.~~

Puc 2502.~~0506~~ “Certificate” means “certificate” as defined in RSA 362-F:2, III, namely “the record that identifies and represents each megawatt-hour (MWh) generated by an eligible renewable energy generating source under RSA 362-F:6.” The term “certificate” also includes the terms “renewable energy certificate” and “REC.”

Puc 2502.~~0607~~ “Class I source” means:

(a) A generation facility that began operation after January 1, 2006 and ~~that~~ produces electricity from ~~anyone~~ of the following ~~technologies~~: wind energy; ~~geothermal energy~~; hydrogen derived from biomass fuel or methane gas; ocean thermal, wave, current, or tidal energy; methane gas; or biomass, pursuant to RSA 362-F:4, I(a), ~~(c), (d), (e) and through~~ (f);

(b) A facility that produces useful thermal energy from geothermal energy, solar thermal energy, or thermal biomass renewable energy if the unit began operation after January 1, 2013 pursuant to RSA 362-F:4, I(b), (g) and (l). The displacement of electricity by end-use customers from solar hot water heating systems that began operation after January 1, 2006, pursuant to RSA 362-F:4, I(g);

(c) A Class II source to the extent it is not otherwise used to satisfy ~~the~~ minimum portfolio standards ~~obligations~~ of other classes pursuant to RSA 362-F:4, I(h);

(d) The incremental new production of electricity in any ~~calendar~~-year from an eligible biomass or methane source, or any hydroelectric generating facility licensed or exempted from licensure by the Federal Energy Regulatory Commission (FERC), regardless of gross nameplate capacity, over the facility’s 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, as described in RSA 362-F:4, I(i); that the associated capital investments result in increased renewable energy output or improvements in the efficiency of electricity generation and provided that the incremental new production of electricity arises from the associated capital investment rather than the operational changes at such facility; and

(e) The production of electricity from a Class III or Class IV source that began operation as a new facility by demonstrating that 80 percent of the resulting federal income tax basis of the source’s plant and equipment, but not its real property and intangible assets, is derived from capital investment that is directly related to restoring generation or increasing capacity, pursuant to RSA 362-F:4, I(j) and Puc 2502.~~0405~~; ~~and~~.

(f) The portion of production of electricity from any fossil-fueled generating facility that originally began operation prior to January 1, 2006 attributable to Class I eligible biomass fuels co-fired after January 1, 2012 as described in RSA 362-F:4, I(k).

Puc 2502.~~0708~~ “Class II source” means a generation facility that produces electricity from solar technologies and that began operation after January 1, 2006, pursuant to RSA 362-F:4, II.

Puc 2502.~~0809~~ “Class III source” means a generation facility that began operation ~~on or before~~ prior to January 1, 2006 and produces electricity from eligible biomass technologies having a gross nameplate capacity of 25 megawatts or less, or from methane gas, pursuant to RSA 362-F:4, III.

~~Puc 2502.0910 “Class IV source” means a hydroelectric generation facility that began operation prior to or before January 1, 2006, that and has a gross nameplate capacity of 5 megawatts or less, and that meets the requirements of RSA 362-F:4, IV, has installed FERC required and approved upstream and downstream diadromous fish passages and has obtained all necessary state water quality certifications, to the extent the source is not used to satisfy certificate purchase obligations pursuant to RSA 362-F:4, I(j).~~

Puc 2502.10 “Co-Fired Electric Generating Facility” means any fossil-fueled electric generation facility that originally began operation prior to January 1, 2006 if, after January 1, 2012, such facility co-fires with Class I eligible biomass fuels to displace the combustion of an amount of fossil fuels and meets the following requirements:

(a) Either has a quarterly average nitrogen oxide (NO<sub>x</sub>) emission rate, as measured and verified under RSA 362-F:12, of less than or equal to 0.075 lbs(pounds)/million British thermal units (MMBtu) or has a plan approved by the department for reductions in NO<sub>x</sub> emission from other emissions sources in accordance with RSA 362-F:4,I(k)(1). The quantity of reductions shall be the fraction of electrical production derived from the combustion of biomass fuels multiplied by the difference between the generation unit’s NO<sub>x</sub> emission rate and 0.075 lbs/MMBtu; and

(b) Either has a particulate emission rate, as measured and verified under RSA 362-F:12, of less than or equal to 0.02 lbs/MMBtu or has a plan approved by the department for reductions in particulate matter emissions from emission sources owned by or affiliated with the co-firing entity in accordance with RSA 362-F:4,I(k)(2). The quantity of reductions shall be the fraction of electrical production derived from the combustion of biomass fuels multiplied by the difference between the generation unit’s particulate matter emission rate and 0.02 lbs/MMBtu.

Puc 2502.11 “Commission” means the New Hampshire public utilities commission.

Puc 2502.12 “Control area” means a geographic region in which a common generation control system is used to maintain the interchange of electrical energy within and outside the region.

Puc 2502.13 “Customer-sited source” means “customer sited-source” as defined in RSA 362-F:2, V, namely “a source that is interconnected on the end-use customer’s side of the retail electricity meter in such a manner that it displaces all or part of the metered consumption of the end-use customer.”

~~Puc 2502.14 “Default service” means “default service” as defined in RSA 362-F:2, VI, namely “electricity supply that is available to retail customers who are otherwise without an electricity supplier as defined in RSA 374-F:2, I-a.” electricity supply that is available to retail customers pursuant to RSA 374-F from the electric utility responsible for providing them with distribution service.~~

Puc 2502.15 “Department” means the New Hampshire department of environmental services.

Puc 2502.16 “Distribution utility” means any electric transmission or distribution company and includes rural electric cooperatives.

~~Puc 2502.17+6 “Eligible electric biomass technologies” means “eligible biomass technologies” as defined in RSA 362-F:2, VIII, namely, electric “generating technologies that use biomass fuels as their primary fuel, provided that the generation unit:~~

~~(a) Has a quarterly average nitrogen oxide (NO<sub>x</sub>) emission rate for the hours in the calendar quarter during which the device generated electricity of less than or equal to 0.075 pounds/million British~~

thermal units (lbs/MMBtu), and either has a particulate emission rate of less than or equal to 0.02 lbs/MMBtu as measured and verified under RSA 362-F:12, or is participating in a plan approved by the department under RSA 362-F:11, IV for reductions in particulate matter emissions from other emission sources comparable to the difference between the generation unit's particulate matter emissions rate and the 0.02 lbs/MMBtu rate~~an average particulate emission rate of less than or equal to 0.02 lbs/MMBtu as measured and verified under RSA 362-F:12; and~~

(b) Uses any fuel other than the primary fuel only for start-up, maintenance, or other required internal needs.<sup>22</sup>

Puc 2502.~~1817~~ “End-use customer” means ~~“end-use customer” as defined in RSA 362-F:2, IX, namely~~ “any person or entity that purchases electricity supply at retail in New Hampshire from another person or entity but shall not include (a) ~~A~~ generating facility taking station service at wholesale from the regional market administered by the independent system operator (ISO-New England) or self-supplying from its other generating stations; ~~and.~~

~~(b) 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.”~~

Puc 2502.~~1918~~ “Generation attributes” means the non-price characteristics of the electrical or thermal energy output of a ~~generation~~ unit including, but not limited to, the unit’s location, fuel type, actual emissions, vintage and portfolio standard eligibility.

Puc 2502.~~2019~~ “Generation information system (GIS)” means the system operated by the New England Power Pool (NEPOOL), which includes a generation information database and certificate system, and that accounts for certain generation attributes ~~of electrical energy consumed within, imported into or exported from NEPOOL.~~

Puc 2502.~~2120~~ “Historical generation baseline” means:

(a) For a hydroelectric facility, the average annual electrical production, in megawatt-hours, from the later of January 1, 1986 or the date of first commercial operation through December 31, 2005, adjusted as if any upgrade or expansion completed during the period had been in place over the entire period as described in RSA 362-F:2, X(b); or

(b) For other facilities, the average annual electrical production, in megawatt-hours, for 2004 through 2006, or for the first 36 months after the facility began operation if that date is after December 31, 2001, as described in RSA 362-F:2, X(a).

Puc 2502.~~2221~~ “ISO New England” means the not-for-profit regional transmission organization authorized by FERC to operate the bulk electricity transmission system in the New England Control Area, or its successor.

Puc 2502.~~2322~~ “Incremental new production” means the difference between the ~~annual calendar~~ yearly electricity output of an eligible source and its historical generation baseline.

Puc 2502.~~24~~ “Independent Monitor” means a person ~~certified~~designated by the commission to perform duties pursuant to Puc 2505.09.

Puc 2502.25 “Large thermal source” means a source with a total gross nameplate capacity of its units, combined, of more than 150,000 British thermal units (Btu) per hour of useful thermal energy.

Puc 2502.~~2623~~ “Methane gas” means “methane gas” as defined in RSA 362-F:2, XI, namely “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.”

Puc 2502.~~2725~~ “New England control area” means “New England control area” as defined in RSA 362-F:2, XII, namely “the term as defined in ISO-New England’s transmission, markets and services tariff, FERC electric tariff no. 3, section II.” This includes Connecticut, Rhode Island, Massachusetts, New Hampshire, Vermont, and those parts of Maine not assigned to another control area pursuant to a FERC-approved tariff.

Puc 2502.~~2826~~ “Portfolio standards” means the minimum renewable energy certificate obligations pursuant to RSA 362-F:3, and Puc 2503.01.

Puc 2502.~~2927~~ “Primary fuel” means “primary fuel” as defined in RSA 362-F:2, XIII, namely “a fuel or fuels, either singly or in combination, that comprises at least 90 percent of the total energy input into a generating unit.”

Puc 2502.~~3028~~ “Provider of electricity” means “provider of electricity” as defined in RSA 362-F:2, XIV.

Puc 2502.~~3129~~ “Renewable energy fund” means the nonlapsing special fund created by RSA 362-F:10 and administered by the commission.

Puc 2502.~~3230~~ “Renewable energy source” means “renewable energy source” as defined in RSA 362-F:2, XV, namely “a Class I, II, III, or IV source of electricity or a Class I source of useful thermal energy electricity displacement by a Class I source under RSA 362-F:4, I(g). An electrical generating facility, while selling its electrical output at long-term rates established before January 1, 2007 by orders of the commission under RSA 362-A:4, shall not be considered a renewable source.” The term “renewable energy source” includes the terms “renewable source” and “source.”

Puc 2502.~~3334~~ “Retire” means to make no further use of a certificate for purposes of trading in the generation attributes associated with the certificate.

Puc 2502.~~3432~~ “Revenue quality meter” means an electricity meter used by a customer-sited source that is of sufficient quality to be eligible for use by a distribution utility company to measure for billing purposes the customer’s electricity consumption.

Puc 2502.35 “Small thermal source” means a source with a total gross nameplate capacity of its units, combined, of 150,000 Btu per hour or less of useful thermal energy.

Puc 2502.36 “Thermal Biomass Renewable Energy Technologies” means facilities, comprised of one or more biomass units, that produce useful thermal energy using biomass as the fuel source, that began operation after January 1, 2013, provided the facilities comply with the following requirements:

(a) If the biomass unit is rated between 3 and 30 MMBtu/hour design gross heat input, the particulate emission rate from the unit is less than or equal to 0.10 lbs/MMBtu;

(b) If the biomass unit is rated equal to or greater than 30 MMBtu/hour design gross heat input, the particulate emission rate from the unit is less than or equal to 0.02 lbs/MMBtu as measured and verified by the department pursuant to RSA 362-F:12;

(c) If the biomass unit is rated less than 100 MMBtu/hour design gross heat input, the unit implements best management practices as established by the department; and

(d) If the biomass unit is rated equal to or greater than 100 MMBtu/hour design gross heat input, the quarterly average NOx emission rate is no more than 0.075 lbs/MMBtu as measured and verified by the department pursuant to RSA 362-F:12.

Puc 2502.37 “Useful thermal energy” means “useful thermal energy” as defined in RSA 362-F:2, XV-a, namely “renewable energy delivered from Class I sources that can be metered and that is delivered in New Hampshire to an end user in the form of direct heat, steam, hot water, or other thermal form that is used for heating, cooling, humidity control, process use, or other valid thermal end use energy requirements and for which fuel or electricity would otherwise be consumed.”

Puc 2502.38 “Year” means “year” as defined in RSA 362-F:2, XVI, namely “a calendar year beginning January 1, and ending December 31.”

**PART Puc 2503 ~~RENEWABLE~~ PORTFOLIO ~~STANDARDS~~ CERTIFICATE OBLIGATIONS**

**Puc 2503.01 ~~Minimum Certificate Obligations~~ Portfolio Standards.**

(a) Except as provided in Puc 2503.01(j), for each year specified in Table 2500.01 below eEach provider of electricity shall:

- (1) Obtain and retire ~~Class I, Class II, Class III and Class IV~~ certificates sufficient in number and class type to meet or exceed the percentages of total megawatt-hours of electricity supplied by the provider to its end-use customers for each ~~calendar~~ year as established by paragraphs (b) through (fg) below; or
- (2) Make alternative compliance payments pursuant to Puc 2503.02.

(b) For ~~calendar~~ years 2008, 2009, 2010 and 2011, the percentages shall be as specified in Table 2500.~~0102~~, ~~Minimum Electric Renewable~~ Portfolio Standards, pursuant to RSA 362-F:3.

(c) ~~Pursuant to RSA 362 F:3, for calendar~~ Except as noted in Puc 2503.01(j), Ffor years 2012 through 2025 and thereafter, the percentages shall be as specified in RSA 362-F:3, which are specified in Table 2500.01 as follows and as modified pursuant to (d) through (g) below.

Table 2500.01 Portfolio Standards

<u>Calendar Year</u>	<u>Total Class I</u>	<u>Class I from useful thermal energy</u>	<u>Class II</u>	<u>Class III</u>	<u>Class IV</u>
<u>2008</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>3.50%</u>	<u>0.50%</u>
<u>2009</u>	<u>0.50%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>4.50%</u>	<u>1.00%</u>
<u>2010</u>	<u>1.00%</u>	<u>0.00%</u>	<u>0.04%</u>	<u>5.50%</u>	<u>1.00%</u>

2011	2.00%	0.00%	0.08%	6.50%	1.00%
2012	3.00%	0.00% <del>-</del>	0.15%	1.40%	1.00%
2013	3.80%	0.00%	0.20%	1.50%	1.30%
2014	5.00%	0.40%	0.30%	3.00%	1.40%
2015	6.00%	0.60%	0.30%	8.00%	1.50%
2016	6.90%	1.30%	0.30%	8.00%	1.50%
2017	7.80%	1.40%	0.30%	8.00%	1.50%
2018	8.70%	1.50%	0.30%	8.00%	1.50%
2019	9.60%	1.60%	0.30%	8.00%	1.50%
2020	10.50%	1.70%	0.30%	8.00%	1.50%
2021	11.40%	1.80%	0.30%	8.00%	1.50%
2022	12.30%	1.90%	0.30%	8.00%	1.50%
2023	13.20%	2.00%	0.30%	8.00%	1.50%
2024	14.10%	2.00%	0.30%	8.00%	1.50%
2025 and thereafter	15.00%	2.00%	0.30%	8.00%	1.50%

Table 2500.01 Minimum Electric Renewable Portfolio Standards

Calendar Year	Class I	Class II	Class III	Class IV
2008	0.0%	0.0%	3.5%	0.5%
2009	0.5%	0.0%	4.5%	1.0%
2010	1.0%	0.04%	5.5%	1.0%
2011	2.0%	0.08%	6.5%	1.0%
2012	3.0%	0.15%	6.5%	1.0%
2013	4.0%	0.2%	6.5%	1.0%
2014	5.0%	0.3%	6.5%	1.0%
2015	6.0%	0.3%	6.5%	1.0%
2016	7.0%	0.3%	6.5%	1.0%
2017	8.0%	0.3%	6.5%	1.0%
2018	9.0%	0.3%	6.5%	1.0%
2019	10.0%	0.3%	6.5%	1.0%
2020	11.0%	0.3%	6.5%	1.0%
2021	12.0%	0.3%	6.5%	1.0%
2022	13.0%	0.3%	6.5%	1.0%
2023	14.0%	0.3%	6.5%	1.0%
2024	15.0%	0.3%	6.5%	1.0%
2025	16.0%	0.3%	6.5%	1.0%

(d) Upon a petition or on its own motion, and after notice and hearing, the commission shall for good cause accelerate or delay by up to one year any annual increase in Class I or Class II portfolio standards~~acquisition requirements~~.  
~~Any such order shall be issued on or before September 30 of the preceding year.~~

(e) For purposes of (d) above, “good cause” means that the acceleration or delay of an increase is reasonably expected to:

- (1) Increase investment in renewable energy generation-production in New Hampshire; or

(2) Mitigate cost increases to retail electric rates for New Hampshire customers without materially hindering the development of renewable resources.

(f) For ~~calendar~~ years beginning 2012, the commission shall, after notice and hearing, modify the Class III and Class IV ~~portfolio standards~~~~acquisition requirements~~ if:

(1) The modified ~~portfolio standards~~~~requirements~~ would be at least 85 percent but not more than 95 percent of the reasonable expected annual output of available eligible sources; and

(2) The modification would be consistent with the purposes of RSA 362-F.

(g) In determining whether to modify Class III and Class IV ~~portfolio standards~~~~requirements~~ pursuant to (f) above, the commission shall consider evidence regarding supply and demand from similar programs in other states.

(h) Proceedings conducted under this section shall be adjudicative and shall be conducted pursuant to Part Puc 203. A notice issued pursuant to Puc 203.12 in such proceeding shall be ~~mailed-sent~~ to all providers of electricity.

(i) The commission shall post each order issued pursuant to this section on its web site.

(j) The annual portfolio standards set forth in Table 2500.02 shall apply to the electrical load under any electrical power supply contracts for a term of years entered into by providers of electricity on or before July 1, 2012. Upon the expiration of any such contract, the portfolio standards set forth in Table 2500.01 shall apply. For purposes of this section, "term of years" shall mean a contract term of 12 months or more from the date of execution, without regard to any renewal or extension period.

Table 2500.02 Portfolio Standards  
for 2008 – 2011 and  
for Power Supply Contracts Entered into Prior to July 1, 2012

<u>Calendar Year</u>	<u>Class I</u>	<u>Class II</u>	<u>Class III</u>	<u>Class IV</u>
<u>2008</u>	<u>0.0%</u>	<u>0.0%</u>	<u>3.5%</u>	<u>0.5%</u>
<u>2009</u>	<u>0.5%</u>	<u>0.0%</u>	<u>4.5%</u>	<u>1.0%</u>
<u>2010</u>	<u>1.0%</u>	<u>0.04%</u>	<u>5.5%</u>	<u>1.0%</u>
<u>2011</u>	<u>2.0%</u>	<u>0.08%</u>	<u>6.5%</u>	<u>1.0%</u>
<u>2012</u>	<u>3.0%</u>	<u>0.15%</u>	<u>6.5%</u>	<u>1.0%</u>
<u>2013</u>	<u>4.0%</u>	<u>0.2%</u>	<u>6.5%</u>	<u>1.0%</u>
<u>2014</u>	<u>5.0%</u>	<u>0.3%</u>	<u>6.5%</u>	<u>1.0%</u>
<u>2015</u>	<u>6.0%</u>	<u>0.3%</u>	<u>6.5%</u>	<u>1.0%</u>
<u>2016</u>	<u>7.0%</u>	<u>0.3%</u>	<u>6.5%</u>	<u>1.0%</u>
<u>2017</u>	<u>8.0%</u>	<u>0.3%</u>	<u>6.5%</u>	<u>1.0%</u>
<u>2018</u>	<u>9.0%</u>	<u>0.3%</u>	<u>6.5%</u>	<u>1.0%</u>
<u>2019</u>	<u>10.0%</u>	<u>0.3%</u>	<u>6.5%</u>	<u>1.0%</u>
<u>2020</u>	<u>11.0%</u>	<u>0.3%</u>	<u>6.5%</u>	<u>1.0%</u>
<u>2021</u>	<u>12.0%</u>	<u>0.3%</u>	<u>6.5%</u>	<u>1.0%</u>
<u>2022</u>	<u>13.0%</u>	<u>0.3%</u>	<u>6.5%</u>	<u>1.0%</u>
<u>2023</u>	<u>14.0%</u>	<u>0.3%</u>	<u>6.5%</u>	<u>1.0%</u>
<u>2024</u>	<u>15.0%</u>	<u>0.3%</u>	<u>6.5%</u>	<u>1.0%</u>
<u>2025</u>	<u>16.0%</u>	<u>0.3%</u>	<u>6.5%</u>	<u>1.0%</u>

Puc 2503.02 Alternative Compliance Payments.

(a) In lieu of ~~meeting the portfolio standards of RSA 362-F:3 and acquiring any certificate as required by Puc 2503.01(a)(1) for a given year, if and to the extent sufficient certificates are not otherwise available at a price below the amounts specified in RSA 362-F:10, II and III,~~ a provider of electricity shall make the appropriate alternative compliance payment to the commission at the rates when a certificate is not otherwise available at a price below the amount of the alternative compliance payment pursuant to established by RSA 362-F:10, II and III and calculated by the commission.

(b) On or before January 31 of each year, the commission shall establish ~~that year's~~ the alternative compliance ~~payment rate~~ payment for each class ~~as directed by RSA 362-F:10, III, by adjusting the previously applicable alternative compliance payment by a percentage equal to the annual percentage change, as measured from the preceding calendar year, in the Consumer Price Index, All Urban Consumers, Northeast Region, all items, not seasonally adjusted, as published by the Bureau of Labor Statistics of the U.S. Department of Labor.~~

(c) The commission shall publish its schedule of alternative compliance payment rates established pursuant to this part on the commission's web site.

(d) A provider of electricity shall remit alternative compliance payments for each year by the following July 31 ~~with its annual compliance report~~ as specified by Puc 2503.03(b).

Puc 2503.03 Annual Compliance Report.

(a) On or before July 1 of each year, a provider of electricity shall file a report with the commission on Form E-2500, Annual Renewable Portfolio Standard Compliance Filing, or a similar document containing the same information, documenting the provider's compliance with this part for the preceding ~~calendar~~ year.

~~(b) When filing form E-2500 with the commission, a provider shall file a copy of the completed form with the state treasurer delivered by mail or in person at:~~

~~State of New Hampshire Treasury  
25 Capitol Street, Room 121  
Concord, NH 03301-6312~~

~~(b)(e) On or before July 31 of each year, the provider of electricity shall submit to the file with the copy of the completed form filed with the state treasurer-commission either a check payable to the State of New Hampshire in the amount of any alternative compliance payments due pursuant to Puc 2503.02 or documentation that the funds have been electronically transferred to the renewable energy fund bank accountstate treasurer.~~

~~(c)(d)~~ The report shall include:

- (1) The name of the provider of electricity filing the report;
- (2) The date of the report;
- (3) The ~~calendar~~ year represented by the report;
- (4) The name, title and signature of the officer or employee who prepared the report;
- (5) The total number of kilowatt-hours of electricity sold or delivered to end use customers;

~~(6) For a report filed in 2009, total kilowatt hours sold or delivered under a supply contract executed prior to January 1, 2007 for default service pursuant to RSA 374-F:3, V(e);~~

~~(6) A list of electrical power supply contracts for a term of years that were executed on or before July 1, 2012 pursuant to Puc 2503.01(j), including the execution date and expiration dates of each contract, the annual amount of electricity supplied in kilowatt-hours under the contract during the preceding year, and the total amount of electricity supplied under all such contracts during the preceding year;~~

(7) Total certificate obligations in kilowatt-hours for each class calculated using the percentages in Table 2500.01 and, as applicable, Table 2500.02;

(8) Total NEPOOL GIS certificates purchased or acquired for each class of sources listed in Table 2500.01 and, as applicable, Table 2500.02;

~~(9) Total commission issued certificates purchased or acquired by class;~~

~~(9)~~ Total costs incurred for the purchase of certificates by class;

~~(10)~~ Total certificates from years other than the compliance year by class and by year of issuance used pursuant to RSA 362-F:7,I;

~~(11+2)~~ The balance of certificate obligations to be met with alternative compliance payments by class;

~~(12+3)~~ The total dollar amount of alternative compliance payments owed by class using the alternative compliance payments schedule determined by the commission pursuant to Puc 2503.02; ~~and~~

~~(13+4)~~ ~~The Total~~ excess certificates by class to be banked for future compliance years; ~~and~~

~~(14)~~ The total certificate net metering credits by class calculated pursuant to RSA 362-F:6, II-a and Puc 2503.04.

~~(d)(e)~~ A provider of electricity shall separately file its GIS report titled "My Settled Certificates Disposition," or another report approved by the commission, containing the final number of certificates settled for the prior ~~calendar~~ year no later than July ~~3130~~ of each year.

Puc 2503.04 Net-Metering Credit

(a) A provider of electricity shall receive Class I and Class II certificates for the production of electricity at customer-sited sources that is net-metered to a distribution utility pursuant to RSA 362-A:9 and Puc 900 provided that:

(1) The customer-sited source is eligible to produce Class I or Class II certificates; and

(2) The commission has not certified the customer-sited source for the production of Class I or Class II certificates.

(b) On or before February 1 of each year, distribution utilities shall submit to the commission the following:

(1) A list of customer-sited sources eligible for Class I certification that meet the requirements of Puc 2503.04(a), including the owner of the source, the location of the source, the type of renewable energy used by the source, the nameplate rated capacity in alternating current of the generator in kilowatts (kW), and certification by the distribution utility that the source began operation after January 1, 2006;

(2) A list of customer-sited sources eligible for Class II certification that meet the requirements of Puc 2503.04 (a), including the owner of the source, the location of the source, the nameplate rated capacity of the inverters in alternating current, and certification by the utility that the source began operation after January 1, 2006;

(3) Total annual electricity sales in kWh for the preceding year; and

(4) Total default service sales in kWh or equivalent for the preceding year.

(c) The commission shall estimate the total yearly production for Class I and Class II customer-sited sources identified pursuant to paragraph (b) using a capacity factor rating of 20 percent for each installation.

(d) By February 28 of each year, the commission shall compute and make public credit percentages that are equal to the estimated production for the prior year in each class divided by the total amount of electricity supplied to end-use customers in the prior year, with the results converted to a percentage.

(e) Each provider of electricity may, at the time of filing its annual report pursuant to Puc 2503.03, claim a Class I and/or a Class II certificate credit equal to the credit percentage for each class multiplied by the total megawatt-hours of electricity supplied by the provider to its end-use customers in the preceding year.

Puc 2503.054 Certificate Banking.

(a) Except as provided in paragraphs (b) through (de) below, certificates obtained in compliance with this chapter shall be used to comply with the portfolio standard certificate acquisition obligation for the ~~calendar~~ year in which the ~~generation energy~~ represented by the certificate was produced.

(b) A provider of electricity may bank unused certificates and thereafter use them to comply with the portfolio standard certificate acquisition obligations for the two ~~calendar~~ years following the year in which the energy was produced pursuant to (c) below.

(c) An owner of certificates, ~~or fractional certificates,~~ may bank unused certificates by filing with the commission the following:

(1) By July 1 of each year, on the Form E2500 or in a similar format containing the same information, the total amount of excess certificates by class to be banked for future compliance years; and

~~(2) By July 31-30 of each year, the for certificates tracked by the GIS to be banked from the prior calendar year, a report titled "My Settled Certificates Disposition," issued by GIS to the owner indicating the total number of certificates owned and settled for the prior calendar year; or~~

~~(2) By March 31 of each year, for certificates issued by the commission to be banked from the prior calendar year, an affidavit of the owner stating that the certificates have not been traded or retired.~~

~~(d) A provider of electricity may apply unused certificates issued for energy produced in the first quarter of a calendar year to the certificate acquisition obligations of the preceding calendar year.~~

~~(d)(e)~~ No provider of electricity shall meet more than 30 percent of its portfolio standard certificate acquisition obligation for any individual class in any given ~~calendar~~ year with certificates acquired pursuant to paragraphs (b) ~~and (d)~~.

Puc 2504.01 Location of Sources Eligible to be Issued ~~Issuing~~ Certificates.

(a) Certificates used to comply with the portfolio standards purchased or sold pursuant to this chapter shall, pursuant to RSA 362-F:6, IV, originate from:

(1) Sources within the New England control area; or

(2) Sources in a control area adjacent to the New England control area, provided that the energy is delivered within the New England control area and such delivery is verified by submitting to the commission:

a. Documentation of a unit-specific bilateral contract or other legally enforceable obligation that is executed between the source owner, operator, or authorized agent and an electric energy purchaser located within the New England control area for delivery of the source's electric energy to the New England control area;

b. Proof of associated transmission rights for delivery of the source's electric energy from the generation unit of the source through the adjacent control area to the New England control area;

c. Documentation that the electrical energy delivered was settled in the ISO-New England wholesale market system;

d. Documentation that the source produced, during each hour of the applicable month, the amount of megawatt-hours claimed, as verified by the GIS administrator; and

e. Confirmation that the electrical energy delivered under the legal obligation received a North American Electric Reliability Corporation tag from the originating control area to the New England control area.

(b) If the originating control area employs a generation information system that is comparable to the GIS, such system may be used to support the documentation required in (a)(2)d above.

(c) ~~Except as provided in Puc 2504.03, i~~ Issuance, qualification, sales, exchanges, and retirement of ~~renewable~~ certificates pursuant to this chapter shall be conducted through the GIS according to its operating rules.

(d) Certificates used to comply with the thermal portfolio standards shall originate from sources that delivered the useful thermal energy in New Hampshire.

Puc 2504.02 Transferability of Certificates.

(a) A certificate may be sold or otherwise exchanged by the source to which it was initially issued or by any other person or entity that acquires the certificate.

(b) A certificate shall be used only once for compliance with the ~~portfolio standards~~ acquisition requirements of this chapter.

(c) A certificate shall not be used for compliance with this chapter if it has been 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, thermal energy output, portfolio, or sale.

(d) A certificate that has been used for compliance with this chapter shall not 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, thermal energy output, portfolio, or sale.

~~Puc 2504.03 Commission Issued Certificates.~~

~~(a) A customer-sited source that is ineligible to participate in the GIS but otherwise produces or displaces electricity and that qualifies for one of the renewable energy classes of RSA 362-F:4 may acquire directly from the commission new certificates pursuant to RSA 362-F:6 II, including fractional certificates representing less than a megawatt-hour of electricity production or displacement, provided that the source is located in New Hampshire.~~

~~(b) Fractional certificates may be aggregated into whole certificates by the owner of such certificates.~~

~~(c) The commission shall issue such certificates with serial numbers to the owner of the customer-sited source or its designee as indicated in a letter signed by such owner and filed at the commission.~~

~~(d) The person issued the certificate shall be the initial owner of the certificate.~~

~~(e) To qualify for fractional certificates other than provided in Puc 2505.11, the customer shall use a revenue quality meter.~~

~~(f) The owner of the customer-sited source shall make available to the monitor and the commission a copy of the certificate from the meter manufacturer attesting that the meter operates to the manufacturer's standards.~~

~~(g) The customer shall maintain the meter according to the manufacturer's standards.~~

PART Puc 2505 CERTIFICATION OF RENEWABLE ENERGY SOURCES SOURCE ELIGIBILITY DETERMINATION AND MONITORING

Puc 2505.01 Generation Eligibility Determinations.

(a) The commission shall within 45 days of receiving a completed application pursuant to this part determine the eligibility of a facility to be issued ~~obtain~~ new certificates ~~of a generation facility, a solar hot water heating system, or a customer-sited source.~~

(b) The applicant shall have the burden of demonstrating eligibility to be issued ~~obtain~~ new certificates.

(c) The effective date of certification shall be the date that a completed application is submitted to the commission.

(d) When issuing a certification under this rule, the commission shall provide a copy to the owner of the generation facility and the administrator of the GIS. To be issued new ~~acquire~~ certificates, the owner shall ~~then~~ register with the GIS and comply with its rules and procedures.

(e) No generation facility shall be eligible to ~~be issued~~ ~~acquire~~ new certificates under this chapter while selling its electrical output at long-term rates established before January 1, 2007 by orders of the commission under RSA 362-A:4.

(f) No customer-sited source shall be certified as eligible to ~~be issued new~~ ~~acquire~~ certificates under this part unless the source is located in New Hampshire.

(g) No thermal energy source shall be certified as eligible to be issued new certificates under this part unless the thermal energy is delivered in New Hampshire.

Puc 2505.02 Application Requirements.

(a) To qualify as a facility eligible to ~~be issued new~~ ~~acquire~~ certificates under this Chapter, a ~~proposed~~ source shall demonstrate its eligibility under Class I, II, III or IV by filing a completed application with the commission.

~~(b) For C~~customer-sited sources with a gross nameplate capacity of 100 kilowatts or less of electricity, or equivalent thermal output the application shall include:~~apply pursuant to Puc 2505.08.~~

(1) The name, address and contact information of the applicant;

(2) A complete list of the equipment used at the facility, including the meter and, if applicable, the inverter;

(3) The gross nameplate capacity of the source;

(4) The GIS facility code;

(5) The name, license number and contact information of the installer of the generation equipment, or a statement that the equipment was installed directly by the customer;

(6) The name and contact information of the seller of the generation equipment;

(7) The name and contact information of the independent monitor of the source;

(8) A copy of the interconnection agreement pursuant to Puc 307.06, if applicable, between the applicant and the distribution utility;

(9) An attestation that the project meets the metering requirements of Puc 2506;

(10) An attestation that the project is installed and operating in conformance with any applicable building codes;

(11) For an installation with electric output, documentation of the applicable distribution utility's approval of the installation; and

(12) An affidavit by the owner attesting to the accuracy of the content of the application.

~~(c)(b)~~ For ~~all other~~ sources with a gross nameplate capacity of more than 100 kilowatts of electricity, the application shall include:

- (1) The name and address of the applicant;
- (2) The name and location of the facility;
- (3) The ISO-New England asset identification number, if available;
- (4) The GIS facility code, ~~if available~~;
- (5) A description of the facility, including fuel type, gross nameplate ~~generation~~ capacity, the initial commercial operation date, and the date it began operation, if different;
- (6) If an eligible electric biomass technology or co-fired electric generating facility ~~source~~, the following documentation:
  - a. NO<sub>x</sub> emission rate in lb/MMBtu, quarterly average; ~~and~~
  - b. Particulate matter emission rates in lb/MMBtu; ~~and~~
  - c. A description of pollution control equipment or proposed practices for compliance with NO<sub>x</sub> and particulate matters ~~such~~ requirements;
  - d. Other source NO<sub>x</sub> emission reduction plan for a co-fired electric generating facility, as applicable;
  - e. Other source particulate emission reduction plan, as applicable;
  - f. For co-fired electric generating facilities, the methodology to be used to calculate the electrical production derived from the combustion of biomass fuels; ~~and~~
  - g. Proof that a copy of the completed application has been filed with the department.
- (7) All other necessary regulatory approvals that are related to REC requirements, including any reviews, approvals or permits required by the department;
- (8) Proof that the applicant either has an approved interconnection study on file with the commission, is a party to a currently effective interconnection agreement, or is otherwise not required to undertake an interconnection study;
- ~~(9) If a biomass facility, proof that a copy of the completed application has been filed with the department;~~
- ~~(9)(10)~~ A description of how the generation facility is connected to the distribution utility;
- ~~(10)(11)~~ A statement as to whether the facility has been certified under another non-federal jurisdiction's renewable portfolio standard and proof thereof;
- ~~(11)(12)~~ A statement as to whether the facility's output is reported to and ~~had been~~ verified by ISO-New England;

(12)(13) A description of how the facility's output is reported to the GIS if not reported to and verified by ISO-New England;

(13) Certification that the source complies with the metering requirements of Puc 2506;

(14) An affidavit by the owner attesting to the accuracy of the contents of the application;

(15) The name and telephone number of the facility's operator, if different from the owner; and

(16) Such other information as the applicant wishes to provide to assist in classification of the generating facility.

(d) For sources producing useful thermal energy, the application shall include:

(1) The name, address and contact information of the applicant;

(2) The name and location of the facility;

(3) A description of the equipment and meters used to measure useful thermal energy including the manufacturer, model, placement of the sensors in the energy production system, temperature operating range, flow operating range, thermal energy operating range, and pressure operating range, if applicable;

(4) A description of the manufacturer's recommended methods and frequency for meter calibration;

(5) The rated thermal capacity of the facility, expressed in Btu/hour;

(6) The GIS facility code;

(7) The name, license number, if applicable, and contact information of the installer of thermal biomass facility, solar thermal technology, or geothermal system, or a statement that the equipment was installed directly by the owner;

(8) The name and contact information of the seller of the thermal equipment;

(9) The name and contact information of the independent monitor of the facility;

(10) An attestation that the project meets the metering requirements of Puc 2506 and the meters were installed according to manufacturer's recommendation;

(11) The manufacturer's guaranteed accuracy of the meters used to calculate thermal energy output;

(12) For small thermal sources, a description of the methodology used to calculate the useful thermal energy pursuant to Puc 2506.04 including the equations and values for the variables in the equations;

(13) For large thermal sources, a description of the methodology used to calculate the useful thermal energy pursuant to Puc 2506.04;

(14) The discount factors for meter accuracy pursuant to Puc 2506.05(e) to be applied for REC calculations, if applicable;

(15) The discount factor for operating energy and thermal energy losses pursuant to Puc 2506.05(f) to be applied for REC calculations, if applicable, or a detailed description of the method for determining a discount factor for operating energy and thermal energy losses, if applicable;

(16) If a thermal biomass facility, the following documentation, as applicable:

a. For units with a heat input capacity of 100 MMBtu/hour or greater, the NO<sub>x</sub> emission rate in lb/MMbtu, quarterly average;

b. For units with a heat input capacity of 3 MMBtu/hour or greater, the particulate matter emission rate in lb/MMBtu;

c. A description of pollution control equipment or proposed practices for compliance with NO<sub>x</sub> and particulate matter requirements;

d. For units with a heat input capacity of less than 100 MMBtu/hour, the proposed best management practices that are consistent with the recommendations in the report entitled "Emission Controls for Small Wood-Fired Boilers" prepared for the United States Forest Service, Western Forestry Leadership Coalition by RSG, Inc., May 2010; and

e. Proof that a copy of the completed application has been filed with the department.

(17) All other necessary regulatory approvals that are related to REC requirements, including any reviews, approvals or permits required by the department;

(18) A statement as to whether the facility has been certified under another non-federal jurisdiction's renewable portfolio standards and proof thereof;

(19) A description of how the facility's output is reported to the GIS, including the name and contact information of the independent monitor;

(20) The name and telephone number of the facility's operator, if different from the owner;

(21) Such other information as the applicant wishes to provide to assist in classification of the facility;

(22) For thermal biomass renewable energy technologies, the total system thermal efficiency;

(23) For a solar thermal facility, the Solar Rating and Certification Corporation (SRCC) rating of the system;

(24) For a geothermal facility, the coefficient of performance and the energy efficiency ratio of the system;

(25) An attestation by the applicant that the project is installed and operating in conformance with any applicable building codes;

(26) An affidavit by the owner attesting to the accuracy of the contents of the application; and

(27) An affidavit by a professional engineer that is licensed in New Hampshire and in good standing attesting that the renewable energy source meets the requirements of this part.

(e) For thermal sources requesting eligibility to be issued certificates for the period January 1, 2014 until 60 days following the effective date of this part, the application shall include the following information for that interim period which information shall be submitted no later than 60 days following the effective date of this part:

(1) If requesting eligibility to be issued thermal certificates, the information required under Puc 2505.02(d), except as outlined in Puc 2505.02(e)(2); and

(2) In lieu of the information required by Puc 2505.02 (d) (11) through (13), a thermal source may submit a detailed explanation of the methodology used to measure and calculate thermal energy and an attestation by a professional engineer that is licensed in New Hampshire and in good standing that the methodology for measuring useful thermal energy and calculating certificates is sound.

(f) For combined heat and power facilities, the application shall include:

(1) As to the eligibility to be issued certificates for electricity production, the information required under Puc 2505.02 (c); and

(2) As to the eligibility to be issued certificates for thermal energy output, the information required under Puc 2505.02(d).

#### Puc 2505.03 Preliminary Designation.

(a) A developer of a proposed new or repowered source may request preliminary designation as an eligible source by submitting an application containing the information described in Puc 2505.02, provided that any tentative or estimated information, such as the initial commercial operation date, is so identified.

(b) The commission shall rule on a request for preliminary designation within 60 days of receiving a complete application. The commission shall grant ~~athe~~ request for preliminary designation when the facts as stated on the application demonstrate that the planned facility is expected to meet the requirements of the requested class. When granting such a request, the commission shall attach such conditions to its approval as are reasonably necessary to ensure compliance with RSA 362-F and this chapter. When denying such a request, the commission shall provide include with any denial of a preliminary designation request a detailed explanation of the basis for its decision.

(c) Preliminary designation under this section shall not exempt a ~~facilitysource~~ from the regular application requirements of this part. A ~~facilitysource~~ granted preliminary designation of eligibility shall be entitled to full certification, provided that the facility as constructed or modified is consistent with the facts as stated in the application for preliminary designation ~~application~~ and complies with any conditions added by the commission.

Puc 2505.04 Certification of Biomass Facilities Producing Electricity or Useful Thermal Energy.

(a) Eligibility determinations of ~~generation~~-facilities that use biomass fuels shall be conditional as required by RSA 362-F:11, III.

(b) Each source shall file with the department and the commission within 45 days of the end of each calendar quarter an affidavit attesting that the source was operated in compliance with all the eligibility criteria to produce RECs for that quarter, including the following information for the source:

(1) Quarterly average NOx emission rate;

(2) Particulate matter emission rate;

(3) Other source's NOx emission reduction plan for a co-fired electric generating facility, as applicable;

(4) Other source's particulate emission reduction plan for a co-fired electric generating facility or eligible electric biomass technology, as applicable; and

(5) Best management practices as approved by the department for thermal energy sources.

(c) Each source shall also file with the department within 45 days of the end of each calendar quarter documentation attesting to the source's average NOx and particulate matter emission rates for such quarter as required by RSA 362-F:12, III. Documentation for purposes of the preceding paragraph shall include copies of the applicable pages from the excess emission report from the subject quarter and the most recent particulate matter stack test report.

~~(d)(b)~~ Within 10 days of receiving notice from the department that a ~~generation~~-facility conditionally certified pursuant to ~~paragraph subsection~~ (a) has met the department's emissions standards pursuant to RSA 362-F:12~~1~~, III, the commission shall ~~certify designate~~ the facility as eligible to be issued certificates.

(e) An eligible electric biomass facility that otherwise meets the eligibility requirements of Class III but which, as of January 1, 2012, was not eligible due to inability to achieve the particulate matter emissions rate specified in RSA 362-F:2, VIII(a), and which obtains department approval of an alternative plan under RSA 362-F:2, VIII(a), shall inform the commission of the approved plan and the commission shall certify the source in accordance with the department-approved plan pursuant to RSA 362-F:11, IV.

~~(f)(e) For purpose of certification, a~~ biomass facility generating electricity shall ~~conduct a stack test to verify compliance with the emission standard for particulate matter no later than 12 months prior to the end of the subject calendar quarter except as provided for in RSA 362-F:12, II~~ by conducting a stack test in accordance with Env-A 800 and as follows:

(1) For purposes of initial certification the testing shall occur prior to the first quarter for which the facility wishes to produce RECs.

(2) Except as provided for in RSA 362-F:12, II, the results of the most recent stack test shall be valid for use in verifying the particulate emission rate beginning with the calendar quarter following the stack test and for three subsequent calendar quarters.

(3) If a facility conducts a stack test that fails to demonstrate compliance with the particulate emission standard, the facility shall be deemed to have not met the particulate emission standard for the quarter in which the unsuccessful test was performed.

(4) Notwithstanding (3) above, the unit may demonstrate that it meets the particular emission standard for a quarter in which it fails a test if it subsequently passes a test and the operating hours between the failed and passing tests represent less than 10 percent of the unit's total operating time for that quarter.

~~(d) All stack tests conducted to verify particulate emissions shall be conducted in accordance with Env-A 800.~~

~~(g) (e) All eligible electric biomass technologies and any thermal biomass renewable energy technology rated equal to or greater than 100 MMBtu/hour gross heat input shall verify compliance with the emission standards for~~ Verification of NOx emissions shall be made by ~~through~~ continuous emission monitors meeting the requirements in compliance with ~~of~~ Env-A 808, including but not limited to the following:

(1) A biomass facility shall conduct a Relative Accuracy Test Audit of the continuous emission monitor to certify the accuracy of the NOx emissions data at least once every four calendar quarters, and prior to the quarter for which the facility first wishes to produce RECs; and

(2) The continuous emission monitor for measurement of NOx emission data must have data availability equal to or greater than 90 percent per calendar quarter as defined in Env-A 808 for the verification of NOx emissions.

(h) A thermal biomass unit rated greater than 3 MMBtu/hour and less than 30 MMBtu/hour gross heat input shall verify compliance with the emission standard for particulate matter by conducting a one-time stack test prior to the first quarter in which the unit intends to produce RECs. The stack test shall be conducted in accordance with Env-A 800, except that the unit must operate in the upper 10% of its typical operating load instead of upper 10% of capacity.

(i) A thermal biomass unit rated equal to or greater than 30 MMBtu/hour shall verify compliance with the emission standard for particulate matter by conducting a stack test in accordance with Env-A 800 and as follows:

(1) For purposes of initial certification, the testing shall occur prior to the first quarter for which the facility wishes to generate credits;

(2) Except as provided for in RSA 362-F:12, II, the results of the most recent stack test may be used to verify the particulate emission rate for the period beginning with the calendar quarter following the stack test and for three subsequent calendar quarters;

(3) If a facility conducts a stack test that fails to demonstrate compliance with the particulate emission standard, the facility shall be deemed to not have met the particulate standard for the quarter in which the unsuccessful test was performed; and

(4) Notwithstanding (3) above, the unit may demonstrate that it met the particulate emission standard for a quarter in which it failed a test if it subsequently passes a test and the operating hours between the failed and passing tests represent less than 10 percent of the unit's total operating hours for that quarter.

(j) A thermal biomass unit rated less than 100 MMBtu/hour gross heat input shall verify compliance with best management practices as determined and approved by the department in accordance with the report entitled "Emission Controls for Small Wood-Fired Boilers," prepared for the United States Forest Service, Western Forestry Leadership Coalition by RSG Inc., May 2010.

(k) The provisions of Puc 2505.10 shall apply to biomass facilities.

~~(f) The commission shall, after notice and opportunity for hearing, suspend the certification of a generation facility that uses biomass fuels as its primary fuel for a calendar quarter if:~~

~~(1) The facility has failed to comply with the requirements of RSA 362 F:12, I and II relative to emissions monitoring and stack testing; or~~

~~(2) The facility has failed to comply with the requirement in RSA 362 F:12, III to provide a quarterly filing to the commission relative to emissions and stack testing.~~

~~(g) The suspension of certification pursuant to (f) above shall be for so long as the facility is out of compliance with the limit on emissions.~~

~~(h) A facility suspended pursuant to (f) above shall have its suspension lifted upon demonstration to the commission of certification by the department that it meets the limits on emissions.~~

~~(i) Upon demonstration pursuant to (h) above, the facility shall be certified to be issued certificates as of the next calendar quarter.~~

Puc 2505.05 Certification of Incremental New Production Output.

(a) A generation facility that that uses biomass, methane or hydroelectric technologies to produce energy shall be eligible to participate as a Class I source upon certification by the commission under this rule.

(b) The commission shall certify a biomass, methane or hydroelectric generation facility as an eligible Class I resource under this rule when the applicant demonstrates completion of capital investments attributable to efficiency improvements, additions of capacity, or increased renewable energy output that are sufficient, were intended, and can be demonstrated to increase annual renewable electricity output.~~that it has made capital investments after January 1, 2006 with the successful purpose of improving the efficiency or increasing the output of renewable energy from the facility.~~

(c) The commission shall limit the certification of an applicant under this rule to the amount of incremental new production directly attributable to the new capital investments that formed the basis of the application.

(d) Beginning on July 1, 2013, a Class III source eligible as a Class I source may notify the commission that it elects to be a Class III source instead of Class I source. Once such notice is given, the Commission shall notify the NEPOOL GIS administrator that the production from that source shall qualify for class III certificates beginning with the immediately following quarter, provided the source meets the other requirements of a class III eligible biomass technology.

Puc 2505.06 Certification of Repowered Class III or IV Sources ~~as Class I Sources.~~

(a) A Class III or Class IV source shall be eligible to participate as a Class I ~~resource~~ upon certification by the commission under this rule.

(b) The commission shall certify a Class III or Class IV source as a Class I source under this rule when the source has demonstrated that:

(1) It has made new capital investments for the purpose of restoring unusable generation capacity or adding to existing capacity, in light of the department's environmental permitting requirements or otherwise; and

(2) Eighty percent of the applicant's tax basis in the resulting plant and equipment of the eligible generation capacity, including department permitting requirements for new plants, but exclusive of any tax basis in real property and intangible assets, is derived from the new capital investments.

(c) Except as provided in Puc 2505.06(e), Aan applicant certified as eligible under this rule to participate as a Class I source shall be deemed no longer certified as a Class III or Class IV source.

(d) The entire energy output of an eligible repowered Class I source shall be eligible for ~~renewable energy~~ certificates.

(e) Beginning on July 1, 2013, a Class III source eligible as a Class I source may notify the commission that it elects to be a Class III source instead of Class I source. Once such notice is given, the Commission shall notify the NEPOOL GIS administrator that the production from that source shall qualify for class III certificates beginning with the immediately following quarter, provided the source meets the other requirements of a class III eligible biomass technology.

Puc 2505.07 Certification of Formerly Nonrenewable Energy Electric Generation Facilities as Repowered Class I Sources.

(a) An electric generation unit that is not qualified as a renewable energy source may become eligible to participate as a Class I source when it demonstrates that:

(1) It has made new capital investments for the purpose of repowering with eligible biomass technologies or methane gas and complies with the certification requirements of Puc 2505.04, if using biomass fuel; and

(2) Eighty percent of the applicant's tax basis in the resulting generation unit, including department permitting requirements for new plants, but exclusive of any tax basis in real property and intangible assets, is derived from the new capital investments.

~~Puc 2505.08 Certification of Certain Customer Sited Sources.~~

~~(a) A customer sited source with a capacity of 100 kilowatts or less, or with an equivalent thermal output, shall demonstrate its eligibility to acquire certificates by submitting an application under this section.~~

~~(b) Such application shall include:~~

~~(1) The name, address and contact information of the applicant;~~

~~(2) A complete list of the equipment used at the facility, including the meter and, if applicable, the inverter;~~

~~(3) The name, license number and contact information of the installer of the applicable generation or solar heating equipment, or a statement that the equipment was installed directly by the customer;~~

~~(4) The name and contact information of the seller of the applicable generation or heating equipment;~~

~~(5) The name and contact information of the independent monitor of the source;~~

~~(6) A copy of the interconnection agreement pursuant to Puc 307.06, if applicable, between the applicant and the distribution utility;~~

~~(7) An attestation by the applicant that the project is installed and operating in conformance with any applicable building codes; and~~

~~(8) For an installation with electric output, documentation of the applicable distribution utility's approval of the installation.~~

Puc 2505.08 Certification of Combined Heat and Power Facilities

(a) A combined heat and power facility which seeks certification as a Class I or Class III source shall provide the following information in addition to the application required in Puc 2505.02 and Puc 2505.04:

(1) Proof that the system meets the requirements of Puc 2505.02(c) if the applicant seeks to qualify the facility for its electric generation;

(2) Proof that the system meets the requirements of Puc 2505.02(d) if the applicant seeks to qualify the facility for the useful thermal energy produced;

(3) A description of the total system efficiency; and

(4) Certification that the meters measuring thermal energy output comply with Puc 2506.04.

Puc 2505.09 Independent Monitors.

(a) An independent monitor shall verify the electricity production ~~of electricity~~ of a customer-sited source or the production of useful thermal energy from an eligible source acquiring certificates pursuant to this part and report such production and REC calculation to the GIS. Such a customer-sited source or a source producing useful thermal energy shall either retain the services of an independent monitor directly or, if participating in aggregation pursuant to Puc 2507~~6~~, through an aggregator.

(b) A distribution public utility ~~that is a distribution company pursuant to RSA 362-F:1, XIV~~ shall be eligible to serve as an independent monitor for customer-sited sources and sources producing useful thermal energy within its service territory, provided that the distribution utility employs one or more persons to perform monitoring tasks who meet the qualifications specified in paragraph (c) or (d).

(c) Except as provided in paragraph subsection (b), an independent monitor who verifies electrical production shall be:

- (1) An electrician licensed by the state of New Hampshire and in good standing;
- (2) A professional engineer licensed by the state of New Hampshire and in good standing;
- (3) A certified building analyst professional or a certified mechanical professional as certified by the Building Performance Institute, Inc. of Malta, New York;
- (4) A certified energy manager as certified by the Association of Energy Engineers;
- (5) A home energy rater as certified by Residential Energy Services Network (RESNET); or
- (6) An independent monitor certified under a renewable portfolio standard program in another state.

(d) Except as provided in paragraph (b), an independent monitor who verifies useful thermal energy production shall be one of the following:

- (1) For verifying useful thermal energy from any approved source, a professional engineer licensed by the State of New Hampshire and in good standing;
- (2) For verifying useful thermal energy from solar thermal sources, a North American Board of Certified Energy Practitioners (NABCEP) Certified Solar Heating Installer; or
- (3) For verifying useful thermal energy from geothermal sources, an International Ground Source Heat Pump Association (IGSHPA) Accredited Geothermal Installer.

(e)(4) To qualify as an independent monitor, an applicant shall file an application with the commission that includes:

- (1) The name of the applicant;
- (2) The business address of the applicant;
- (3) A copy of the license issued by the state of New Hampshire or such other qualifying certification as may be applicable; and

(4) A description of how the applicant will be compensated for its services.

~~(f)(e)~~ The commission shall certify as an qualified independent monitor an applicant meeting the requirements of paragraph (c) or (d) above, and shall maintain ~~maintaining~~ a list of certified qualified independent monitors on its web site.

~~(g)(f)~~ No customer-sited source or source producing useful thermal energy shall use an independent monitor who is a member of the immediate family of the owner of the source, holds a direct or indirect ownership interest in the source, or who sold or installed the equipment used by the source.

~~(h)(g)~~ The fact that a provider of electricity installed the customer-sited source or source producing useful thermal energy shall not be a disqualifying relationship pursuant to ~~(f)(g)~~ above.

~~(i)(h)~~ The duties of the independent monitor shall be:

(1) To perform an initial inspection of the source's meters for accuracy and capability to measure the ~~power~~ electricity or useful thermal energy produced, unless the meter is owned by a distribution utility company that has already inspected it pursuant to Puc 305;

(2) To measure ~~annually~~ quarterly the source's electricity or useful thermal energy production ~~or displacement~~ used to qualify for certificates pursuant to the GIS operating rules ~~Puc 2505.10 or Puc 2505.11;~~

(3) To report the production of electricity (or useful thermal energy) from the source and the REC calculation to the customer and the GIS quarterly in accordance with the GIS operating rules.

~~(j)(i)~~ An independent monitor shall not receive compensation for monitoring services that is a function of the number of certificates issued to any source using the independent monitor.

~~(k)(i)~~ An independent monitor shall provide the commission with notice prior to discontinuing services as an independent monitor.

~~Puc 2505.10 Metering of Customer Sited Sources:~~

~~(a) Except as provided in Puc 2505.11, the annual eligibility of a customer-sited source shall be determined pursuant to this section by meter readings that are separated by no more than 13 months.~~

~~(b) For a customer-sited source participating in net metering pursuant to Puc 900, the annual production eligible for certificates shall be either:~~

~~(1) The sum of any net positive output from the source to the grid for the 12 consecutive monthly billing periods that most closely match the applicable calendar year; or~~

~~(2) In the alternative, if the output of the source is directly metered, the gross output as measured by 2 meter readings, the first taken within 30 days of the beginning of the calendar year and the second within 30 days of the end of the year.~~

~~(c) For all other customer-sited sources, the annual production eligible for certificates shall be the gross output as measured by two meter readings, the first taken within 30 days of the beginning of the calendar year and the second within 30 days of the end of the year.~~

~~(d) After meter readings for the first year of eligibility are taken, subsequent year meter readings shall begin with the last meter reading for the prior year.~~

#### Puc 2505.10 Suspension of Eligibility to Produce Certificates for Biomass Facilities

(a) The commission shall suspend the certification of a facility that uses biomass fuels for one or more calendar quarters when the department informs the commission that one of the following events has occurred:

(1) The facility has failed to verify that it complies with the requirements of RSA 362-F:4, I(f), (k) and (l) relative to NOx emissions or an alternative plan to reduce NOx emissions, and RSA 362-F:12, I relative to NOx emissions monitoring;

(2) The facility has failed to comply with the requirements of RSA 362-F:4, I(f), (k), and (l) relative to particulate emissions or an alternative plan to reduce particulate emissions and RSA 362-F:12, II relative to stack testing;

(3) The facility has failed to comply with the requirements of RSA 362-F:4, I(l) relative to best management practices;

(4) The facility has failed to comply with the requirement in RSA 362-F:12, III to provide a quarterly filing to the commission and department relative to emissions monitoring and stack testing and an alternative emissions reduction plan, if applicable; or

(5) The facility fails to meet any of the applicable requirements in Puc 2505.04.

(b) The suspension of certification pursuant to (a) above shall be for so long as the facility has not verified that it complies with the emission requirements, including best management practices.

(c) A facility suspended pursuant to (a) above shall have its suspension lifted upon demonstration to the commission of certification by the department that it meets the emission requirements and is operating in accordance with best management practices.

(d) Upon demonstration pursuant to (c) above, the facility shall be certified to be issued certificates as of the next calendar quarter.

(e) The facility shall have an opportunity for hearing after suspension of its certification pursuant to this section.

#### Puc 2505.11 Measurement of Electricity Displaced from Solar Hot Water Heating Systems:

~~(a) The displacement of electricity consumption from a solar hot water heating system, for the purpose of qualifying such displacement for acquisition of certificates, shall be determined for each calendar year pursuant to this section.~~

~~(b) When a customer has installed a solar hot water system to replace or supplement one or more existing electric hot water heaters, the annual displacement shall be initially calculated by separately determining, for each monthly metering period, the net reduction in the customer's electric consumption as compared to the equivalent period prior to the system installation.~~

~~(c) A net reduction calculated pursuant to (b) above shall be adjusted by any known factors which individually or in aggregate can be reasonably estimated by a monitor to otherwise increase or decrease total metered electrical consumption by more than 10 percent in a given year.~~

~~(d) For purposes of (c) above, "known factors" shall include but not be limited to an increase or decrease in household size, material changes in consumption patterns or business activity, or significant additions, subtractions or modifications of energy consuming devices.~~

~~(e) If the electric consumption of a hot water heater is directly measured for the monthly metering periods in the calendar year prior to installation of a solar hot water heating system, then the actual net reduction in electric consumption for hot water heating for such a metering period may be a substitute for the monthly estimates described above.~~

~~(f) If a customer installs a solar hot water system in a newly constructed building or addition in which there was no previous hot water heating system, then the annual displacement shall be the estimated difference between the actual annual electric consumption and what such consumption would otherwise have been without the solar hot water heating system.~~

~~(g) Customers may choose to directly meter the production of their solar hot water system using commercially available meters that measure and convert British thermal units to kilowatt hours, where one kilowatt hour of certificate-eligible generation shall be deemed to occur upon the delivery of 3,412 British thermal units of metered thermal energy by the solar hot water system.~~

~~(h) To be eligible to acquire certificates based on electricity displacement pursuant to paragraph (b) or (f), a customer shall submit to the commission one or more estimates of displacement by an independent monitor.~~

~~(i) Each such estimate shall be reviewed by the commission and accepted by it if it finds the estimate to be reasonable. The commission shall reject the estimate if it finds it to be unreasonable with an explanation provided in writing and an opportunity for resubmission.~~

Puc 2505. ~~4211~~ Notification of Change.

(a) A ~~customer-sited source~~ renewable energy source certified under this part shall notify the commission in writing and within 10 days whenever there is a change in ownership, primary fuel or any other information contained in its application for certification.

(b) The commission shall revoke or modify the certification of a ~~customer-site source~~ renewable energy source when it determines upon investigation that any changed circumstances ~~reported under this section~~ require such revocation or modification pursuant to this part.

Puc 2505. ~~4312~~ Adjudicative Proceedings. The commission shall conduct an adjudicative proceeding pursuant to RSA 541-A and Puc 200 upon petition by an applicant, source, or other party aggrieved by a decision under this part.

PART Puc 2506 METERING, VERIFICATION, AND REPORTING

Puc 2506.01 Metering of All Renewable Energy Sources

(a) Electricity generation in megawatt-hours and useful thermal energy expressed in megawatt-hours shall be measured and verified in accordance with ISO-NE and GIS operating rules and this Part.

(b) For each submission to GIS, the owner of a renewable energy source, the independent monitor, or the designated representative shall attest to the accuracy and truthfulness of the data.

Puc 2506.02 Metering of Customer-Sited Sources.

(a) A customer-sited source shall use a revenue quality meter to measure the electricity generated.

(b) A customer-sited source shall certify to the independent monitor that the meter operates to the manufacturer's standards.

(c) A customer-sited source shall maintain the meter according to the manufacturer's recommendations.

Puc 2506.03 Metering of Co-Fired Electric Generating Sources

(a) A co-fired source shall measure and verify electricity generation in accordance with ISO-NE and GIS operating rules and shall use electric meters that satisfy the requirements of Puc 900.

(b) For co-fired sources, the source shall calculate the portion of electricity generated from the combustion of Class I biomass fuels quarterly based on the heat input of the facility using one of the following methods:

(1) By measuring the energy content of each combusted fuel (low heat value as combusted), the mass or volumetric input flow of each of the fuels combusted, and the total electricity produced; or

(2) By an alternative method approved by the department based on the heat input of the combusted fuel and the electricity produced.

(c) The initial energy content shall be based on each delivery for the initial quarter or on the fuel supply contract for fuel delivered in the initial quarter. For each subsequent quarter, the energy content shall be based on a methodology approved by the department.

Puc 2506.04 Metering of Sources that Produce Useful Thermal Energy

(a) Sources producing useful thermal energy shall comply with this part in metering production of useful thermal energy.

(b) Sources shall retain an independent monitor to verify the useful thermal energy produced.

(c) Sources shall take data readings for the measurement of useful thermal energy at least every hour. The useful thermal energy produced shall be totaled for each 24 hour period, each monthly period, and each quarter.

(d) Sources shall install meters to measure thermal energy output in compliance with the manufacturer's recommendations and as noted in this part.

(e) Large thermal sources using a liquid or air based system shall measure the useful thermal energy produced using one of the following methods:

(1) Installation and use of heat meters with an accuracy that complies with European Standard EN 1434 published by CEN, the European Committee for Standardization, and that complies with paragraph (k), (l) or (m). The heat meter shall have the highest Class flow meter that will cover the design flow range at the point of measurement and a temperature sensor pair of Class 5K or lower. Compliance shall be certified by a professional engineer licensed by the state of New Hampshire and in good standing;

(2) Installation and use of meters that do not comply with subparagraph (e)(1), provided that the manufacturers' guaranteed accuracy of the meters is  $\pm 5.0\%$  or better, and provided that a professional engineer licensed by the state of New Hampshire and in good standing certifies that the meters were installed and operate according to the manufacturers' specifications and in accordance with paragraph (k), (l) or (m); or

(3) Use of an alternative metering method approved pursuant to Puc 2506.06, provided that the accuracy of any such method is  $\pm 5.0\%$  or better, and provided that a professional engineer licensed by the state of New Hampshire and in good standing certifies that the source implemented the alternative method as approved by the commission and certifies that the alternative method achieves the stated accuracy of  $\pm 5.0\%$  or better.

(f) Large thermal sources using a steam-based system shall measure the useful thermal energy produced using one of the following methods:

(1) Installation and use of meters with accuracy of  $\pm 3.0\%$  or better, which compliance shall be certified by a professional engineer licensed by the state of New Hampshire and in good standing and in accordance with paragraph (m);

(2) Installation and use of meters that do not comply with the accuracy of subparagraph (f)(1), provided that the manufacturer's guaranteed accuracy of the meters is  $\pm 5.0\%$  or better, and provided that a professional engineer licensed by the state of New Hampshire and in good standing certifies that the meters were installed and operate according to the manufacturer's specifications and in accordance with paragraph (m); or

(3) Use of an alternative metering method approved pursuant to this section, provided that the accuracy of any such method is  $\pm 5.0\%$  or better, and provided that a professional engineer licensed by the state of New Hampshire and in good standing certifies that the source implemented the alternative method as approved by the commission and certifies that the alternative method achieves the stated accuracy of  $\pm 5.0\%$  or better.

(g) Small thermal sources shall measure useful thermal energy produced using one of the following methods:

- (1) For any small thermal sources, the methods described in paragraphs (e) or (f);
- (2) For small thermal sources using solar thermal technologies, the method described in paragraph (h);
- (3) For small thermal sources using geothermal technologies, the method described in paragraph (i); or
- (4) For small thermal sources using thermal biomass technologies, the method described in paragraph (j).

(h) Calculation of useful thermal energy produced by small thermal sources using solar technologies.

- (1) “Q” means thermal energy generated, stated in Btu’s.
- (2) “R” means the Solar Rating and Certification Corporation (SRCC) OG100 rating on Mildly Cloudy C Conditions, stated in thousands of Btu’s per day.
- (3) “L” means the orientation and shading losses calculated based on solar models such as Solar Pathfinder, T-sol, Solmetric, or another model approved by the Commission, converted from a percentage to the equivalent number less than 1.
- (4) “t” means the total operating run time of the circulating pump as metered, stated in hours.
- (5) “h” means 11 hours per day to convert the SRCC OG100 rating to an hourly basis (conversion factor).
- (6) To calculate Q, the useful thermal energy produced by small thermal sources using solar technologies, the source shall compute the product of R, t and the result of 1 minus L, and divide the result by the product of h and 1,000, as in the formula below:

$$Q = [R * t * (1 - L)] / (h * 1,000)$$

(i) Calculation of useful thermal energy produced by small thermal sources using geothermal technologies.

- (1) “Q” means thermal energy generated, stated in Btu’s.
- (2) “HC” means the Air Conditioning, Heating and Refrigeration Institute (AHRI) certified heating capacity at part load, stated in Btu’s per hour.
- (3) “COP” means the AHRI Certified Coefficient of Performance.

(4) “t” means total operating run time of the pump when the entering water temperature is greater than the leaving water temperature, stated in hours.

(5) Small thermal sources using geothermal technologies may calculate Q, the useful thermal energy produced, by multiplying HC by the difference between COP and 1, multiplying the result by t, and dividing the result by COP, as in the formula below:

$$Q = [HC * (COP - 1) * t] / COP$$

(j) Calculation of useful thermal energy produced by small thermal sources using thermal biomass renewable energy technologies.

(1) “Q” means the thermal energy generated, stated in Btu’s.

(2) “D” means the default pellet density, which shall be 0.0231 pounds per cubic inch.

(3) “R” means the auger revolutions per hour.

(4) “V” means auger feed volume, stated in cubic inches per auger revolution. Small thermal sources shall assume that V equals one of the following:

a. 5 cubic inches per revolution for augers with a 2” inside diameter;

b. 20 cubic inches per revolution for augers with a 3” inside diameter;

c. 50 cubic inches per revolution for augers with a 4” inside diameter;

d. 95 cubic inches per revolution for augers with a 5” inside diameter; or

e. 150 cubic inches per revolution for augers with a 6” inside diameter.

(5) “EC” means the default energy content of pellet fuel, which shall be 7870 Btu per pound.

(6) “ASE” means the default thermal efficiency expressed as a percentage based on the manufacturer’s warranty of average seasonal thermal efficiency, or based on a default thermal efficiency of 65%.

(7) “t” means the total auger run time in hours as metered.

(8) The estimated amount of fuel burned (the product of D, R, V and t) shall be verified by the fuel purchase records and fuel inventory.

(9) Small thermal sources using thermal biomass renewable energy technologies with wood pellets as the fuel source may calculate Q, the useful thermal energy produced, by computing the product of D, R, V, EC, ASE and t, as in the formula below:

$$Q = (D * R * V * EC * ASE * t)$$

(k) Thermal sources using solar thermal technologies.

(1) “Q<sub>g</sub>” means the heat generated in the collector loop, stated in Btu’s.

(2) “dm/dt” means the mass flow of the collector working fluid measured near the inlet to the solar storage tank, stated in pounds per hour.

(3) “c<sub>p</sub>” means the specific heat of the collector fluid, stated in Btu’s per pound (mass), degrees Fahrenheit (BTU/lbm-°F).

(4) “Ti” means the collector loop inlet temperature measured near the outlet of the solar storage tank, stated in degrees Fahrenheit.

(5) “To” means the collector loop outlet temperature measured near the inlet to the solar storage tank, stated in degrees Fahrenheit.

(6) “t” means the frequency at which data readings are recorded, stated in hours.

(7) Meter sensors shall be installed on the collector loop as close to the water storage tank as practical and in accordance with the meter manufacturer’s guidance.

(8) Thermal sources using solar thermal technologies shall calculate Q, the useful thermal energy produced, by calculating the product of dm/dt, c<sub>p</sub>, the difference between To and Ti, and t, as stated in the formula below:

$$Q_g = (dm/dt) * c_p * (T_o - T_i) * t$$

(1) Thermal sources using geothermal technologies.

(1) “Q<sub>g</sub>” means heat generated in the ground loop, stated in BTU’s.

(2) “dm/dt” means mass flow measured near the outlet of the ground loop, stated in pounds per hour.

(3) “c<sub>p</sub>” means specific heat of the working fluid, stated in BTU/lbm-°F.

(4) “t” means the frequency at which data readings are recorded, stated in hours.

(5) “Ti” means ground loop inlet temperature measured at the inlet to the ground loop, stated in degrees Fahrenheit.

(6) “To” means ground loop outlet temperature measured at the outlet from the ground loop, stated in degrees Fahrenheit.

(7) Bleed points, supplemental boilers and cooling towers shall be excluded from the calculation.

(8) Meter sensors shall be installed on the ground loop as close to the ground loop inlet and outlet as practical and in accordance with the manufacturer’s recommendation.

(9) Thermal sources using geothermal technologies shall calculate Q, the useful thermal energy produced, by calculating the product of dm/dt, c<sub>p</sub>, the difference between To and Ti, and t, as stated in the formula below:

$$Q_g = (dm/dt) * c_p * (T_o - T_i) * t$$

(m) Thermal sources using thermal biomass renewable energy technologies.

(1) "Q<sub>g</sub>" means the thermal energy generated from biomass, stated in Btu.

(2) "dm<sub>out</sub>/dt" means mass flow metered upstream of distribution and downstream of parasitic loads, stated in pounds per hour.

(3) "h<sub>out</sub>" means the specific enthalpy at the metering point determined by temperature data and, for superheated steam, by pressure data, stated in Btu's per pound.

(4) "dm<sub>in</sub>/dt" means mass flow of water into the feedwater or condensate pumps, stated in pounds per hour.

(5) "h<sub>in</sub>" means the specific enthalpy at the metering point which will be a function of the enthalpy of incoming condensate and make-up water prior to the first condensate or feedwater pumps, stated in Btu's per pound.

(6) "t" means the frequency at which data readings are recorded, stated in hours.

(7) All metering systems shall measure boiler feedwater flow, pressure and temperature as close to the first feedwater pump inlet as possible, thereby excluding the deaerator.

(8) Metering for systems that produce hot water shall include sensors for temperature and hot water mass flow placed as close as possible to the boiler hot water distribution header inlet.

(9) Metering for systems that produce steam shall include sensors for temperature, pressure and steam flow placed as close as possible to the steam distribution header inlet and thereby prior to distribution to process loads.

(10) For saturated steam systems, pressure and temperature shall be measured to verify the absence of superheat at the measurement point.

(11) For superheated systems, both pressure and temperature measurements shall be required.

(12) Regardless of phase, the enthalpy under the measured conditions shall either be calculated using International Association for the Properties of Water and Steam (IAPWS) Industrial Formulation 1997 (IF97) formulas or taken from IAPWS or derivative steam tables.

(13) Thermal sources using thermal biomass renewable energy technologies shall calculate Q, the useful thermal energy produced, by calculating the product of dm<sub>out</sub>/dt, (h<sub>out</sub>), and t, and subtract from that number the product of dm<sub>in</sub>/dt, h<sub>in</sub> and t, as stated in the formula below:

$$Q_g = [dm_{out}/dt * (h_{out}) * t] - [dm_{in}/dt * (h_{in}) * t]$$

Puc 2506.05 Calculation of Certificates for Production of Useful Thermal Energy

(a) Sources producing useful thermal energy, the independent monitor or the designated representative shall report to GIS the useful thermal energy produced and the amount of REC's calculated pursuant to this part, as verified by the source's independent monitor.

(b) Useful thermal energy shall be expressed and reported in megawatt-hours where each 3,412,000 Btu's of useful thermal energy is equivalent to one megawatt-hour.

(c) Small thermal sources shall receive certificates based on the useful thermal energy produced as metered pursuant to Puc 2506.04(e) or (f) and discounted, as applicable, by the discount for meter accuracy pursuant to paragraph (e) or as calculated pursuant to Puc 2506.04(h), (i), or (j).

(d) Large thermal sources shall receive certificates based on the useful thermal energy calculated pursuant to Puc 2506.04(e) or (f), discounted by the sum of the percentage discount for meter accuracy pursuant to paragraph (e) and the percentage discount for operating energy and thermal storage losses, or parasitic load, pursuant to paragraph (f).

(e) The discount factor for meter accuracy referenced in paragraphs (c) and (d) shall be one of the following:

(1) If the meters used to measure useful thermal energy output comply with the accuracy of the European Standard EN 1434 as provided in Puc 2506.04(e)(1) or the accuracy pursuant to Puc 2506.04(f)(1), there shall be no meter accuracy discount; or

(2) If the meters used to measure useful thermal energy output do not comply with the accuracy of the European Standard EN 1434 as provided in Puc 2506.04(e)(1) or the accuracy pursuant to Puc 2506.04(f)(1), the applicable meter discount shall be the manufacturer's guaranteed accuracy of the meters used or the accuracy of the alternative method approved pursuant to Puc 2506.06.

(f) The discount factor for large thermal sources for parasitic load referenced in paragraph (d) shall be one of the following:

(1) For sources using solar thermal technology, the discount factor shall be 3.0% of the useful thermal energy produced as measured pursuant to Puc 2506.04;

(2) For sources using geothermal technology, the discount factor shall be 3.6% of the useful thermal energy produced as measured pursuant to Puc 2506.04;

(3) For sources using thermal biomass renewable energy technology, the discount factor shall be 2.0% of the useful thermal energy produced as measured pursuant to Puc 2506.04; or

(4) The discount factor shall be the source's actual metering of the parasitic load.

Puc 2506.06 Request for Alternative Method for Measuring Thermal Energy

(a) A source shall not use an alternative metering method until that alternative method is approved by the commission.

(b) A source seeking approval of an alternative method shall submit an application to the commission that includes the following information:

(1) The name, mailing address, daytime telephone number, and e-mail address of the person requesting approval for the alternative method;

(2) The name and location of the source at which the alternative method will be implemented;

(3) A description of the metering method otherwise required by these rules and the reasons it cannot be used with the applicant's facility;

(4) A description of the proposed alternative method;

(5) Technical data and information demonstrating that the accuracy of the method otherwise required by these rules will be substantially achieved by the proposed alternative method (such data and information may include third party data such as product test results from independent test laboratories, performance data based on nationally recognized product test/certification programs, published resource data for use in calculations, and examples of the use of the method by other organizations for similar purposes); and

(6) Certification by a professional engineer licensed by the state of New Hampshire and in good standing of the meter accuracy rate that will be achieved by the alternative metering method and that the proposed alternative method is technologically sound.

(c) The commission shall approve an alternative metering method that satisfies the requirements of paragraph (b).

PART Puc 25076 AGGREGATION OF SOURCES CERTIFICATES

Puc 25076.01 Registration.

(a) A person not otherwise qualified to obtain certificates ~~as a provider of electricity~~ may purchase, combine, and re-sell ~~whole or fractional~~ certificates ~~issued customer-sited sources~~ by registering as an aggregator pursuant to this section.

(b) An application for registration as an aggregator shall contain:

(1) The name of the aggregator;

(2) The address and telephone number of the aggregator;

(3) Identification of the independent monitor or monitors responsible for verifying the production of energy from the applicable ~~customer-sited~~ sources; and

(4) A disclosure of whether there is any family or business relationship between such independent monitor or monitors and the aggregator; ~~and~~

~~(5) A description of how the monitors will be compensated for its services.~~

(c) An aggregator may aggregate ~~fractional or whole~~ certificates only if:

(1) -The associated ~~generation energy produced~~ uses the same energy resource and technology, as described in Puc 2502.06, Puc 2502.07, ~~and~~ Puc 2502.08 ~~and~~ Puc 2502.09; ~~and~~

~~(2) The source is otherwise eligible to acquire certificates pursuant to Puc 2504.03 above; and~~

~~(2)~~ ~~(3)~~ The energy associated with the certificates was produced in the same ~~calendar~~ year.

(d) An aggregator shall provide the commission with at least 30 days' notice before discontinuing the provision of aggregation services.

#### Puc 2507.02 Prohibited Relationships.

(a) An aggregator shall not purchase certificates from a customer-sited source or a source producing useful thermal energy if the aggregator has a prohibited relationship to an independent monitor, equipment manufacturer, equipment installer or owner associated with the source.

(b) For purposes of this section, "prohibited relationship" means

- (1) A direct or indirect ownership interest comprising at least ten percent of the stock or other equity of an entity,
- (2) Common direct or indirect ownership of at least ten percent,
- (3) Membership in the same household or immediate family, or
- (4) Service as an officer, director, partner, employee, agent or fiduciary.

(c) If a prohibited relationship pursuant to (b) exists between a ~~customer-sited~~ source and any member of an aggregator's household or immediate family, then the aggregator shall also be deemed to have such a prohibited relationship pursuant to this section.

#### PART Puc 2508.7 RENEWABLE ENERGY FUND

Puc 2508.7.01 Source of Fund. All alternative compliance payments deposited pursuant to Puc 2503.02 with the state treasurer shall be held in a nonlapsing account to be known as the renewable energy fund. The commission shall account separately for alternative compliance payments received in connection with Class II ~~portfolio standard~~ certificate acquisition obligations.

#### ~~Puc 2507.02 Annual Report of Fund~~

~~(a) On September 1 of each year, the commission shall publish on its web site a report of the renewable energy fund including:~~

- ~~(1) Class II alternative compliance payments received in the calendar year;~~
- ~~(2) Class I, III and IV alternative compliance payments received in the calendar year;~~
- ~~(3) An estimate of the Class II amounts in the alternative compliance fund available to support new solar energy technology initiatives; and~~

~~(4) An estimate of Class I, III and IV amounts in the alternative compliance fund available to support other thermal and electrical renewable energy initiatives.~~

Puc 2508.027.03 Renewable Energy Initiatives.

(a) The commission shall periodically issue a request for proposals for initiatives to be supported by the renewable energy fund. All such initiatives shall be located in New Hampshire.

(b) In determining whether and to what extent it will dedicate money from the renewable energy fund to proposals submitted pursuant to (a) above, the commission shall consider the extent to which:

(1) The initiative ~~is likely to expand~~ or support the production capacity of the supply of renewable energy certificates for use to comply with the portfolio facilities located in New Hampshire;

(2) The initiative is likely to be cost-effective;

(3) The initiative promotes market transformation, innovation, and energy cost savings;

(4) The initiative will reduce New Hampshire's electrical peak load, or fossil fuel consumption as well as defer or eliminate local utility distribution plant expenditures;

(5) The initiative is likely to result in economic development and environmental benefits for New Hampshire;

(6) The initiative increases fuel diversity in the production of electricity or useful thermal energy for consumption in New Hampshire; and

(7) The applicant has the capacity to successfully complete the initiative ~~and the significance of the proposed assistance of the renewable energy fund in the viability of the project.~~

(c) The commission on its own motion shall dedicate funds for those initiatives that it finds are:

(1) Substantially consistent with the factors set forth in (b) above;

(2) Realistically proposed and achievable by the applicant; and

(3) Most likely, on balance, to advance the purposes of RSA 362-F, within the constraint of available funds.

(d) The commission shall allocate ~~all~~ Class II alternative compliance payments into the renewable energy fund, on an annual basis, primarily to projects and initiatives that support eligible solar technologies.

(e) The commission shall allocate not less than 20 percent of Class I, II, III and IV alternative compliance payments received on an annual basis to customer-sited ~~thermal and~~ renewable energy projects or sources producing thermal energy of up to 1200 kilowatts in gross nameplate capacity or the equivalent thermal output provided that such ~~customer-sited~~ projects meet the requirements of Puc 2507.04.

(f) The commission on its own motion and after notice and hearing shall establish ~~a~~-rebate programs for ~~customer-sited~~ renewable energy projects of up to ~~1200~~ kilowatts in gross nameplate capacity or equivalent thermal output, to be supported by the fund allocated pursuant to (e) above.

Puc 250~~87.0304~~ Customer-Sited or Thermal Energy Projects.

(a) The provisions of this part shall apply to customer-sited ~~generation sources or thermal energy sources producing of~~ up to ~~100200~~ kW in gross nameplate capacity or equivalent thermal output.

(b) Persons seeking rebate or incentive funds for customer-sited projects or thermal energy projects from the renewable energy fund shall apply according to this section.

(c) ~~For residential~~ Applicants, the project shall be located in New Hampshire and the rebate or incentive payment shall be made as directed by RSA 362-F:10, V.:

~~(1) A residential, commercial, industrial, institutional, or public entity in New Hampshire;~~

~~(2) An end use customer of provider of electricity located in New Hampshire; and~~

~~(3) The owner of the proposed project.~~

(d) For all other applicants, the project shall be located in New Hampshire, the applicant or owner of the project shall be interconnected to a provider of electricity, and the rebate or incentive payment shall be made to the owner of the project.

~~(e)(d)~~ Applications pursuant to this part shall include the following information:

(1) The name, address and telephone number of the applicant;

(2) The location of the proposed project;

(3) The owner of the project~~The name and address of the monitor who will verify installation and production;~~

(4) The type of technology used in the proposed project; and

(5) The gross nameplate capacity of the proposed project.

~~(f)(e)~~ Applications shall include a signed contract with a primary installer or vendor that provides customers with a turnkey service.

~~(f) If the applicant intends to install the project, the applicant shall apply for a waiver from (e) above.~~

(g) The commission shall notify an applicant by letter if the application~~his or her proposal~~ is accepted for funding from the renewable energy fund, including the amount, in dollars, that may be provided through the renewable energy fund.

(h) Prior to receiving any monies from the renewable energy fund, the applicant shall demonstrate that the project is installed and operating by providing an attestation as follows~~by a monitor or a distribution company that states:~~

(1) For projects generating useful thermal energy, an appropriate local official shall attest that ~~t~~The project is installed and operating in conformance with applicable codes, including applicable safety, zoning and building codes, and has received any required inspections; or

(2) For projects generating electricity, the distribution utility shall attest that tThe interconnection between the project and the distribution utility complies with the applicable interconnection, testing, and operational requirements, though not necessarily the net metering requirements, of Puc 900, "Net Metering for Customer-Owned Renewable Energy Generation Resources," or in the alternative, Puc 307.06; ~~and~~

~~(3) The monitor or distribution utility has inspected the installation.~~

(i) Upon demonstration that the project is installed and operating, the commission shall issue the rebate based on the approved application. ~~provide the state treasurer information regarding:~~

~~(1) The name and address of the recipient of the money; and~~

~~(2) The amount of money to be disbursed to the recipient pursuant to (i) above.~~

Puc 250~~87.0405~~ 0405 Audit. A recipient of any monies disbursed from the renewable energy fund shall make its books, records and facilities available to the commission for the purpose of allowing the commission to discharge its audit responsibilities pursuant to RSA 362-F:10, I.

APPENDIX

<b>Rule</b>	<b>Statute</b>
Puc 2501.01	RSA 362-F:13
Puc 2501.02	RSA 362-F
Puc 2501.02(a)	RSA 362-F:13; RSA 362-F:3
Puc 2501.02(b)	RSA 362-F:13; RSA 362-F:6
Puc 2501.02(c)	RSA 362-F:13; RSA 362-F:10
Puc 2501.02(d)	RSA 362-F:13; RSA 362-F:6 and 7
Puc 2502.01	RSA 362-F:13; RSA 362-F:10
Puc 2502.02(a)	RSA 362-F:13; RSA 362-F:2, I; RSA 362-F:4, I(j)
Puc 2502.02(b)	RSA 362-F:13; RSA 362-F:2, I; RSA 362-F:4, I(j)
Puc 2502.03	RSA 362-F:13; RSA 362-F:2, II
Puc 2502.04	RSA 362-F:13; RSA 362-F:4, I(i)
Puc 2502.05	RSA 362-F:13; RSA 362-F:2, III
Puc 2502.06(a)	RSA 362-F:13; RSA 362-F:4, I(a), (c), (d), (e), and (f)
Puc 2502.06(b)	RSA 362-F:13; RSA 362-F:4, I(b), (g), and (l)
Puc 2502.06(c)	RSA 362-F:13; RSA 362-F:4, I(h)
Puc 2502.06(d)	RSA 362-F:13; RSA 362-F:4, I(i)
Puc 2502.06(e)	RSA 362-F:13; RSA 362-F:4, I(j)
Puc 2502.06(f)	RSA 362-F:13; RSA 362-F:4, I(k)
Puc 2502.07	RSA 362-F:13; RSA 362-F:4, II
Puc 2502.08	RSA 362-F:13; RSA 362-F:4, III
Puc 2502.09	RSA 362-F:13; RSA 362-F:4, IV
Puc 2502.10	RSA 362-F:13; RSA 362-F:4, I(k)
Puc 2502.11	RSA 362-F:13; RSA 362-F:2, IV
Puc 2502.12	RSA 362-F:13; RSA 362-F:2, XII
Puc 2502.13	RSA 362-F:13; RSA 362-F:2, V
Puc 2502.14	RSA 362-F:13; RSA 362-F:2, VI
Puc 2502.15	RSA 362-F:13; RSA 362-F:2, VII
Puc 2502.16	RSA 362-F:13
Puc 2502.17	RSA 362-F:13; RSA 362-F:2, VIII
Puc 2502.18	RSA 362-F:13; RSA 362-F:2, IX
Puc 2502.19	RSA 362-F:13
Puc 2502.20	RSA 362-F:13; RSA 362-F:6, I
Puc 2502.21	RSA 362-F:13; RSA 362-F:2, X
Puc 2502.22	RSA 362-F:13; RSA 362-F:6, I
Puc 2502.23	RSA 362-F:13; RSA 362-F:4, I(i)
Puc 2502.24	RSA 362-F:13; RSA 362-F:6, II
Puc 2502.25	RSA 362-F:13; RSA 362-F:2, XV-a
Puc 2502.26	RSA 362-F:13; RSA 362-F:2, XI
Puc 2502.27	RSA 362-F:13; RSA 362-F:6, II
Puc 2502.28	RSA 362-F:13; RSA 362-F:3
Puc 2502.29	RSA 362-F:13; RSA 362-F:2, XIII
Puc 2502.30	RSA 362-F:13; RSA 362-F:2, XIV
Puc 2502.31	RSA 362-F:13; RSA 362-F:10
Puc 2502.32	RSA 362-F:13; RSA 362-F:2, XV
Puc 2502.33	RSA 362-F:13; RSA 362-F:3

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Puc 2502.34	RSA 362-F:13
Puc 2502.35	RSA 362-F:13; RSA 362-F:2, XV-a
Puc 2502.36	RSA 362-F:13; RSA 362-F:12
Puc 2502.37	RSA 362-F:13; RSA 362-F:2, XV-a
Puc 2502.38	RSA 362-F:13; RSA 362-F:2, XV-a
Puc 2503.01	RSA 362-F:13; RSA 362-F:3
Puc 2503.02	RSA 362-F:13; RSA 362-F:10
Puc 2503.03	RSA 362-F:13; RSA 362-F:8
Puc 2503.04	RSA 362-F:13; RSA 362-F:6, II-a
Puc 2503.05	RSA 362-F:13; RSA 362-F:7
Puc 2504.01	RSA 362-F:13; RSA 362-F:6, IV
Puc 2504.02	RSA 362-F:13; RSA 362-F:7
Puc 2505.01	RSA 362-F:13; RSA 362-F:11
Puc 2505.02	RSA 362-F:13; RSA 362-F:11, I
Puc 2505.03	RSA 362-F:13; RSA 362-F:13, V
Puc 2505.04	RSA 362-F:13; RSA 362-F:4, I(l); RSA 362-F:11, III; RSA 362-F:12
Puc 2505.05	RSA 362-F:13; RSA 362-F:4, I(i)
Puc 2505.06	RSA 362-F:13; RSA 362-F:4, I(j)
Puc 2505.07	RSA 362-F:13; RSA 362-F:4, I(l)
Puc 2505.08	RSA 362-F:13; RSA 362-F:4, I(l)
Puc 2505.09	RSA 362-F:13; RSA 362-F:6, II
Puc 2505.10	RSA 362-F:13; RSA 362-F:12
Puc 2505.11	RSA 362-F:13; RSA 362-F:11, II
Puc 2505.12	RSA 362-F:13; RSA 362-F:11; RSA 362-F:12
Puc 2506.01	RSA 362-F:13; RSA 362-F:6
Puc 2506.02	RSA 362-F:13; RSA 362-F:7, II
Puc 2506.03	RSA 362-F:13; RSA 362-F:4, I(k)
Puc 2506.04	RSA 362-F:13, VI-a
Puc 2506.05	RSA 362-F:13, VI-a
Puc 2506.06	RSA 362-F:13, VI-z
Puc 2507.01	RSA 362-F:13; RSA 362-F:6, II
Puc 2507.02	RSA 362-F:13; RSA 362-F:6, II
Puc 2508.01	RSA 362-F:13; RSA 362-F:10
Puc 2508.02	RSA 362-F:13; RSA 362-F:10, I
Puc 2508.03	RSA 362-F:13; RSA 362-F:10, I
Puc 2508.04	RSA 362-F:13; RSA 362-F:10, I