Bill as Introduced

2012 SESSION

12-2842
06/10

SENATE BILL ***218-FN***

AN ACT relative to electric renewable portfolio standards.

SPONSORS: Sen. Bradley, Dist 3; Sen. Barnes, Jr., Dist 17; Sen. Lambert, Dist 13; Sen. Odell, Dist 8; Sen. Gallus, Dist 1; Sen. Forrester, Dist 2; Sen. Luther, Dist 12; Rep. Introne, Rock 3; Rep. Cataldo, Straf 3

COMMITTEE: Energy and Natural Resources

ANALYSIS

This bill modifies the electric renewable portfolio standards.

Explanation: Matter added to current law appears in ***bold italics.***
Matter removed from current law appears [~~in brackets and struckthrough.~~]
Matter which is either (a) all new or (b) repealed and reenacted appears in regular type.

12-2842
06/10

STATE OF NEW HAMPSHIRE

In the Year of Our Lord Two Thousand Twelve

AN ACT relative to electric renewable portfolio standards.

Be it Enacted by the Senate and House of Representatives in General Court convened:

1 Electric Renewable Portfolio Standard; Definitions; Eligible Biomass Technologies. Amend RSA 362-F:2, VIII(a) to read as follows:

(a) Has a quarterly average nitrogen oxide (NOx) emission rate of less than or equal to 0.075 pounds/million British thermal units (lbs/Mmbtu), and an average particulate emission rate of less than or equal to 0.02 lbs/Mmbtu as measured and verified under RSA 362-F:12, ***or in lieu of the particulate emission rate, has an alternative emission rate as approved by the department under RSA 362-F:11, IV***; and

2 Definitions; Renewable Energy Source; Useful Thermal Energy. Amend RSA 362-F:2, XV to read as follows:

XV. "Renewable energy source," "renewable source," or "source" means a class I, II, III, or IV source of electricity ***or useful thermal energy*** ~~[or 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.

XV-a. "Useful thermal energy" means energy 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.

3 Minimum Electric Renewable Portfolio Standards. Amend RSA 362-F:3 to read as follows:

362-F:3 Minimum Electric Renewable Portfolio Standards. For each year specified in the table below, each provider of electricity shall obtain and retire certificates sufficient in number and class type to meet or exceed the following percentages of total megawatt-hours of electricity supplied by the provider to its end-use customers that year, except to the extent that the provider makes payments to the renewable energy fund under RSA 362-F:10, II:

	2008	2009	2010	2011	2012	2013	2014	2015	2025
Class I	0.0%	0.5%	1%	2%	3%	4%	5%	6%	16% (*)
~~[Class II~~	~~0.0%~~	~~0.0%~~	~~0.04%~~	~~0.08%~~	~~0.15%~~	~~0.2%~~	~~0.3%~~	~~0.3%~~	~~0.3%]~~
Class II	***0.0%***	***0.0%***	***0.0%***	***0.0%***	***0.0%***	***0.0%***	***0.0%***	***0.0%***	***0.0%***
~~[Class III~~	~~3.5%~~	~~4.5%~~	~~5.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%]~~
Class III	***3.5%***	***4.5%***	***5.5%***	***6.5%***	***9.0%***	***9.0%***	***9.0%***	***9.0%***	***9.0%***
~~[Class IV~~	~~0.5%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%]~~

Class IV *0.5%* *1%* *1%* *1%* *1%* *1.5%* *1.5%* *1.5%* *1.5%*

Class I increases an additional one percent per year from 2015 through 2025. Classes [~~II~~] ***III and*** IV remain at the same percentages from 2015 through 2025 except as provided in RSA 362-F:4, V-VI.

4 Electric Renewable Energy Classes. Amend RSA 362-F:4, I(g) through (j) and II to read as follows:

(g) [~~The equivalent displacement of electricity, as determined by the commission, by end-use customers, from solar hot water heating systems used instead of electric hot water heating~~] ***Solar thermal energy.***

(h) Class II sources [~~to the extent that they are not otherwise used to satisfy the minimum portfolio standards of other classes~~].

(i) The incremental new production of electricity in any year from an eligible biomass or methane source or any hydroelectric generating facility licensed or exempted by Federal Energy Regulatory Commission (FERC), regardless of gross nameplate capacity, over its historical generation baseline, provided the commission certifies demonstrable completion of capital investments attributable to the efficiency improvements, additions of capacity, or increased renewable energy output that are sufficient to, were intended to, and can be demonstrated to increase annual renewable electricity output. The determination of incremental production shall not be based on any operational changes at such facility but rather on capital investments in efficiency improvements or additions of capacity.

(j) The production of electricity from a class III or IV source that has begun operation as a new facility by demonstrating that 80 percent of its resulting tax basis of the source's plant and equipment, but not its property and intangible assets, is derived from capital investment directly related to restoring generation or increasing capacity including department permitting requirements for new plants. Such production shall not qualify for class III or IV certificates. ***Commencing July 1, 2013 a class III source eligible as a class I source under this subparagraph or subparagraph (i) may submit a notice to the commission electing to be a class III source instead of a class I source. Once such notice is given, the production from such a source shall qualify for class III certificates, provided the source meets the other requirements of a class III eligible biomass technology.***

(k) Class I facilities using eligible sources may be co-fired with fossil fuels, provided that only the renewable energy fraction of production from class I multi-fuel facilities shall be considered eligible.

II. Class II (New Solar) shall include the production of electricity from solar technologies, provided the source began operation after January 1, 2006. ***Class II technologies may be used to satisfy the minimum portfolio standards of class I.***

5 Electric Renewable Energy Classes. Amend RSA 362-F:4, IV(a) to read as follows:

IV.(a) Class IV (Existing Small Hydroelectric) shall include the production of electricity from hydroelectric energy, provided the facility began operation prior to January 1, 2006, has a total nameplate capacity of 5 MWs or less as measured by the sum of the nameplate capacities of all the generators at the facility, has actually installed both upstream and downstream diadromous fish passages and such installations have been approved by the Federal Energy Regulatory Commission, ***or has a total nameplate capacity of 1 MW or less as measured by the sum of the nameplate capacities of all the generators at the facility and is interconnected with an electric distribution system located in New Hampshire*** and when required, has documented applicable state water quality certification pursuant to section 401 of the Clean Water Act for hydroelectric projects.

6 Electric Renewable Energy Classes. Amend RSA 362-F:4, V to read as follows:

V. For good cause, and after notice and hearing, the commission may accelerate or delay by up to one year, any given year's incremental increase in class I [~~or II~~] renewable portfolio standards requirement under RSA 362-F:3.

7 Commission Review and Report. Amend RSA 362-F:5, IV to read as follows:

IV. Increasing the class requirements relative to [~~classes~~] ***class*** I [~~and II~~] beyond 2025;

8 Commission Review and Report. Amend RSA 362-F, VI to read as follows:

VI. The timeframe and manner in which new renewable class I [~~and II~~] sources might transition to and be treated as existing renewable sources and if appropriate, how corresponding portfolio standards of new and existing sources might be adjusted;

9 Renewable Energy Certificates. Amend RSA 362-F:6, II to read as follows:

II. The commission shall establish procedures by which electricity ***and useful thermal energy*** production not tracked by ISO-New England from customer-sited sources, including behind the meter production, may be included within the ***class I*** certificate program, provided such sources are located in New Hampshire. The procedures may include the aggregation of sources and shall be compatible with procedures of the certificate program administrator. The production shall be monitored and verified by an independent entity designated by the commission, which may include electric distribution companies.

10 New Paragraph; Renewable Energy Certificates. Amend RSA 362-F:6 by inserting after paragraph IV the following new paragraph:

V. A qualified producer of useful thermal energy shall provide for the metering of useful thermal energy produced in order to calculate the quantity of megawatt-hours for which renewable energy certificates are qualified, and to report to the public utilities commission under rules adopted pursuant to RSA 362-F:13. Monitoring, reporting, and calculating the useful thermal energy produced in each quarter shall be expressed in megawatt-hours, where each 3,412,000 BTUs of useful thermal energy is equivalent to one megawatt-hour.

11 Renewable Energy Fund. Amend RSA 362-F:10, I and II to read as follows:

I. There is hereby established a renewable energy fund. This nonlapsing, special fund shall be continually appropriated to the commission to be expended in accordance with this section. The state treasurer shall invest the moneys deposited therein as provided by law. Income received on investments made by the state treasurer shall also be credited to the fund. All payments to be made under this section shall be deposited in the fund. The moneys paid into the fund under paragraph II of this section[~~, excluding class II moneys,~~] shall be used by the commission to support thermal and electrical renewable energy initiatives. [~~Class II moneys shall only be used to support solar energy technologies in New Hampshire.~~] All initiatives supported out of these funds shall be subject to audit by the commission as deemed necessary. All fund moneys [~~including those from class II~~] may be used to administer this chapter, but all new employee positions shall be approved by the fiscal committee of the general court.

II. In lieu of meeting the portfolio requirements of RSA 362-F:3 for a given year if, and to the extent sufficient certificates are not otherwise available at a price below the amounts specified in this paragraph, an electricity provider may, at the time of report submission for that year under RSA 362-F:8, make payment to the commission at the following rates for each megawatt-hour not met for a given class obligation through the acquisition of certificates:

(a) Class I ***and II***--$57.12.

(b) [~~Class II--$150~~.

~~(c)~~] Class III--$28.

[~~(d)~~] ***(c)*** Class IV--$28.

12 New Paragraph; Application. Amend RSA 362-F:11 by inserting after paragraph III the following new paragraph:

IV. Notwithstanding any law to the contrary, as an alternative to compliance with the particulate matter emission standard in RSA 362-F: 2, VIII (a), a biomass facility otherwise meeting the eligibility requirements of class III, but which as of January 1, 2012 was not a class III eligible biomass technology, may consult with the department and submit a plan, including testing or other reduction protocol verification, to the department for reduction in carbon monoxide or other emissions in lieu of the particulate matter emissions reduction. The department shall expeditiously review the plan and, if approved, provide verification of approval and the testing protocol and such other information it deems relevant to the commission. The application submitted under this section shall inform the commission of the alternative emission standard and the commission shall act under this section to certify the source using the process in RSA 362-F:11, III and in accordance with the plan approved by the department.

13 New Paragraph; Rulemaking. Amend RSA 362-F:13 by inserting after paragraph VI the following new paragraph:

VI-a. Adopt procedures for the metering, verification, and reporting of useful thermal energy output.

14 New Section; Economic Benefits Retention. Amend RSA 362-F by inserting after section 13 the following new section:

362-F:14 Economic Benefits Retention. The commission shall, in all decisions affecting class III biomass technologies or class III standards, consider job loss and job retention, forestry economic impacts in the region and the state, and certificate production from class III eligible and potentially eligible biomass technologies. The proposed action shall aid job retention, forestry economic benefits, and certificate demand, given the certificate supply potential from these technologies.

15 Effective Date. This act shall take effect upon its passage.

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12-2842
12/12/11

SB 218-FN - FISCAL NOTE

AN ACT relative to electric renewable portfolio standards.

FISCAL IMPACT:

The Public Utilities Commission and Department of Environmental Services state this bill will have an indeterminable fiscal impact on state restricted revenue, state restricted expenditures, county expenditures, and local expenditures, and may decrease county and local revenue by an indeterminable amount in FY 2013 and each year thereafter.

METHODOLOGY:

The Public Utilities Commission and Department of Environmental Services state this bill modifies the electric renewable portfolio standards. The Commission and Department assume that provisions of this bill will not be implemented until FY 2013. For calendar year 2010, the State incurred $163,615 in direct costs on state electricity bills attributable to renewable energy certificate purchasing costs and alternative compliance payments made by the state electricity providers, and $226,042 in direct administrative costs associated with managing the program. It is assumed there will be similar expenditures in FY 2012. For FY 2013 through FY 2016, the Commission and Department state revenues and expenditures will be indeterminable. The Commission and Department state many of the changes in the bill will result in the renewable energy certificate supply increasing which may in turn lower the renewable energy certificate price, decreasing the renewable portfolio standards costs. Other changes in the bill increases the renewable energy certificate requirement that electric providers must meet through either renewable energy certificate purchases or alternative compliance payments (the funding source for the renewable energy fund), which absent an increase in renewable energy certificate supply may increase renewable energy certificate prices increasing the cost of electricity purchases made by the State. Also, as alternative compliance payments increase, the cost attributable to these payments increases State expenditures and revenue, and if payments decrease State expenditures and revenue decrease. Examples of the fiscal impact include:

- elimination of class II requirements decreases expenditures for the State as it relates to electricity purchases (approximately $3,635 in calendar year 2010) while at the same time decreasing revenue to the renewable energy fund (approximately $58,884 from class II alternative compliance payments in calendar year 2010).

- increasing class I, III, and IV supplies resulting from thermal resources and hydroelectric systems in NH under I MW and not needing fish passages has the effect of lowering alternative compliance payments, decreasing revenue.
- increasing class III and IV supplies may require an increase in the resources required resulting in increased alternative compliance payments, increasing revenue.

The Commission states the requirement to incorporate thermally-sourced renewable energy certificates into the renewable portfolio standards program would necessitate the need to hire an engineer (labor grade 29, step 1) for at least the first year's startup period, possibly longer. The cost, including salary and benefits, to hire an engineer for one year would be $79,493.

The Commission and Department state this bill will also have an indeterminable fiscal impact on county and local expenditures, and may decrease county and local revenue. As electricity costs shift up or down, the county and local expenditures will shift in the same direction. Revenue may decrease to the extent access to rebates or grant funds flowing from the renewable energy fund decreases.

SB 218-FN – AS AMENDED BY THE SENATE

03/21/12 1235s
03/21/12 1368s

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COMMITTEE: Energy and Natural Resources

ANALYSIS

This bill modifies the electric renewable portfolio standards.

Explanation: Matter added to current law appears in ***bold italics.***
Matter removed from current law appears [~~in brackets and struckthrough.~~]
Matter which is either (a) all new or (b) repealed and reenacted appears in regular type.

03/21/12 1235s
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In the Year of Our Lord Two Thousand Twelve

AN ACT relative to electric renewable portfolio standards.

Be it Enacted by the Senate and House of Representatives in General Court convened:

1 Electric Renewable Portfolio Standards; Definitions; Eligible Biomass Technologies. Amend RSA 362-F:2, VIII(a) to read as follows:

(a) Has a quarterly average nitrogen oxide (NOx) emission rate of less than or equal to 0.075 pounds/million British thermal units (lbs/Mmbtu), and ***either has*** an average 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***; and

2 Definitions; Renewable Energy Source; Useful Thermal Energy. Amend RSA 362-F:2, XIV and XV to read as follows:

XIV. "Provider of electricity" means a distribution company providing default service***; a non-residential customer meeting its retail load through direct purchase from the wholesale electricity market, except as provided in RSA 362-F:15, II;*** or an electricity supplier as defined in RSA 374-F:2, II, but does not include municipal suppliers.

XV. "Renewable energy source," "renewable source," or "source" means a class I, II, III, or IV source of electricity or [~~electricity displacement by a class I source under RSA 362-F:4, I(g)~~] ***a class I source of useful thermal energy.*** 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.

XV-a. "Useful thermal energy" means renewable energy delivered from class I sources that can be metered and that is delivered 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 in New Hampshire.

3 Minimum Electric Renewable Portfolio Standards. Amend RSA 362-F:3 to read as follows:

362-F:3 Minimum Electric Renewable Portfolio Standards. For each year specified in the table below, each provider of electricity shall obtain and retire certificates sufficient in number and class type to meet or exceed the following percentages of total megawatt-hours of electricity supplied by

the provider to its end-use customers that year, except to the extent that the provider makes payments to the renewable energy fund under RSA 362-F:10, II:

	2008	2009	2010	2011	2012	2013	2014	2015	2025 *and thereafter*
Class I	0.0%	0.5%	1%	2%	3%	[~~4%~~] *4.2%*	[~~5%~~] *5.4%*	[~~6%~~] *6.6%*	[~~16%~~] *18.6%* (*)
Class II	0.0%	0.0%	0.04%	0.08%	0.15%	0.2%	0.3%	0.3%	0.3%
~~[Class III~~	~~3.5%~~	~~4.5%~~	~~5.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%]~~
Class III	*3.5%*	*4.5%*	*5.5%*	*6.5%*	*6.5%*	*6.5%*	*9.0%*	*9.0%*	*9.0%*
~~[Class IV~~	~~0.5%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%]~~
Class IV	*0.5%*	*1%*	*1%*	*1%*	*1%*	*1.5%*	*1.5%*	*1.5%*	*1.5%*

*Class I increases an additional [~~one~~] ***1.2*** percent per year from 2015 through 2025. ***A minimum percentage of the class 1 totals shall be satisfied annually by the acquisition of renewable energy certificates from qualifying renewable energy technologies producing useful thermal energy as defined in RSA 362-F:2, XV-a. The minimum percentage to be satisfied by the acquisition of renewable energy certificates from qualifying renewable energy technologies producing useful thermal energy shall be 0.2 percent in 2013, 0.4 percent in 2014, and increased annually by 0.2 percent per year from 2015 through 2025.*** Classes II, ***III, and*** IV remain at the same percentages from 2015 through 2025 except as provided in RSA 362-F:4, V-VI.

4 Electric Renewable Energy Classes. Amend the introductory paragraph of RSA 362-F:4, I to read as follows:

I. Class I (New) shall include the production of electricity ***or useful thermal energy*** from any of the following, provided the source began operation after January 1, 2006, except as noted below:

5 Electric Renewable Energy Classes. Amend RSA 362-F:4, I(b) to read as follows:

(b) Geothermal energy***, if the geothermal energy output is in the form of useful thermal energy only if the unit began operation after January 1, 2013.***

6 Electric Renewable Energy Classes. Amend RSA 362-F:4, I(g) to read as follows:

(g) [~~The equivalent displacement of electricity, as determined by the commission, by end-use customers, from solar hot water heating systems used instead of electric hot water heating~~] ***Solar thermal energy; if the solar thermal energy output is in the form of useful thermal energy only if the unit began operation after January 1, 2013.***

7 Electric Renewable Energy Classes. Amend RSA 362-F:4, I(j) to read as follows:

(j) The production of electricity from a class III or IV source that has begun operation as a new facility by demonstrating that 80 percent of its resulting tax basis of the source's plant and equipment, but not its property and intangible assets, is derived from capital investment directly related to restoring generation or increasing capacity including department permitting requirements for new plants. Such production shall not qualify for class III or IV certificates. ***Commencing July 1, 2013, a class III source eligible as a class I source under this subparagraph or***

subparagraph (i) may submit a notice to the commission electing to be a class III source instead of a class I source. Once such notice is given, the production from such a source shall qualify for class III certificates, provided the source meets the other requirements of a class III eligible biomass technology.

(k) The production of electricity from any fossil-fueled generating facility that originally commenced 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. The portion of the total electrical energy output that qualifies as class I from a facility in a given time period shall be the fraction of electrical production derived from the combustion of biomass fuels based on the heat input at the facility in that time period as determined by the commission in consultation with the department. To qualify under this paragraph, the electricity generation facility that co-fires with biomass fuels shall:

(1) Either have a quarterly average nitrogen oxide (NOx) emission rate, as measured and verified under RSA 362-F:12, of less than or equal to 0.075 pounds/million British thermal units (lbs/Mmbtu) or be a participant in a plan approved by the department for reductions in NOx from other emission sources. The quantity of reductions required shall be the fraction of electrical production derived from the combustion of biomass fuels, as determined under this paragraph, multiplied by the difference between the generation unit's NOx emissions rate and the 0.075 lbs/Mmbtu rate. The plan shall contain reductions, in the aggregate or individually, in NOx emissions from other emission sources under the jurisdiction of the department and demonstrate that the reductions will be quantifiable. The department shall expeditiously review the plan and, if approved, provide such information as it deems relevant to the commission. The application submitted to the commission under RSA 362-F:11 shall inform the commission of the plan and the commission shall certify the source in accordance with the plan approved by the department; and

(2) Either have an average particulate emission rate, as measured and verified under RSA 362-F:12, of less than or equal to 0.02 lbs/Mmbtu or be a participant in a plan approved by the department for reductions in particulate matter emissions from emission sources owned by or affiliated with the co-firing entity. The quantity of reductions required shall be the fraction of electrical production derived from the combustion of biomass fuels, as determined under this paragraph, multiplied by the difference between the generation unit's particulate matter emissions rate and the 0.02 lbs/Mmbtu rate. The plan shall contain reductions, in the aggregate or individually, in particulate matter emissions from other emission sources under the jurisdiction of the department and demonstrate that the reductions will be quantifiable. The department

shall expeditiously review the plan and, if approved, provide such information as it deems relevant to the commission. The application submitted to the commission under RSA 362-F:11 shall inform the commission of the plan and the commission shall certify the source in accordance with the plan approved by the department.

(l) Biomass renewable energy technologies producing useful thermal energy that began operation after January 1, 2013 provided that:

(1) If the unit is a biomass unit rated between 3 and 30 Mmbtu/hr design gross heat input, and has an average particulate emission rate of less than or equal to 0.10 lbs/Mmbtu as measured and verified by conducting and reporting the results of a one-time initial stack test in accordance with methods approved by the department;

(2) If the unit is a biomass unit rated equal to or greater than 30 Mmbtu/hr design gross heat input, and has an average particulate emission rate of less than or equal to 0.02 lbs/Mmbtu as measured and verified under RSA 362-F:12;

(3) If the unit is a biomass unit rated less than 100 Mmbtu/hr design gross heat input, and it implements Best Management Practices as determined by the department; and

(4) If the unit is a biomass unit rated equal to or greater than 100 Mmbtu/hr design gross heat input, and it has a quarterly average NOx emission rate of less than or equal to 0.075 Mmbtu/hr as measured and verified under RSA 362-F:12.

8 Electric Renewable Energy Classes. Amend RSA 362-F:4, III to read as follows:

III. Class III (Existing Biomass/Methane) shall include the production of electricity from any of the following, provided the source began operation prior to January 1, 2006:

(a) Eligible biomass technologies having a gross nameplate capacity of 25 MWs or less.

(b) Methane gas. *Effective for electricity production commencing January 1, 2014, methane gas shall not qualify for class III if the production is from a source which began operation prior to January 1, 2006 and which source exceeds a total gross nameplate capacity of 10 MWs in the aggregate located at any single landfill site. All phases, stages, cells, lifts, expansions, and other landfill areas shall be combined in determining the single landfill site. Only class III and potential class III eligible sources at any single landfill site shall be included in determining whether the 10 MW aggregate limitation has been exceeded.*

9 Electric Renewable Energy Classes. Amend RSA 362-F:4, IV(a) to read as follows:

IV.(a) Class IV (Existing Small Hydroelectric) shall include the production of electricity from hydroelectric energy, provided the facility*:*

(1) Began operation prior to January 1, 2006[~~,~~]*;*

(2) When required, has documented applicable state water quality certification pursuant to section 401 of the Clean Water Act for hydroelectric projects; and

(3) Either:

(a) Has a total nameplate capacity of 5 MWs or less as measured by the sum of the nameplate capacities of all the generators at the facility[~~,~~] ***and*** has actually installed both upstream and downstream diadromous fish passages and such installations have been approved by the Federal Energy Regulatory Commission, [~~and when required, has documented applicable state water quality certification pursuant to section 401 of the Clean Water Act for hydroelectric projects~~] ***or;***

(b) Has a total nameplate capacity of one MW or less as measured by the sum of the nameplate capacities of all generators at the facility, is in compliance with applicable Federal Energy Regulatory Commission fish passage restoration requirements, and is interconnected with an electric distribution system located in New Hampshire.

10 Commission Review and Report. Amend RSA 362-F:5, VI to read as follows:

VI. The timeframe and manner in which new renewable class I and II sources might transition to and be treated as existing renewable sources and if appropriate, how corresponding portfolio standards of new and existing sources might be adjusted;

11 Renewable Energy Certificates. Amend RSA 362-F:6, II to read as follows:

II. The commission shall establish procedures by which electricity ***and useful thermal energy*** production not tracked by ISO-New England from customer-sited sources, including behind the meter production, may be included within the certificate program, provided such sources are located in New Hampshire. The procedures may include the aggregation of sources and shall be compatible with procedures of the certificate program administrator***, where possible.*** The production shall be monitored and verified by an independent entity designated by the commission, which may include electric distribution companies***, or by such other means as the commission finds adequate in verifying that such production is occurring. The commission may also establish a methodology for estimating production from customer-sited sources for which certificates are not issued and giving credit for such production in certificate equivalents, in an equitable manner.***

12 New Paragraph; Renewable Energy Certificates. Amend RSA 362-F:6 by inserting after paragraph IV the following new paragraph:

V. A qualified producer of useful thermal energy shall provide for the metering of useful thermal energy produced in order to calculate the quantity of megawatt-hours for which renewable energy certificates are qualified, and to report to the public utilities commission under rules adopted pursuant to RSA 362-F:13. Monitoring, reporting, and calculating the useful thermal energy produced in each quarter shall be expressed in megawatt-hours, where each 3,412,000 BTUs of useful thermal energy is equivalent to one megawatt-hour.

13 Sale, Exchange, and Use of Certificates. Amend RSA 362-F:7, I to read as follows:

I. 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. A certificate may only be used

once for compliance with the requirements of this chapter. It may not be used for compliance with this chapter if it has been or will be used for compliance with any similar requirements of another non-federal jurisdiction, or otherwise sold, retired, claimed, or represented as part of any other electrical energy output or sale. Certificates shall only be used by providers of electricity for compliance with the requirements of RSA 362-F:3 in the year in which the generation represented by the certificate was produced, except that unused certificates of the proper class issued for production during the prior 2 years [~~or the first quarter of the subsequent year~~] may be used to meet up to 30 percent of a provider's requirements for a given class obligation in the current year of compliance.

14 Renewable Energy Fund. Amend RSA 362-F:10, II to read as follows:

II. In lieu of meeting the portfolio requirements of RSA 362-F:3 for a given year if, and to the extent sufficient certificates are not otherwise available at a price below the amounts specified in this paragraph, an electricity provider may, at the time of report submission for that year under RSA 362-F:8, make payment to the commission at the following rates for each megawatt-hour not met for a given class obligation through the acquisition of certificates:

(a) Class I--$57.12, ***except for that portion of the class minimum electric renewable portfolio standards to be met by qualifying renewable energy technologies producing useful thermal energy under RSA 362-F:3 which shall be $28 beginning January 1, 2013.***

(b) Class II--$150.

(c) Class III--$28.

(d) Class IV--$28.

15 Renewable Energy Fund. Amend RSA 362-F:10, X to read as follows:

X. Consistent with RSA 362-F:10, VI, the commission shall, over each 2-year period commencing July 1, 2010, reasonably balance overall amounts expended***, allocated, or obligated*** from the fund, net of administrative expenditures, between residential and nonresidential sectors. Funds from the renewable energy fund awarded to renewable projects in the residential sector shall be in approximate proportion to the amount of electricity sold at retail to that sector in New Hampshire, and the remaining funds from the renewable energy fund shall be awarded to projects in the nonresidential sector which include commercial and industrial sited renewable energy projects, existing generators, and developers of new commercial-scale renewable generation in New Hampshire.

16 New Paragraph; Application. Amend RSA 362-F:11 by inserting after paragraph III the following new paragraph:

IV. A biomass facility otherwise meeting the eligibility requirements of class III, but which as of January 1, 2012 was not an eligible biomass technology due to the inability to achieve the particulate matter emissions rate specified in RSA 362-F:2, VIII(a), may consult with the department and submit a plan to meet the alternative requirement under that paragraph. The plan

shall contain reductions, in the aggregate or individually, in emissions from other emission sources and demonstrate that the reductions will be quantifiable. The department shall expeditiously review the plan and, if approved, provide such information it deems relevant to the commission. The application submitted under this section shall inform the commission of the plan and the commission shall certify the source in accordance with the plan approved by the department.

17 New Paragraph; Rulemaking. Amend RSA 362-F:13 by inserting after paragraph VI the following new paragraph:

VI-a. Adopt procedures for the metering, verification, and reporting of useful thermal energy output.

18 New Paragraph; Rulemaking. Amend RSA 362-F:13 by inserting after paragraph VII the following new paragraph:

VIII. The department may adopt rules, under RSA 541-A, to determine Best Management Practices for qualifying renewable energy technologies producing useful thermal energy.

19 New Sections; Economic Benefits Retention; Phase-In for Existing Supply Contract Load. Amend RSA 362-F by inserting after section 13 the following new sections:

362-F:14 Economic Benefits Retention. The commission shall, in all decisions affecting class eligible technologies or class standards, consider regional and state job loss, job retention, economic impacts, and certificate production from class eligible and potentially eligible technologies. The proposed action shall aid job retention or job creation, economic activities, and certificate demand, taking into account the certificate supply potential from these technologies.

362-F:15 Phase-In for Existing Supply Contract Load.

I. The increases in the annual purchase percentages in RSA 362-F:3 as compared to those in effect as of January 1, 2012 shall apply to the electrical load under any electrical power supply contracts for a term of years entered into by providers of electricity prior to or on July 1, 2012, upon the expiration of the term of any such contract. Providers of electricity shall inform the commission by July 1 of each year of all such contracts and their terms, including but not limited to the execution date and expiration date of the contract and the annual volume of electrical energy supplied.

II. A "provider of electricity" as defined in RSA 362-F:2, XIV shall not include any non-residential customer contract in effect for a term of years until the term of such contract has expired. The supplier of electrical power under any such contract shall inform the commission by July 1 of each year of such contract and its terms, including but not limited to, the execution date and expiration date and the annual volume of electrical energy supplied.

20 Effective Date.

I. RSA 362-F:2, XIV, as amended by section 2 of this act, shall take effect January 1, 2013.

II. The remainder of this act shall take effect upon its passage.

LBAO
12-2842
12/12/11

SB 218-FN - FISCAL NOTE

AN ACT relative to electric renewable portfolio standards.

FISCAL IMPACT:

The Public Utilities Commission and Department of Environmental Services state this bill will have an indeterminable fiscal impact on state restricted revenue, state restricted expenditures, county expenditures, and local expenditures, and may decrease county and local revenue by an indeterminable amount in FY 2013 and each year thereafter.

METHODOLOGY:

The Public Utilities Commission and Department of Environmental Services state this bill modifies the electric renewable portfolio standards. The Commission and Department assume that provisions of this bill will not be implemented until FY 2013. For calendar year 2010, the State incurred $163,615 in direct costs on state electricity bills attributable to renewable energy certificate purchasing costs and alternative compliance payments made by the state electricity providers, and $226,042 in direct administrative costs associated with managing the program. It is assumed there will be similar expenditures in FY 2012. For FY 2013 through FY 2016, the Commission and Department state revenues and expenditures will be indeterminable. The Commission and Department state many of the changes in the bill will result in the renewable energy certificate supply increasing which may in turn lower the renewable energy certificate price, decreasing the renewable portfolio standards costs. Other changes in the bill increases the renewable energy certificate requirement that electric providers must meet through either renewable energy certificate purchases or alternative compliance payments (the funding source for the renewable energy fund), which absent an increase in renewable energy certificate supply may increase renewable energy certificate prices increasing the cost of electricity purchases made by the State. Also, as alternative compliance payments increase, the cost attributable to these payments increases State expenditures and revenue, and if payments decrease State expenditures and revenue decrease. Examples of the fiscal impact include:

- elimination of class II requirements decreases expenditures for the State as it relates to electricity purchases (approximately $3,635 in calendar year 2010) while at the same time decreasing revenue to the renewable energy fund (approximately $58,884 from class II alternative compliance payments in calendar year 2010).

- increasing class I, III, and IV supplies resulting from thermal resources and hydroelectric systems in NH under I MW and not needing fish passages has the effect of lowering alternative compliance payments, decreasing revenue.
- increasing class III and IV supplies may require an increase in the resources required resulting in increased alternative compliance payments, increasing revenue.

The Commission states the requirement to incorporate thermally-sourced renewable energy certificates into the renewable portfolio standards program would necessitate the need to hire an engineer (labor grade 29, step 1) for at least the first year's startup period, possibly longer. The cost, including salary and benefits, to hire an engineer for one year would be $79,493.

The Commission and Department state this bill will also have an indeterminable fiscal impact on county and local expenditures, and may decrease county and local revenue. As electricity costs shift up or down, the county and local expenditures will shift in the same direction. Revenue may decrease to the extent access to rebates or grant funds flowing from the renewable energy fund decreases.

LBAO
12-2842
Amended 05/30/12

SB 218 FISCAL NOTE

AN ACT relative to electric renewable portfolio standards.

FISCAL IMPACT:

The Public Utilities Commission and Department of Environmental Services state this bill, **as amended by the House (Amendment #2012-2180h)**, will have an indeterminable fiscal impact on state restricted revenue, state restricted expenditures, county expenditures, and local expenditures, and may decrease county and local revenue by an indeterminable amount in FY 2013 and each year thereafter.

METHODOLOGY:

The Public Utilities Commission and Department of Environmental Services state this bill modifies the electric renewable portfolio standards. The Commission and Department assume that provisions of this bill will not be implemented until FY 2013. For calendar year 2010, the State incurred $163,615 in direct costs on state electricity bills attributable to renewable energy certificate purchasing costs and alternative compliance payments made by the state electricity providers, and $226,042 in direct administrative costs associated with managing the program. It is assumed there will be similar expenditures in FY 2012. For FY 2013 through FY 2016, the Commission and Department state revenues and expenditures will be indeterminable. The Commission and Department state many of the changes in the bill will result in the renewable energy certificate supply increasing in the short-term which may lower the renewable energy certificate price, decreasing overall renewable portfolio standard costs. The lowered alternative compliance payments will discourage renewable energy project development which may decrease renewable energy certificate supplies in the medium and long-term, thus driving up the alternative compliance payments remitted. Other changes in the bill increases the renewable energy certificate requirement that electric providers must meet through either renewable energy certificate purchases or alternative compliance payments (the funding source for the renewable energy fund), which absent an increase in renewable energy certificate supply may increase renewable energy certificate prices increasing the cost of electricity purchases made by the State. Also, as the amount of alternative compliance payments made for any resource class increase, the cost attributable to these payments increases State expenditures and revenue, and if payments decrease State expenditures and revenue decrease.

The Commission states the requirement to incorporate thermally-sourced renewable energy certificates into the renewable portfolio standards program would necessitate the need for an

engineer. The bill as amended prohibits the Commission from adding employees, therefore the Commission would need to hire a consultant to complete the engineering requirements. The Commission is not able to determine the cost of hiring a consultant at this time.

The Commission and Department state this bill will also have an indeterminable fiscal impact on county and local expenditures, and may decrease county and local revenue. As electricity costs shift up or down, the county and local expenditures will shift in the same direction. Revenue may decrease to the extent access to rebates or grant funds flowing from the renewable energy fund decreases.

03/21/12 1235s
03/21/12 1368s
17May2012... 2180h
06/06/12 2392CofC
06/06/12 2499EBA

2012 SESSION

12-2842
06/10

SENATE BILL ***218-FN***

AN ACT relative to electric renewable portfolio standards.

SPONSORS: Sen. Bradley, Dist 3; Sen. Barnes, Jr., Dist 17; Sen. Lambert, Dist 13; Sen. Odell, Dist 8; Sen. Gallus, Dist 1; Sen. Forrester, Dist 2; Sen. Luther, Dist 12; Rep. Introne, Rock 3; Rep. Cataldo, Straf 3

COMMITTEE: Energy and Natural Resources

ANALYSIS

This bill modifies the electric renewable portfolio standards.

Explanation: Matter added to current law appears in ***bold italics.***
Matter removed from current law appears [~~in brackets and struckthrough.~~]
Matter which is either (a) all new or (b) repealed and reenacted appears in regular type.

03/21/12 1235s
03/21/12 1368s
17May2012... 2180h
06/06/12 2392CofC
06/06/12 2499EBA

12-2842
06/10

STATE OF NEW HAMPSHIRE

In the Year of Our Lord Two Thousand Twelve

AN ACT relative to electric renewable portfolio standards.

Be it Enacted by the Senate and House of Representatives in General Court convened:

1 Electric Renewable Portfolio Standards; Definitions; Eligible Biomass Technologies. Amend RSA 362-F:2, VIII(a) to read as follows:

(a) Has a quarterly average nitrogen oxide (NOx) emission rate of less than or equal to 0.075 pounds/million British thermal units (lbs/Mmbtu), and ***either has*** an average 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***; and

2 Definitions; Renewable Energy Source; Useful Thermal Energy. Amend RSA 362-F:2, XV to read as follows:

XV. "Renewable energy source," "renewable source," or "source" means a class I, II, III, or IV source of electricity or [~~electricity displacement by a class I source under RSA 362-F:4, I(g)~~] ***a class I source of useful thermal energy***. 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.

XV-a. "Useful thermal energy" means 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.

3 Minimum Electric Renewable Portfolio Standards. Amend RSA 362-F:3 to read as follows:

362-F:3 Minimum Electric Renewable Portfolio Standards. For each year specified in the table below, each provider of electricity shall obtain and retire certificates sufficient in number and class type to meet or exceed the following percentages of total megawatt-hours of electricity supplied by the provider to its end-use customers that year, except to the extent that the provider makes payments to the renewable energy fund under RSA 362-F:10, II:

	2008	2009	2010	2011	2012	2013	2014	2015	2025
Class I	0.0%	0.5%	1%	2%	3%	4%	5%	6%	[~~16%~~] *15%* (*)
Class II	0.0%	0.0%	0.04%	0.08%	0.15%	0.2%	0.3%	0.3%	0.3%
Class III	3.5%	4.5%	5.5%	6.5%	6.5%	6.5%	[~~6.5%~~] *7.0%*	[~~6.5%~~] *8.0%*	[~~6.5%~~] *8.0%*
Class IV	0.5%	1%	1%	1%	1%	[~~1%~~] *1.3%*	[~~1%~~] *1.4%*	[~~1%~~] *1.5%*	[~~1%~~] *1.5%*

*Class I increases an additional [~~one~~] *0.9* percent per year from 2015 through 2025. ***A set percentage of the class I totals shall be satisfied annually by the acquisition of renewable energy certificates from qualifying renewable energy technologies producing useful thermal energy as defined in RSA 362-F:2, XV-a. The set percentage shall be 0.2 percent in 2013, 0.4 percent in 2014, and increased annually by 0.2 percent per year from 2015 through 2025.*** Classes II-IV remain at the same percentages from 2015 through 2025 except as provided in RSA 362-F:4, V-VI.

4 Electric Renewable Energy Classes. Amend the introductory paragraph of RSA 362-F:4, I to read as follows:

I. Class I (New) shall include the production of electricity ***or useful thermal energy*** from any of the following, provided the source began operation after January 1, 2006, except as noted below:

5 Electric Renewable Energy Classes. Amend RSA 362-F:4, I(b) to read as follows:

(b) Geothermal energy, ***if the geothermal energy output is in the form of useful thermal energy only if the unit began operation after January 1, 2013.***

6 Electric Renewable Energy Classes. Amend RSA 362-F:4, I(g) to read as follows:

(g) [~~The equivalent displacement of electricity, as determined by the commission, by end-use customers, from solar hot water heating systems used instead of electric hot water heating~~] ***Solar thermal energy; if the solar thermal energy output is in the form of useful thermal energy only if the unit began operation after January 1, 2013.***

7 Electric Renewable Energy Classes. Amend RSA 362-F:4, I(j) to read as follows:

(j) The production of electricity from a class III or IV source that has begun operation as a new facility by demonstrating that 80 percent of its resulting tax basis of the source's plant and equipment, but not its property and intangible assets, is derived from capital investment directly related to restoring generation or increasing capacity including department permitting requirements for new plants. Such production shall not qualify for class III or IV certificates. ***Commencing July 1, 2013, a class III source eligible as a class I source under this subparagraph or subparagraph (i) may submit a notice to the commission electing to be a class III source instead of a class I source. Once such notice is given, the production from such a source shall qualify for class III certificates, provided the source meets the other requirements of a class III eligible biomass technology.***

(k) The production of electricity from any fossil-fueled generating facility that originally commenced 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. The portion of the total electrical energy output that qualifies as class I from a facility in a given time period shall be the fraction of electrical production derived from the combustion of biomass fuels based on the heat input at the facility in that time period as determined by the commission in consultation with the department. To qualify under this paragraph, the electricity generation facility that co-fires with biomass fuels shall:

(1) Either have a quarterly average nitrogen oxide (NOx) emission rate, as measured and verified under RSA 362-F:12, of less than or equal to 0.075 pounds/million British thermal units (lbs/Mmbtu) or be a participant in a plan approved by the department for reductions in NOx from other emission sources. The quantity of reductions required shall be the fraction of electrical production derived from the combustion of biomass fuels, as determined under this paragraph, multiplied by the difference between the generation unit's NOx emissions rate and the 0.075 lbs/Mmbtu rate. The plan shall contain reductions, in the aggregate or individually, in NOx emissions from other emission sources under the jurisdiction of the department and demonstrate that the reductions will be quantifiable. The department shall expeditiously review the plan and, if approved, provide such information as it deems relevant to the commission. The application submitted to the commission under RSA 362-F:11 shall inform the commission of the plan and the commission shall certify the source in accordance with the plan approved by the department; and

(2) Either have an average particulate emission rate, as measured and verified under RSA 362-F:12, of less than or equal to 0.02 lbs/Mmbtu or be a participant in a plan approved by the department for reductions in particulate matter emissions from emission sources owned by or affiliated with the co-firing entity. The quantity of reductions required shall be the fraction of electrical production derived from the combustion of biomass fuels, as determined under this paragraph, multiplied by the difference between the generation unit's particulate matter emissions rate and the 0.02 lbs/Mmbtu rate. The plan shall contain reductions, in the aggregate or individually, in particulate matter emissions from other emission sources under the jurisdiction of the department and demonstrate that the reductions will be quantifiable. The department shall expeditiously review the plan and, if approved, provide such information as it deems relevant to the commission. The application submitted to the commission under RSA 362-F:11 shall inform the commission of the plan and the commission shall certify the source in accordance with the plan approved by the department.

(l) Biomass renewable energy technologies producing useful thermal energy that began operation after January 1, 2013 provided that:

(1) If the unit is a biomass unit rated between 3 and 30 Mmbtu/hr design gross heat input, and has an average particulate emission rate of less than or equal to 0.10 lbs/Mmbtu as measured and verified by conducting and reporting the results of a one-time initial stack test in accordance with methods approved by the department;

(2) If the unit is a biomass unit rated equal to or greater than 30 Mmbtu/hr design gross heat input, and has an average particulate emission rate of less than or equal to 0.02 lbs/Mmbtu as measured and verified under RSA 362-F:12;

(3) If the unit is a biomass unit rated less than 100 Mmbtu/hr design gross heat input, and it implements best management practices as determined by the department; and

(4) If the unit is a biomass unit rated equal to or greater than 100 Mmbtu/hr design gross heat input, and it has a quarterly average NOx emission rate of less than or equal to 0.075 Mmbtu/hr as measured and verified under RSA 362-F:12.

8 Renewable Energy Portfolio; Purchased Power Agreements. No provision of RSA 362-F shall be construed to affect the cost recovery of any contract or agreement entered into pursuant to RSA 362-F:9 prior to the effective date of this act. Such contract or agreement shall be governed by the commission's order approving the same.

9 Electric Renewable Energy Classes. Amend RSA 362-F:4, IV(a) to read as follows:

IV.(a) Class IV (Existing Small Hydroelectric) shall include the production of electricity from hydroelectric energy, provided the facility*:*

(1) Began operation prior to January 1, 2006[*,*]*;*

(2) When required, has documented applicable state water quality certification pursuant to section 401 of the Clean Water Act for hydroelectric projects; and

(3) Either:

(A) Has a total nameplate capacity of 5 MWs or less as measured by the sum of the nameplate capacities of all the generators at the facility[*,*] *and* has actually installed both upstream and downstream diadromous fish passages and such installations have been approved by the Federal Energy Regulatory Commission, [~~and when required, has documented applicable state water quality certification pursuant to section 401 of the Clean Water Act for hydroelectric projects~~] *or;*

(B) Has a total nameplate capacity of one MW or less as measured by the sum of the nameplate capacities of all generators at the facility, is in compliance with applicable Federal Energy Regulatory Commission fish passage restoration requirements, and is interconnected with an electric distribution system located in New Hampshire.

10 Renewable Energy Certificates. Amend RSA 362-F:6, II to read as follows:

II. The commission shall establish procedures by which electricity *and useful thermal energy* production not tracked by ISO-New England from customer-sited sources, including behind

the meter production, may be included within the certificate program, provided such sources are located in New Hampshire. The procedures may include the aggregation of sources and shall be compatible with procedures of the certificate program administrator, ***where possible***. The production shall be monitored and verified by an independent entity designated by the commission, which may include electric distribution companies, ***or by such other means as the commission finds adequate in verifying that such production is occurring***.

II-a. The commission shall establish a methodology to estimate the total yearly production for customer-sited sources that are net metered under RSA 362-A:9 and for which class I or II certificates are not issued. For purposes of estimation, the commission shall use a capacity factor rating of 20 percent for each installation and shall keep class II production separate from class I production. Providers of electricity required to obtain and retire certificates under RSA 362-F:3 shall receive an annual credit for such production. 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 calendar year in each class divided by the total amount of electricity supplied by providers of electricity to end-use customers in the prior calendar year, with the result converted to a percentage. Each provider may then, at the time of its annual report filing under RSA 362-F:8, claim a class I and a class II certificate credit equal to the credit percentage times the total megawatt-hours of electricity supplied by the provider to its end-use customers the prior calendar year.

11 New Paragraph; Renewable Energy Certificates. Amend RSA 362-F:6 by inserting after paragraph IV the following new paragraph:

V. A qualified producer of useful thermal energy shall provide for the metering of useful thermal energy produced in order to calculate the quantity of megawatt-hours for which renewable energy certificates are qualified, and to report to the public utilities commission under rules adopted pursuant to RSA 362-F:13. Monitoring, reporting, and calculating the useful thermal energy produced in each quarter shall be expressed in megawatt-hours, where each 3,412,000 BTUs of useful thermal energy is equivalent to one megawatt-hour.

12 Sale, Exchange, and Use of Certificates. Amend RSA 362-F:7, I to read as follows:

I. 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. A certificate may only be used once for compliance with the requirements of this chapter. It may not be used for compliance with this chapter if it has been or will be used for compliance with any similar requirements of another non-federal jurisdiction, or otherwise sold, retired, claimed, or represented as part of any other electrical energy output or sale. Certificates shall only be used by providers of electricity for compliance with the requirements of RSA 362-F:3 in the year in which the generation represented by the certificate was produced, except that unused certificates of the proper class issued for production

during the prior 2 years [~~or the first quarter of the subsequent year~~] may be used to meet up to 30 percent of a provider's requirements for a given class obligation in the current year of compliance.

13 Renewable Energy Fund. Amend RSA 362-F:10, I-III to read as follows:

I. There is hereby established a renewable energy fund. This nonlapsing, special fund shall be continually appropriated to the commission to be expended in accordance with this section. The state treasurer shall invest the moneys deposited therein as provided by law. Income received on investments made by the state treasurer shall also be credited to the fund. All payments to be made under this section shall be deposited in the fund. The moneys paid into the fund under paragraph II of this section, excluding class II moneys, shall be used by the commission to support thermal and electrical renewable energy initiatives. Class II moneys shall only be used to support solar energy technologies in New Hampshire. All initiatives supported out of these funds shall be subject to audit by the commission as deemed necessary. All fund moneys including those from class II may be used to administer this chapter, but all new employee positions shall be approved by the fiscal committee of the general court. ***No new employees shall be hired by the commission due to the inclusion of useful thermal energy in class I production.***

II. In lieu of meeting the portfolio requirements of RSA 362-F:3 for a given year if, and to the extent sufficient certificates are not otherwise available at a price below the amounts specified in this paragraph, an electricity provider may, at the time of report submission for that year under RSA 362-F:8, make payment to the commission at the following rates for each megawatt-hour not met for a given class obligation through the acquisition of certificates:

(a) Class I—[~~$57.12~~,] ***$55, except for that portion of the class electric renewable portfolio standards to be met by qualifying renewable energy technologies producing useful thermal energy under RSA 362-F:3 which shall be $25 beginning January 1, 2013.***

(b) Class II—[~~$150~~] ***$55.***

(c) Class III—[~~$28~~] ***$31.50.***

(d) Class IV—[~~$28~~] ***$26.50.***

III. Beginning in [~~2008~~] ***2013***, the commission shall adjust these rates by January 31 of each year using the Consumer Price Index as published by the Bureau of Labor Statistics of the United States Department of Labor ***for classes III and IV and ½ of such Index for classes I and II.***

14 Renewable Energy Fund. Amend RSA 362-F:10, X to read as follows:

X. Consistent with RSA 362-F:10, VI, the commission shall, over each 2-year period commencing July 1, 2010, reasonably balance overall amounts expended***, allocated, or obligated*** from the fund, net of administrative expenditures, between residential and nonresidential sectors. Funds from the renewable energy fund awarded to renewable projects in the residential sector shall be in approximate proportion to the amount of electricity sold at retail to that sector in New Hampshire, and the remaining funds from the renewable energy fund shall be awarded to

projects in the nonresidential sector which include commercial and industrial sited renewable energy projects, existing generators, and developers of new commercial-scale renewable generation in New Hampshire.

15 New Paragraph; Application. Amend RSA 362-F:11 by inserting after paragraph III the following new paragraph:

IV. A biomass facility otherwise meeting the eligibility requirements of class III, but which as of January 1, 2012 was not an eligible biomass technology due to the inability to achieve the particulate matter emissions rate specified in RSA 362-F:2, VIII(a), may consult with the department and submit a plan to meet the alternative requirement under that paragraph. The plan shall contain reductions, in the aggregate or individually, in emissions from other emission sources and demonstrate that the reductions will be quantifiable. The department shall expeditiously review the plan and, if approved, provide such information it deems relevant to the commission. The application submitted under this section shall inform the commission of the plan and the commission shall certify the source in accordance with the plan approved by the department.

16 New Paragraph; Rulemaking. Amend RSA 362-F:13 by inserting after paragraph VI the following new paragraph:

VI-a. Adopt procedures for the metering, verification, and reporting of useful thermal energy output.

17 New Paragraph; Rulemaking. Amend RSA 362-F:13 by inserting after paragraph VII the following new paragraph:

VIII. The department may adopt rules, under RSA 541-A, to determine best management practices for qualifying renewable energy technologies producing useful thermal energy.

18 New Section; Phase-In for Existing Supply Contract Load. Amend RSA 362-F by inserting after section 13 the following new section:

362-F:14 Phase-In for Existing Supply Contract Load. The increases in the annual purchase percentages in RSA 362-F:3 as compared to those in effect as of January 1, 2012 shall apply to the electrical load under any electrical power supply contracts for a term of years entered into by providers of electricity prior to or on July 1, 2012, upon the expiration of the term of any such contract. Providers of electricity shall inform the commission by July 1 of each year of all such contracts and their terms, including but not limited to the execution date and expiration date of the contract and the annual volume of electrical energy supplied.

19 Effective Date. This act shall take effect upon its passage.

LBAO
12-2842
Amended 05/30/12

SB 218-FN - FISCAL NOTE

AN ACT relative to electric renewable portfolio standards.

FISCAL IMPACT:

The Public Utilities Commission and Department of Environmental Services state this bill, **as amended by the House (Amendment #2012-2180h)**, will have an indeterminable fiscal impact on state restricted revenue, state restricted expenditures, county expenditures, and local expenditures, and may decrease county and local revenue by an indeterminable amount in FY 2013 and each year thereafter.

METHODOLOGY:

The Public Utilities Commission and Department of Environmental Services state this bill modifies the electric renewable portfolio standards. The Commission and Department assume that provisions of this bill will not be implemented until FY 2013. For calendar year 2010, the State incurred $163,615 in direct costs on state electricity bills attributable to renewable energy certificate purchasing costs and alternative compliance payments made by the state electricity providers, and $226,042 in direct administrative costs associated with managing the program. It is assumed there will be similar expenditures in FY 2012. For FY 2013 through FY 2016, the Commission and Department state revenues and expenditures will be indeterminable. The Commission and Department state many of the changes in the bill will result in the renewable energy certificate supply increasing in the short-term which may lower the renewable energy certificate price, decreasing overall renewable portfolio standard costs. The lowered alternative compliance payments will discourage renewable energy project development which may decrease renewable energy certificate supplies in the medium and long-term, thus driving up the alternative compliance payments remitted. Other changes in the bill increases the renewable energy certificate requirement that electric providers must meet through either renewable energy certificate purchases or alternative compliance payments (the funding source for the renewable energy fund), which absent an increase in renewable energy certificate supply may increase renewable energy certificate prices increasing the cost of electricity purchases made by the State. Also, as the amount of alternative compliance payments made for any resource class increase, the cost attributable to these payments increases State expenditures and revenue, and if payments decrease State expenditures and revenue decrease.

The Commission states the requirement to incorporate thermally-sourced renewable energy certificates into the renewable portfolio standards program would necessitate the need for an engineer. The bill as amended prohibits the Commission from adding employees, therefore the Commission would need to hire a consultant to complete the engineering requirements. The Commission is not able to determine the cost of hiring a consultant at this time.

The Commission and Department state this bill will also have an indeterminable fiscal impact on county and local expenditures, and may decrease county and local revenue. As electricity costs shift up or down, the county and local expenditures will shift in the same direction. Revenue may decrease to the extent access to rebates or grant funds flowing from the renewable energy fund decreases.

Amendments

Sen. Bradley, Dist. 3
February 13, 2012
2012-0735s
06/10

Amendment to SB 218-FN

Amend the bill by replacing all after the enacting clause with the following:

1 Electric Renewable Portfolio Standards; Definitions; Eligible Biomass Technologies. Amend RSA 362-F:2, VIII(a) to read as follows:

(a) Has a quarterly average nitrogen oxide (NOx) emission rate of less than or equal to 0.075 pounds/million British thermal units (lbs/Mmbtu), and ***either has*** an average 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***; and

2 Definitions; Renewable Energy Source; Useful Thermal Energy. Amend RSA 362-F:2, XV to read as follows:

XV. "Renewable energy source," "renewable source," or "source" means a class I, II, III, or IV source of electricity ***or useful thermal energy*** [~~or 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.

XV-a. "Useful thermal energy" means energy 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.

3 Minimum Electric Renewable Portfolio Standards. Amend RSA 362-F:3 to read as follows:

362-F:3 Minimum Electric Renewable Portfolio Standards. For each year specified in the table below, each provider of electricity shall obtain and retire certificates sufficient in number and class type to meet or exceed the following percentages of total megawatt-hours of electricity supplied by the provider to its end-use customers that year, except to the extent that the provider makes payments to the renewable energy fund under RSA 362-F:10, II:

	2008	2009	2010	2011	2012	2013	2014	2015	2025
Class I	0.0%	0.5%	1%	2%	3%	4%	5%	6%	16% (*)
[~~Class II~~	~~0.0%~~	~~0.0%~~	~~0.04%~~	~~0.08%~~	~~0.15%~~	~~0.2%~~	~~0.3%~~	~~0.3%~~	~~0.3%~~]
Class II	***0.0%***	***0.0%***	***0.0%***	***0.0%***	***0.0%***	***0.0%***	***0.0%***	***0.0%***	***0.0%***

[~~Class III~~	~~3.5%~~	~~4.5%~~	~~5.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%~~]
Class III	***3.5%***	***4.5%***	***5.5%***	***6.5%***	***9.0%***	***9.0%***	***9.0%***	***9.0%***	***9.0%***
[~~Class IV~~	~~0.5%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~]
Class IV	***0.5%***	***1%***	***1%***	***1%***	***1%***	***1.5%***	***1.5%***	***1.5%***	***1.5%***

Class I increases an additional one percent per year from 2015 through 2025. Classes [~~II~~] ***III and*** IV remain at the same percentages from 2015 through 2025 except as provided in RSA 362-F:4, V-VI.

4 Electric Renewable Energy Classes. Amend RSA 362-F:4, I(g) through (j), II, and III to read as follows:

(g) [~~The equivalent displacement of electricity, as determined by the commission, by end use customers, from solar hot water heating systems used instead of electric hot water heating~~] ***Solar thermal energy.***

(h) Class II sources [~~to the extent that they are not otherwise used to satisfy the minimum portfolio standards of other classes~~].

(i) The incremental new production of electricity in any year from an eligible biomass or methane source or any hydroelectric generating facility licensed or exempted by Federal Energy Regulatory Commission (FERC), regardless of gross nameplate capacity, over its historical generation baseline, provided the commission certifies demonstrable completion of capital investments attributable to the efficiency improvements, additions of capacity, or increased renewable energy output that are sufficient to, were intended to, and can be demonstrated to increase annual renewable electricity output. The determination of incremental production shall not be based on any operational changes at such facility but rather on capital investments in efficiency improvements or additions of capacity.

(j) The production of electricity from a class III or IV source that has begun operation as a new facility by demonstrating that 80 percent of its resulting tax basis of the source's plant and equipment, but not its property and intangible assets, is derived from capital investment directly related to restoring generation or increasing capacity including department permitting requirements for new plants. Such production shall not qualify for class III or IV certificates. ***Commencing July 1, 2013 a class III source eligible as a class I source under this subparagraph or subparagraph (i) may submit a notice to the commission electing to be a class III source instead of a class I source. Once such notice is given, the production from such a source shall qualify for class III certificates, provided the source meets the other requirements of a class III eligible biomass technology.***

(k) Class I facilities using eligible sources may be co-fired with fossil fuels, provided that only the renewable energy fraction of production from class I multi-fuel facilities shall be considered eligible.

II. Class II (New Solar) shall include the production of electricity from solar technologies, provided the source began operation after January 1, 2006. ***Class II technologies may be used to satisfy the minimum portfolio standards of class I.***

III. Class III (Existing Biomass/Methane) shall include the production of electricity from any of the following, provided the source began operation prior to January 1, 2006:

(a) Eligible biomass technologies having a gross nameplate capacity of 25 MWs or less.

(b) Methane gas. ***Effective for electricity production commencing July 1, 2012, methane gas shall not qualify for class III if the production is from a source which began operation prior to January 1, 2006 and which source exceeds a total gross nameplate capacity of 10 MWs in the aggregate located at any single landfill site. All phases, stages, cells, lifts, expansions, and other landfill areas shall be combined in determining the single landfill site. Only class III and potential class III eligible sources at any single landfill site shall be included in determining whether the 10 MW aggregate limitation has been exceeded.***

5 Electric Renewable Energy Classes. Amend RSA 362-F:4, IV(a) to read as follows:

IV.(a) Class IV (Existing Small Hydroelectric) shall include the production of electricity from hydroelectric energy, provided the facility*:*

(1) Began operation prior to January 1, 2006[~~,~~]*;*

(2) When required, has documented applicable state water quality certification pursuant to section 401 of the Clean Water Act for hydroelectric projects; and

(3) Either has a total nameplate capacity of 5 MWs or less as measured by the sum of the nameplate capacities of all the generators at the facility, ***and*** has actually installed both upstream and downstream diadromous fish passages and such installations have been approved by the Federal Energy Regulatory Commission, [~~and when required, has documented applicable state water quality certification pursuant to section 401 of the Clean Water Act for hydroelectric projects~~] ***or has a total nameplate capacity of 1 MW or less as measured by the sum of the nameplate capacities of all generators at the facility and is interconnected with an electric distribution system located in New Hampshire***.

6 Electric Renewable Energy Classes. Amend RSA 362-F:4, V to read as follows:

V. For good cause, and after notice and hearing, the commission may accelerate or delay by up to one year, any given year's incremental increase in class I [~~or II~~] renewable portfolio standards requirement under RSA 362-F:3.

7 Commission Review and Report. Amend RSA 362-F:5, IV to read as follows:

IV. Increasing the class requirements relative to [~~classes~~] ***class*** I [~~and II~~] beyond 2025;

8 Commission Review and Report. Amend RSA 362-F, VI to read as follows:

VI. The timeframe and manner in which new renewable class I [~~and II~~] sources might transition to and be treated as existing renewable sources and if appropriate, how corresponding portfolio standards of new and existing sources might be adjusted;

9 Renewable Energy Certificates. Amend RSA 362-F:6, II to read as follows:

II. The commission shall establish procedures by which electricity ***and useful thermal energy*** production not tracked by ISO-New England from customer-sited sources, including behind the meter production, may be included within the ***class I*** certificate program, provided such sources are located in New Hampshire. The procedures may include the aggregation of sources and shall be compatible with procedures of the certificate program administrator. The production shall be monitored and verified by an independent entity designated by the commission, which may include electric distribution companies.

10 New Paragraph; Renewable Energy Certificates. Amend RSA 362-F:6 by inserting after paragraph IV the following new paragraph:

V. A qualified producer of useful thermal energy shall provide for the metering of useful thermal energy produced in order to calculate the quantity of megawatt-hours for which renewable energy certificates are qualified, and to report to the public utilities commission under rules adopted pursuant to RSA 362-F:13. Monitoring, reporting, and calculating the useful thermal energy produced in each quarter shall be expressed in megawatt-hours, where each 3,412,000 BTUs of useful thermal energy is equivalent to one megawatt-hour.

11 Renewable Energy Fund. Amend RSA 362-F:10, I and II to read as follows:

I. There is hereby established a renewable energy fund. This nonlapsing, special fund shall be continually appropriated to the commission to be expended in accordance with this section. The state treasurer shall invest the moneys deposited therein as provided by law. Income received on investments made by the state treasurer shall also be credited to the fund. All payments to be made under this section shall be deposited in the fund. The moneys paid into the fund under paragraph II of this section[~~, excluding class II moneys,~~] shall be used by the commission to support thermal and electrical renewable energy initiatives. [~~Class II moneys shall only be used to support solar energy technologies in New Hampshire.~~] All initiatives supported out of these funds shall be subject to audit by the commission as deemed necessary. All fund moneys [~~including those from class II~~] may be used to administer this chapter, but all new employee positions shall be approved by the fiscal committee of the general court.

II. In lieu of meeting the portfolio requirements of RSA 362-F:3 for a given year if, and to the extent sufficient certificates are not otherwise available at a price below the amounts specified in this paragraph, an electricity provider may, at the time of report submission for that year under RSA 362-F:8, make payment to the commission at the following rates for each megawatt-hour not met for a given class obligation through the acquisition of certificates:

(a) Class I ***and II***--$57.12.

(b) [~~Class II--$150~~.

~~(c)~~] Class III--$28.

[~~(d)~~] *(c)* Class IV--$28.

12 New Paragraph; Application. Amend RSA 362-F:11 by inserting after paragraph III the following new paragraph:

IV. A biomass facility otherwise meeting the eligibility requirements of class III, but which as of January 1, 2012 was not a class III eligible biomass technology due to the inability to achieve the particulate matter emissions rate specified in RSA 362-F:2, VIII(a), may consult with the department and submit a plan to meet the alternative particulate matter requirement under that paragraph. The plan shall contain reductions, in the aggregate or individually, in particulate matter emissions from other emission sources and demonstrate that the reductions will be quantifiable. The department shall expeditiously review the plan and, if approved, provide such information it deems relevant to the commission. The application submitted under this section shall inform the commission of the plan and the commission shall certify the source in accordance with the plan approved by the department.

13 New Paragraph; Rulemaking. Amend RSA 362-F:13 by inserting after paragraph VI the following new paragraph:

VI-a. Adopt procedures for the metering, verification, and reporting of useful thermal energy output.

14 New Section; Economic Benefits Retention. Amend RSA 362-F by inserting after section 13 the following new section:

362-F:14 Economic Benefits Retention. The commission shall, in all decisions affecting class III biomass technologies or class III standards, consider job loss and job retention, forestry economic impacts in the region and the state, and certificate production from class III eligible and potentially eligible biomass technologies. The proposed action shall aid job retention, forestry economic benefits, and certificate demand, given the certificate supply potential from these technologies.

15 Effective Date. This act shall take effect upon its passage.

Energy and Natural Resources
March 13, 2012
2012-1207s
06/09

Amendment to SB 218-FN

Amend the bill by replacing all after the enacting clause with the following:

1 Electric Renewable Portfolio Standards; Definitions; Eligible Biomass Technologies. Amend RSA 362-F:2, VIII(a) to read as follows:

(a) Has a quarterly average nitrogen oxide (NOx) emission rate of less than or equal to 0.075 pounds/million British thermal units (lbs/Mmbtu), and ***either has*** an average 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***; and

2 Definitions; Renewable Energy Source; Useful Thermal Energy. Amend RSA 362-F:2, XIV and XV to read as follows:

XIV. "Provider of electricity" means a distribution company providing default service***; a non-residential customer meeting its retail load through direct purchase from the wholesale electricity market, except as provided in RSA 362-F:15, II;*** or an electricity supplier as defined in RSA 374-F:2, II, but does not include municipal suppliers.

XV. "Renewable energy source," "renewable source," or "source" means a class I, II, III, or IV source of electricity or [~~electricity displacement by a class I source under RSA 362-F:4, I(g)~~] ***a class I source of useful thermal energy***. 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.

XV-a. "Useful thermal energy" means renewable energy delivered from class I sources that can be metered and that is delivered 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 in New Hampshire.

3 Minimum Electric Renewable Portfolio Standards. Amend RSA 362-F:3 to read as follows:

362-F:3 Minimum Electric Renewable Portfolio Standards. For each year specified in the table below, each provider of electricity shall obtain and retire certificates sufficient in number and class type to meet or exceed the following percentages of total megawatt-hours of electricity supplied by the provider to its end-use customers that year, except to the extent that the provider makes

payments to the renewable energy fund under RSA 362-F:10, II:

	2008	2009	2010	2011	2012	2013	2014	2015	2025 *and thereafter*
Class I	0.0%	0.5%	1%	2%	3%	[~~4%~~] *4.2%*	[~~5%~~] *5.4%*	[~~6%~~] *6.6%*	[~~16%~~] *18.6%* (*)
Class II	0.0%	0.0%	0.04%	0.08%	0.15%	0.2%	0.3%	0.3%	0.3%
~~[Class III~~	~~3.5%~~	~~4.5%~~	~~5.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%]~~
Class III	*3.5%*	*4.5%*	*5.5%*	*6.5%*	*6.5%*	*6.5%*	*9.0%*	*9.0%*	*9.0%*
~~[Class IV~~	~~0.5%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%]~~
Class IV	*0.5%*	*1%*	*1%*	*1%*	*1%*	*1.5%*	*1.5%*	*1.5%*	*1.5%*

Class I increases an additional [~~one~~] *1.2* percent per year from 2015 through 2025. ***A minimum percentage of the class 1 totals shall be satisfied annually by the acquisition of renewable energy certificates from qualifying renewable energy technologies producing useful thermal energy as defined in RSA 362-F:2, XV-a. The minimum percentage to be satisfied by the acquisition of renewable energy certificates from qualifying renewable energy technologies producing useful thermal energy shall be 0.2 percent in 2013, 0.4 percent in 2014, and increased annually by .02 percent per year from 2015 through 2025.*** Classes II, ***III, and*** IV remain at the same percentages from 2015 through 2025 except as provided in RSA 362-F:4, V-VI.

4 Electric Renewable Energy Classes. Amend the introductory paragraph of RSA 362-F:4, I to read as follows:

I. Class I (New) shall include the production of electricity ***or useful thermal energy*** from any of the following, provided the source began operation after January 1, 2006, except as noted below:

5 Electric Renewable Energy Classes. Amend RSA 362-F:4, I(b) to read as follows:

(b) Geothermal energy, ***if the geothermal energy output is in the form of useful thermal energy only if the unit began operation after January 1, 2013.***

6 Electric Renewable Energy Classes. Amend RSA 362-F:4, I(f) and (g) to read as follows:

(f) Eligible biomass technologies, ***including the production of electricity from any fossil-fueled generating facility that originally commenced 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. The portion of the total electrical energy output that qualifies as class I from a facility in a given time period shall be the fraction of electrical production derived from the combustion of biomass fuels based on the heat input at the facility in that time period as determined by the commission in consultation with the department.***

(g) [~~The equivalent displacement of electricity, as determined by the commission, by end-use customers, from solar hot water heating systems used instead of electric hot water heating~~] ***Solar thermal energy; if the solar thermal energy output is in the form of useful thermal energy only if the unit began operation after January 1, 2013.***

7 Electric Renewable Energy Classes. Amend RSA 362-F:4, I(j) to read as follows:

(j) The production of electricity from a class III or IV source that has begun operation as a new facility by demonstrating that 80 percent of its resulting tax basis of the source's plant and equipment, but not its property and intangible assets, is derived from capital investment directly related to restoring generation or increasing capacity including department permitting requirements for new plants. Such production shall not qualify for class III or IV certificates. *Commencing July 1, 2013, a class III source eligible as a class I source under this subparagraph or subparagraph (i) may submit a notice to the commission electing to be a class II source instead of a class I source. Once such notice is given, the production from such a source shall qualify for class III certificates, provided the source meets the other requirements of a class III eligible biomass technology.*

(k) The production of electricity from any fossil-fueled generating facility that originally commenced 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. The portion of the total electrical energy output that qualifies as class I from a facility in a given time period shall be the fraction of electrical production derived from the combustion of biomass fuels based on the heat input at the facility in that time period as determined by the commission in consultation with the department. To qualify under this paragraph, the electricity generation facility that co-fires with biomass fuels shall:

(1) Either have a quarterly average nitrogen oxide (NOx) emission rate, as measured and verified under RSA 362-F:12, of less than or equal to 0.075 pounds/million British thermal units (lbs/Mmbtu) or be a participant in a plan approved by the department for reductions in NOx from other emission sources. The quantity of reductions required shall be the fraction of electrical production derived from the combustion of biomass fuels, as determined under this paragraph, multiplied by the difference between the generation unit's NOx emissions rate and the 0.075 lbs/Mmbtu rate. The plan shall contain reductions, in the aggregate or individually, in NOx emissions from other emission sources under the jurisdiction of the department and demonstrate that the reductions will be quantifiable. The department shall expeditiously review the plan and, if approved, provide such information as it deems relevant to the commission. The application submitted to the commission under RSA 362-F:11 shall inform the commission of the plan and the commission shall certify the source in accordance with the plan approved by the department; and

(2) Either have an average particulate emission rate, as measured and verified under RSA 362-F:12, of less than or equal to 0.02 lbs/Mmbtu or be a participant in a plan approved by the department for reductions in particulate matter emissions from emission sources owned by or affiliated with the co-firing entity. The quantity of

reductions required shall be the fraction of electrical production derived from the combustion of biomass fuels, as determined under this paragraph, multiplied by the difference between the generation unit's particulate matter emissions rate and the 0.02 lbs/Mmbtu rate. The plan shall contain reductions, in the aggregate or individually, in particulate matter emissions from other emission sources under the jurisdiction of the department and demonstrate that the reductions will be quantifiable. The department shall expeditiously review the plan and, if approved, provide such information as it deems relevant to the commission. The application submitted to the commission under RSA 362-F:11 shall inform the commission of the plan and the commission shall certify the source in accordance with the plan approved by the department.

(l) Biomass renewable energy technologies producing useful thermal energy that began operation after January 1, 2013 provided that:

(1) If the unit is a biomass unit rated between 3 and 30 Mmbtu/hr design gross heat input, and has an average particulate emission rate of less than or equal to 0.10 lbs/Mmbtu as measured and verified by conducting and reporting the results of a one-time initial stack test in accordance with methods approved by the department;

(2) If the unit is a biomass unit rated equal to or greater than 30 Mmbtu/hr design gross heat input, and has an average particulate emission rate of less than or equal to 0.02 lbs/Mmbtu as measured and verified under RSA 362-F:12;

(3) If the unit is a biomass unit rated less than 100 Mmbtu/hr design gross heat input, and it implements Best Management Practices as determined by the department; and

(4) If the unit is a biomass unit rated equal to or greater than 100 Mmbtu/hr design gross heat input, and it has a quarterly average NOx emission rate of less than or equal to 0.075 Mmbtu/hr as measured and verified under RSA 362-F:12.

8 Electric Renewable Energy Classes. Amend RSA 362-F:4, III to read as follows:

III. Class III (Existing Biomass/Methane) shall include the production of electricity from any of the following, provided the source began operation prior to January 1, 2006:

(a) Eligible biomass technologies having a gross nameplate capacity of 25 MWs or less.

(b) Methane gas. *Effective for electricity production commencing January 1, 2014, methane gas shall not qualify for class III if the production is from a source which began operation prior to January 1, 2006 and which source exceeds a total gross nameplate capacity of 10 MWs in the aggregate located at any single landfill site. All phases, stages, cells, lifts, expansions, and other landfill areas shall be combined in determining the single landfill site. Only class III and potential class III eligible sources at any single landfill site shall be included in determining whether the 10 MW aggregate limitation has been exceeded.*

9 Electric Renewable Energy Classes. Amend RSA 362-F:4, IV(a) to read as follows:

IV.(a) Class IV (Existing Small Hydroelectric) shall include the production of electricity from hydroelectric energy, provided the facility*:*

(1) Began operation prior to January 1, 2006[*,*]*;*

(2) When required, has documented applicable state water quality certification pursuant to section 401 of the Clean Water Act for hydroelectric projects; and

(3) Either:

(a) Has a total nameplate capacity of 5 MWs or less as measured by the sum of the nameplate capacities of all the generators at the facility[*,*] ***and*** has actually installed both upstream and downstream diadromous fish passages and such installations have been approved by the Federal Energy Regulatory Commission, [~~and when required, has documented applicable state water quality certification pursuant to section 401 of the Clean Water Act for hydroelectric projects~~] ***or;***

(b) Has a total nameplate capacity of one MW or less as measured by the sum of the nameplate capacities of all generators at the facility, is in compliance with applicable Federal Energy Regulatory Commission fish passage restoration requirements, and is interconnected with an electric distribution system located in New Hampshire.

10 Commission Review and Report. Amend RSA 362-F:5, VI to read as follows:

VI. The timeframe and manner in which new renewable class I and II sources might transition to and be treated as existing renewable sources and if appropriate, how corresponding portfolio standards of new and existing sources might be adjusted;

11 Renewable Energy Certificates. Amend RSA 362-F:6, II to read as follows:

II. The commission shall establish procedures by which electricity ***and useful thermal energy*** production not tracked by ISO-New England from customer-sited sources, including behind the meter production, may be included within the certificate program, provided such sources are located in New Hampshire. The procedures may include the aggregation of sources and shall be compatible with procedures of the certificate program administrator***, where possible***. The production shall be monitored and verified by an independent entity designated by the commission, which may include electric distribution companies***, or by such other means as the commission finds adequate in verifying that such production is occurring. The commission may also establish a methodology for estimating production from customer-sited sources for which certificates are not issued and giving credit for such production in certificate equivalents, in an equitable manner, to those required to obtain and retire certificates under RSA 362-F:3.***

12 New Paragraph; Renewable Energy Certificates. Amend RSA 362-F:6 by inserting after paragraph IV the following new paragraph:

V. A qualified producer of useful thermal energy shall provide for the metering of useful thermal energy produced in order to calculate the quantity of megawatt-hours for which renewable

energy certificates are qualified, and to report to the public utilities commission under rules adopted pursuant to RSA 362-F:13. Monitoring, reporting, and calculating the useful thermal energy produced in each quarter shall be expressed in megawatt-hours, where each 3,412,000 BTUs of useful thermal energy is equivalent to one megawatt-hour.

13 Sale, Exchange, and Use of Certificates. Amend RSA 362-F:7, I to read as follows:

I. 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. A certificate may only be used once for compliance with the requirements of this chapter. It may not be used for compliance with this chapter if it has been or will be used for compliance with any similar requirements of another non-federal jurisdiction, or otherwise sold, retired, claimed, or represented as part of any other electrical energy output or sale. Certificates shall only be used by providers of electricity for compliance with the requirements of RSA 362-F:3 in the year in which the generation represented by the certificate was produced, except that unused certificates of the proper class issued for production during the prior 2 years [~~or the first quarter of the subsequent year~~] may be used to meet up to 30 percent of a provider's requirements for a given class obligation in the current year of compliance.

14 Renewable Energy Fund. Amend RSA 362-F:10, II to read as follows:

II. In lieu of meeting the portfolio requirements of RSA 362-F:3 for a given year if, and to the extent sufficient certificates are not otherwise available at a price below the amounts specified in this paragraph, an electricity provider may, at the time of report submission for that year under RSA 362-F:8, make payment to the commission at the following rates for each megawatt-hour not met for a given class obligation through the acquisition of certificates:

(a) Class I--$57.12, ***except for that portion of the class minimum electric renewable portfolio standards to be met by qualifying renewable energy technologies producing useful thermal energy under RSA 362-F:3 which shall be $28 beginning January 1, 2013.***

(b) Class II--$150.

(c) Class III--$28.

(d) Class IV--$28.

15 Renewable Energy Fund. Amend RSA 362-F:10, X to read as follows:

X. Consistent with RSA 362-F:10, VI, the commission shall, over each 2-year period commencing July 1, 2010, reasonably balance overall amounts expended***, allocated, or obligated*** from the fund, net of administrative expenditures, between residential and nonresidential sectors. Funds from the renewable energy fund awarded to renewable projects in the residential sector shall be in approximate proportion to the amount of electricity sold at retail to that sector in New Hampshire, and the remaining funds from the renewable energy fund shall be awarded to projects in the nonresidential sector which include commercial and industrial sited renewable energy projects, existing generators, and developers of new commercial-scale renewable generation in

New Hampshire.

16 New Paragraph; Application. Amend RSA 362-F:11 by inserting after paragraph III the following new paragraph:

IV. A biomass facility otherwise meeting the eligibility requirements of class III, but which as of January 1, 2012 was not an eligible biomass technology due to the inability to achieve the particulate matter emissions rate specified in RSA 362-F:2, VIII(a), may consult with the department and submit a plan to meet the alternative requirement under that paragraph. The plan shall contain reductions, in the aggregate or individually, in emissions from other emission sources and demonstrate that the reductions will be quantifiable. The department shall expeditiously review the plan and, if approved, provide such information it deems relevant to the commission. The application submitted under this section shall inform the commission of the plan and the commission shall certify the source in accordance with the plan approved by the department.

17 New Paragraph; Rulemaking. Amend RSA 362-F:13 by inserting after paragraph VI the following new paragraph:

VI-a. Adopt procedures for the metering, verification, and reporting of useful thermal energy output.

18 New Paragraph; Rulemaking. Amend RSA 362-F:13 by inserting after paragraph VII the following new paragraph:

VIII. The department may adopt rules, under RSA 541-A, to determine Best Management Practices for qualifying renewable energy technologies producing useful thermal energy.

19 New Sections; Economic Benefits Retention; Phase-In for Existing Supply Contract Load. Amend RSA 362-F by inserting after section 13 the following new sections:

362-F:14 Economic Benefits Retention. The commission shall, in all decisions affecting class eligible technologies or class standards, consider regional and state job loss, job retention, economic impacts, and certificate production from class eligible and potentially eligible technologies. The proposed action shall aid job retention or job creation, economic activities, and certificate demand, taking into account the certificate supply potential from these technologies.

362-F:15 Phase-In for Existing Supply Contract Load.

I. The increases in the annual purchase percentages in RSA 362-F:3 as compared to those in effect as of January 1, 2012 shall apply to the electrical load under any electrical power supply contracts for a term of years entered into by providers of electricity prior to or on July 1, 2012, upon the expiration of the term of any such contract. Providers of electricity shall inform the commission by July 1 of each year of all such contracts and their terms, including but not limited to the execution date and expiration date of the contract and the annual volume of electrical energy supplied.

II. A "provider of electricity" as defined in RSA 362-F:2, XIV shall not include any non-residential customer contract in effect for a term of years until the term of such contract has expired. The supplier of electrical power under any such contract shall inform the commission by July 1 of

each year of such contract and its terms, including but not limited to, the execution date and expiration date and the annual volume of electrical energy supplied.

20 Effective Date.

I. RSA 362-F:2, XIV, as amended by section 2 of this act, shall take effect January 1, 2013.

II. The remainder of this act shall take effect upon its passage.

Energy and Natural Resources
March 13, 2012
2012-1216s
06/09

Amendment to SB 218-FN

Amend the bill by replacing all after the enacting clause with the following:

1 Electric Renewable Portfolio Standards; Definitions; Eligible Biomass Technologies. Amend RSA 362-F:2, VIII(a) to read as follows:

(a) Has a quarterly average nitrogen oxide (NOx) emission rate of less than or equal to 0.075 pounds/million British thermal units (lbs/Mmbtu), and ***either has*** an average 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***; and

2 Definitions; Renewable Energy Source; Useful Thermal Energy. Amend RSA 362-F:2, XIV and XV to read as follows:

XIV. "Provider of electricity" means a distribution company providing default service***; a non-residential customer meeting its retail load through direct purchase from the wholesale electricity market, except as provided in RSA 362-F:15, II;*** or an electricity supplier as defined in RSA 374-F:2, II, but does not include municipal suppliers.

XV. "Renewable energy source," "renewable source," or "source" means a class I, II, III, or IV source of electricity or [~~electricity displacement by a class I source under RSA 362-F:4, I(g)~~] ***a class I source of useful thermal energy***. 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.

XV-a. "Useful thermal energy" means renewable energy delivered from class I sources that can be metered and that is delivered 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 in New Hampshire.

3 Minimum Electric Renewable Portfolio Standards. Amend RSA 362-F:3 to read as follows:

362-F:3 Minimum Electric Renewable Portfolio Standards. For each year specified in the table below, each provider of electricity shall obtain and retire certificates sufficient in number and class type to meet or exceed the following percentages of total megawatt-hours of electricity supplied by the provider to its end-use customers that year, except to the extent that the provider makes

payments to the renewable energy fund under RSA 362-F:10, II:

	2008	2009	2010	2011	2012	2013	2014	2015	2025 *and thereafter*
Class I	0.0%	0.5%	1%	2%	3%	[~~4%~~] ***4.2%***	[~~5%~~] ***5.4%***	[~~6%~~] ***6.6%***	[~~16%~~] ***18.6%*** (*)
Class II	0.0%	0.0%	0.04%	0.08%	0.15%	0.2%	0.3%	0.3%	0.3%
[~~Class III~~	~~3.5%~~	~~4.5%~~	~~5.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%~~]
Class III	***3.5%***	***4.5%***	***5.5%***	***6.5%***	***6.5%***	***6.5%***	***9.0%***	***9.0%***	***9.0%***
[~~Class IV~~	~~0.5%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~]
Class IV	***0.5%***	***1%***	***1%***	***1%***	***1%***	***1.5%***	***1.5%***	***1.5%***	***1.5%***

*Class I increases an additional [~~one~~] ***1.2*** percent per year from 2015 through 2025. ***A minimum percentage of the class 1 totals shall be satisfied annually by the acquisition of renewable energy certificates from qualifying renewable energy technologies producing useful thermal energy as defined in RSA 362-F:2, XV-a. The minimum percentage to be satisfied by the acquisition of renewable energy certificates from qualifying renewable energy technologies producing useful thermal energy shall be 0.2 percent in 2013, 0.4 percent in 2014, and increased annually by .02 percent per year from 2015 through 2025.*** Classes II, ***III, and*** IV remain at the same percentages from 2015 through 2025 except as provided in RSA 362-F:4, V-VI.

4 Electric Renewable Energy Classes. Amend the introductory paragraph of RSA 362-F:4, I to read as follows:

I. Class I (New) shall include the production of electricity ***or useful thermal energy*** from any of the following, provided the source began operation after January 1, 2006, except as noted below:

5 Electric Renewable Energy Classes. Amend RSA 362-F:4, I(b) to read as follows:

(b) Geothermal energy, ***if the geothermal energy output is in the form of useful thermal energy only if the unit began operation after January 1, 2013.***

6 Electric Renewable Energy Classes. Amend RSA 362-F:4, I(f) and (g) to read as follows:

(f) Eligible biomass technologies, ***including the production of electricity from any fossil-fueled generating facility that originally commenced 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. The portion of the total electrical energy output that qualifies as class I from a facility in a given time period shall be the fraction of electrical production derived from the combustion of biomass fuels based on the heat input at the facility in that time period as determined by the commission in consultation with the department.***

(g) [~~The equivalent displacement of electricity, as determined by the commission, by end-use customers, from solar hot water heating systems used instead of electric hot water heating~~] ***Solar thermal energy; if the solar thermal energy output is in the form of useful thermal energy only if the unit began operation after January 1, 2013.***

7 Electric Renewable Energy Classes. Amend RSA 362-F:4, I(j) to read as follows:

(j) The production of electricity from a class III or IV source that has begun operation as a new facility by demonstrating that 80 percent of its resulting tax basis of the source's plant and equipment, but not its property and intangible assets, is derived from capital investment directly related to restoring generation or increasing capacity including department permitting requirements for new plants. Such production shall not qualify for class III or IV certificates. ***Commencing July 1, 2013, a class III source eligible as a class I source under this subparagraph or subparagraph (i) may submit a notice to the commission electing to be a class II source instead of a class I source. Once such notice is given, the production from such a source shall qualify for class III certificates, provided the source meets the other requirements of a class III eligible biomass technology.***

(k) The production of electricity from any fossil-fueled generating facility that originally commenced 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. The portion of the total electrical energy output that qualifies as class I from a facility in a given time period shall be the fraction of electrical production derived from the combustion of biomass fuels based on the heat input at the facility in that time period as determined by the commission in consultation with the department. To qualify under this paragraph, the electricity generation facility that co-fires with biomass fuels shall:

(1) Either have a quarterly average nitrogen oxide (NOx) emission rate, as measured and verified under RSA 362-F:12, of less than or equal to 0.075 pounds/million British thermal units (lbs/Mmbtu) or be a participant in a plan approved by the department for reductions in NOx from other emission sources. The quantity of reductions required shall be the fraction of electrical production derived from the combustion of biomass fuels, as determined under this paragraph, multiplied by the difference between the generation unit's NOx emissions rate and the 0.075 lbs/Mmbtu rate. The plan shall contain reductions, in the aggregate or individually, in NOx emissions from other emission sources under the jurisdiction of the department and demonstrate that the reductions will be quantifiable. The department shall expeditiously review the plan and, if approved, provide such information as it deems relevant to the commission. The application submitted to the commission under RSA 362-F:11 shall inform the commission of the plan and the commission shall certify the source in accordance with the plan approved by the department; and

(2) Either have an average particulate emission rate, as measured and verified under RSA 362-F:12, of less than or equal to 0.02 lbs/Mmbtu or be a participant in a plan approved by the department for reductions in particulate matter emissions from emission sources owned by or affiliated with the co-firing entity. The quantity of

reductions required shall be the fraction of electrical production derived from the combustion of biomass fuels, as determined under this paragraph, multiplied by the difference between the generation unit's particulate matter emissions rate and the 0.02 lbs/Mmbtu rate. The plan shall contain reductions, in the aggregate or individually, in particulate matter emissions from other emission sources under the jurisdiction of the department and demonstrate that the reductions will be quantifiable. The department shall expeditiously review the plan and, if approved, provide such information as it deems relevant to the commission. The application submitted to the commission under RSA 362-F:11 shall inform the commission of the plan and the commission shall certify the source in accordance with the plan approved by the department.

(l) Biomass renewable energy technologies producing useful thermal energy that began operation after January 1, 2013 provided that:

(1) If the unit is a biomass unit rated between 3 and 30 Mmbtu/hr design gross heat input, and has an average particulate emission rate of less than or equal to 0.10 lbs/Mmbtu as measured and verified by conducting and reporting the results of a one-time initial stack test in accordance with methods approved by the department;

(2) If the unit is a biomass unit rated equal to or greater than 30 Mmbtu/hr design gross heat input, and has an average particulate emission rate of less than or equal to 0.02 lbs/Mmbtu as measured and verified under RSA 362-F:12;

(3) If the unit is a biomass unit rated less than 100 Mmbtu/hr design gross heat input, and it implements Best Management Practices as determined by the department; and

(4) If the unit is a biomass unit rated equal to or greater than 100 Mmbtu/hr design gross heat input, and it has a quarterly average NOx emission rate of less than or equal to 0.075 Mmbtu/hr as measured and verified under RSA 362-F:12.

8 Electric Renewable Energy Classes. Amend RSA 362-F:4, III to read as follows:

III. Class III (Existing Biomass/Methane) shall include the production of electricity from any of the following, provided the source began operation prior to January 1, 2006:

(a) Eligible biomass technologies having a gross nameplate capacity of 25 MWs or less.

(b) Methane gas. *Effective for electricity production commencing January 1, 2014, methane gas shall not qualify for class III if the production is from a source which began operation prior to January 1, 2006 and which source exceeds a total gross nameplate capacity of 10 MWs in the aggregate located at any single landfill site. All phases, stages, cells, lifts, expansions, and other landfill areas shall be combined in determining the single landfill site. Only class III and potential class III eligible sources at any single landfill site shall be included in determining whether the 10 MW aggregate limitation has been exceeded.*

9 Electric Renewable Energy Classes. Amend RSA 362-F:4, IV(a) to read as follows:

IV.(a) Class IV (Existing Small Hydroelectric) shall include the production of electricity from hydroelectric energy, provided the facility*:*

(1) Began operation prior to January 1, 2006[~~,~~]*;*

(2) When required, has documented applicable state water quality certification pursuant to section 401 of the Clean Water Act for hydroelectric projects; and

(3) Either:

(a) Has a total nameplate capacity of 5 MWs or less as measured by the sum of the nameplate capacities of all the generators at the facility[~~,~~] *and* has actually installed both upstream and downstream diadromous fish passages and such installations have been approved by the Federal Energy Regulatory Commission, [~~and when required, has documented applicable state water quality certification pursuant to section 401 of the Clean Water Act for hydroelectric projects~~] *or;*

(b) Has a total nameplate capacity of one MW or less as measured by the sum of the nameplate capacities of all generators at the facility, is in compliance with applicable Federal Energy Regulatory Commission fish passage restoration requirements, and is interconnected with an electric distribution system located in New Hampshire.

10 Commission Review and Report. Amend RSA 362-F:5, VI to read as follows:

VI. The timeframe and manner in which new renewable class I and II sources might transition to and be treated as existing renewable sources and if appropriate, how corresponding portfolio standards of new and existing sources might be adjusted;

11 Renewable Energy Certificates. Amend RSA 362-F:6, II to read as follows:

II. The commission shall establish procedures by which electricity *and useful thermal energy* production not tracked by ISO-New England from customer-sited sources, including behind the meter production, may be included within the certificate program, provided such sources are located in New Hampshire. The procedures may include the aggregation of sources and shall be compatible with procedures of the certificate program administrator*, where possible*. The production shall be monitored and verified by an independent entity designated by the commission, which may include electric distribution companies*, or by such other means as the commission finds adequate in verifying that such production is occurring. The commission may also establish a methodology for estimating production from customer-sited sources for which certificates are not issued and giving credit for such production in certificate equivalents, in an equitable manner, to those required to obtain and retire certificates under RSA 362-F:3.*

12 New Paragraph; Renewable Energy Certificates. Amend RSA 362-F:6 by inserting after paragraph IV the following new paragraph:

V. A qualified producer of useful thermal energy shall provide for the metering of useful thermal energy produced in order to calculate the quantity of megawatt-hours for which renewable

energy certificates are qualified, and to report to the public utilities commission under rules adopted pursuant to RSA 362-F:13. Monitoring, reporting, and calculating the useful thermal energy produced in each quarter shall be expressed in megawatt-hours, where each 3,412,000 BTUs of useful thermal energy is equivalent to one megawatt-hour.

13 Sale, Exchange, and Use of Certificates. Amend RSA 362-F:7, I to read as follows:

I. 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. A certificate may only be used once for compliance with the requirements of this chapter. It may not be used for compliance with this chapter if it has been or will be used for compliance with any similar requirements of another non-federal jurisdiction, or otherwise sold, retired, claimed, or represented as part of any other electrical energy output or sale. Certificates shall only be used by providers of electricity for compliance with the requirements of RSA 362-F:3 in the year in which the generation represented by the certificate was produced, except that unused certificates of the proper class issued for production during the prior 2 years [~~or the first quarter of the subsequent year~~] may be used to meet up to 30 percent of a provider's requirements for a given class obligation in the current year of compliance.

14 Renewable Energy Fund. Amend RSA 362-F:10, II to read as follows:

II. In lieu of meeting the portfolio requirements of RSA 362-F:3 for a given year if, and to the extent sufficient certificates are not otherwise available at a price below the amounts specified in this paragraph, an electricity provider may, at the time of report submission for that year under RSA 362-F:8, make payment to the commission at the following rates for each megawatt-hour not met for a given class obligation through the acquisition of certificates:

(a) Class I--$57.12, ***except for that portion of the class minimum electric renewable portfolio standards to be met by qualifying renewable energy technologies producing useful thermal energy under RSA 362-F:3 which shall be $28 beginning January 1, 2013.***

(b) Class II--$150.

(c) Class III--$28.

(d) Class IV--$28.

15 Renewable Energy Fund. Amend RSA 362-F:10, X to read as follows:

X. Consistent with RSA 362-F:10, VI, the commission shall, over each 2-year period commencing July 1, 2010, reasonably balance overall amounts expended***, allocated, or obligated*** from the fund, net of administrative expenditures, between residential and nonresidential sectors. Funds from the renewable energy fund awarded to renewable projects in the residential sector shall be in approximate proportion to the amount of electricity sold at retail to that sector in New Hampshire, and the remaining funds from the renewable energy fund shall be awarded to projects in the nonresidential sector which include commercial and industrial sited renewable energy projects, existing generators, and developers of new commercial-scale renewable generation in

New Hampshire.

16 New Paragraph; Application. Amend RSA 362-F:11 by inserting after paragraph III the following new paragraph:

IV. A biomass facility otherwise meeting the eligibility requirements of class III, but which as of January 1, 2012 was not an eligible biomass technology due to the inability to achieve the particulate matter emissions rate specified in RSA 362-F:2, VIII(a), may consult with the department and submit a plan to meet the alternative requirement under that paragraph. The plan shall contain reductions, in the aggregate or individually, in emissions from other emission sources and demonstrate that the reductions will be quantifiable. The department shall expeditiously review the plan and, if approved, provide such information it deems relevant to the commission. The application submitted under this section shall inform the commission of the plan and the commission shall certify the source in accordance with the plan approved by the department.

17 New Paragraph; Rulemaking. Amend RSA 362-F:13 by inserting after paragraph VI the following new paragraph:

VI-a. Adopt procedures for the metering, verification, and reporting of useful thermal energy output.

18 New Paragraph; Rulemaking. Amend RSA 362-F:13 by inserting after paragraph VII the following new paragraph:

VIII. The department may adopt rules, under RSA 541-A, to determine Best Management Practices for qualifying renewable energy technologies producing useful thermal energy.

19 New Sections; Economic Benefits Retention; Phase-In for Existing Supply Contract Load. Amend RSA 362-F by inserting after section 13 the following new sections:

362-F:14 Economic Benefits Retention. The commission shall, in all decisions affecting class eligible technologies or class standards, consider regional and state job loss, job retention, economic impacts, and certificate production from class eligible and potentially eligible technologies. The proposed action shall aid job retention or job creation, economic activities, and certificate demand, taking into account the certificate supply potential from these technologies.

362-F:15 Phase-In for Existing Supply Contract Load.

I. The increases in the annual purchase percentages in RSA 362-F:3 as compared to those in effect as of January 1, 2012 shall apply to the electrical load under any electrical power supply contracts for a term of years entered into by providers of electricity prior to or on July 1, 2012, upon the expiration of the term of any such contract. Providers of electricity shall inform the commission by July 1 of each year of all such contracts and their terms, including but not limited to the execution date and expiration date of the contract and the annual volume of electrical energy supplied.

II. A "provider of electricity" as defined in RSA 362-F:2, XIV shall not include any non-residential customer contract in effect for a term of years until the term of such contract has expired. The supplier of electrical power under any such contract shall inform the commission by July 1 of

each year of such contract and its terms, including but not limited to, the execution date and expiration date and the annual volume of electrical energy supplied.

20 Effective Date.

I. RSA 362-F:2, XIV, as amended by section 2 of this act, shall take effect January 1, 2013.

II. The remainder of this act shall take effect upon its passage.

Energy and Natural Resources
March 14, 2012
2012-1235s
06/09

Amendment to SB 218-FN

Amend the bill by replacing all after the enacting clause with the following:

1 Electric Renewable Portfolio Standards; Definitions; Eligible Biomass Technologies. Amend RSA 362-F:2, VIII(a) to read as follows:

(a) Has a quarterly average nitrogen oxide (NOx) emission rate of less than or equal to 0.075 pounds/million British thermal units (lbs/Mmbtu), and ***either has*** an average 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***; and

2 Definitions; Renewable Energy Source; Useful Thermal Energy. Amend RSA 362-F:2, XIV and XV to read as follows:

XIV. "Provider of electricity" means a distribution company providing default service***; a non-residential customer meeting its retail load through direct purchase from the wholesale electricity market, except as provided in RSA 362-F:15, II;*** or an electricity supplier as defined in RSA 374-F:2, II, but does not include municipal suppliers.

XV. "Renewable energy source," "renewable source," or "source" means a class I, II, III, or IV source of electricity or [~~electricity displacement by a class I source under RSA 362-F:4, I(g)~~] ***a class I source of useful thermal energy***. 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.

XV-a. "Useful thermal energy" means renewable energy delivered from class I sources that can be metered and that is delivered 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 in New Hampshire.

3 Minimum Electric Renewable Portfolio Standards. Amend RSA 362-F:3 to read as follows:

362-F:3 Minimum Electric Renewable Portfolio Standards. For each year specified in the table below, each provider of electricity shall obtain and retire certificates sufficient in number and class type to meet or exceed the following percentages of total megawatt-hours of electricity supplied by the provider to its end-use customers that year, except to the extent that the provider makes

payments to the renewable energy fund under RSA 362-F:10, II:

	2008	2009	2010	2011	2012	2013	2014	2015	2025 *and thereafter*
Class I	0.0%	0.5%	1%	2%	3%	[~~4%~~] *4.2%*	[~~5%~~] *5.4%*	[~~6%~~] *6.6%*	[~~16%~~] *18.6%* (*)
Class II	0.0%	0.0%	0.04%	0.08%	0.15%	0.2%	0.3%	0.3%	0.3%
~~[Class III~~	~~3.5%~~	~~4.5%~~	~~5.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%]~~
Class III	*3.5%*	*4.5%*	*5.5%*	*6.5%*	*6.5%*	*6.5%*	*9.0%*	*9.0%*	*9.0%*
~~[Class IV~~	~~0.5%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%]~~
Class IV	*0.5%*	*1%*	*1%*	*1%*	*1%*	*1.5%*	*1.5%*	*1.5%*	*1.5%*

*Class I increases an additional [~~one~~] *1.2* percent per year from 2015 through 2025. ***A minimum percentage of the class 1 totals shall be satisfied annually by the acquisition of renewable energy certificates from qualifying renewable energy technologies producing useful thermal energy as defined in RSA 362-F:2, XV-a. The minimum percentage to be satisfied by the acquisition of renewable energy certificates from qualifying renewable energy technologies producing useful thermal energy shall be 0.2 percent in 2013, 0.4 percent in 2014, and increased annually by .02 percent per year from 2015 through 2025.*** Classes II, ***III, and*** IV remain at the same percentages from 2015 through 2025 except as provided in RSA 362-F:4, V-VI.

4 Electric Renewable Energy Classes. Amend the introductory paragraph of RSA 362-F:4, I to read as follows:

I. Class I (New) shall include the production of electricity ***or useful thermal energy*** from any of the following, provided the source began operation after January 1, 2006, except as noted below:

5 Electric Renewable Energy Classes. Amend RSA 362-F:4, I(b) to read as follows:

(b) Geothermal energy, ***if the geothermal energy output is in the form of useful thermal energy only if the unit began operation after January 1, 2013.***

6 Electric Renewable Energy Classes. Amend RSA 362-F:4, I(g) to read as follows:

(g) [~~The equivalent displacement of electricity, as determined by the commission, by end-use customers, from solar hot water heating systems used instead of electric hot water heating~~] ***Solar thermal energy; if the solar thermal energy output is in the form of useful thermal energy only if the unit began operation after January 1, 2013.***

7 Electric Renewable Energy Classes. Amend RSA 362-F:4, I(j) to read as follows:

(j) The production of electricity from a class III or IV source that has begun operation as a new facility by demonstrating that 80 percent of its resulting tax basis of the source's plant and equipment, but not its property and intangible assets, is derived from capital investment directly related to restoring generation or increasing capacity including department permitting requirements for new plants. Such production shall not qualify for class III or IV certificates. ***Commencing July 1, 2013, a class III source eligible as a class I source under this subparagraph or subparagraph (i) may submit a notice to the commission electing to be a class III source instead of a class I source. Once such notice is given, the production from such a source***

shall qualify for class III certificates, provided the source meets the other requirements of a class III eligible biomass technology.

(k) The production of electricity from any fossil-fueled generating facility that originally commenced 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. The portion of the total electrical energy output that qualifies as class I from a facility in a given time period shall be the fraction of electrical production derived from the combustion of biomass fuels based on the heat input at the facility in that time period as determined by the commission in consultation with the department. To qualify under this paragraph, the electricity generation facility that co-fires with biomass fuels shall:

(1) Either have a quarterly average nitrogen oxide (NOx) emission rate, as measured and verified under RSA 362-F:12, of less than or equal to 0.075 pounds/million British thermal units (lbs/Mmbtu) or be a participant in a plan approved by the department for reductions in NOx from other emission sources. The quantity of reductions required shall be the fraction of electrical production derived from the combustion of biomass fuels, as determined under this paragraph, multiplied by the difference between the generation unit's NOx emissions rate and the 0.075 lbs/Mmbtu rate. The plan shall contain reductions, in the aggregate or individually, in NOx emissions from other emission sources under the jurisdiction of the department and demonstrate that the reductions will be quantifiable. The department shall expeditiously review the plan and, if approved, provide such information as it deems relevant to the commission. The application submitted to the commission under RSA 362-F:11 shall inform the commission of the plan and the commission shall certify the source in accordance with the plan approved by the department; and

(2) Either have an average particulate emission rate, as measured and verified under RSA 362-F:12, of less than or equal to 0.02 lbs/Mmbtu or be a participant in a plan approved by the department for reductions in particulate matter emissions from emission sources owned by or affiliated with the co-firing entity. The quantity of reductions required shall be the fraction of electrical production derived from the combustion of biomass fuels, as determined under this paragraph, multiplied by the difference between the generation unit's particulate matter emissions rate and the 0.02 lbs/Mmbtu rate. The plan shall contain reductions, in the aggregate or individually, in particulate matter emissions from other emission sources under the jurisdiction of the department and demonstrate that the reductions will be quantifiable. The department shall expeditiously review the plan and, if approved, provide such information as it deems relevant to the commission. The application submitted to the commission under RSA 362-

F:11 shall inform the commission of the plan and the commission shall certify the source in accordance with the plan approved by the department.

(l) Biomass renewable energy technologies producing useful thermal energy that began operation after January 1, 2013 provided that:

(1) If the unit is a biomass unit rated between 3 and 30 Mmbtu/hr design gross heat input, and has an average particulate emission rate of less than or equal to 0.10 lbs/Mmbtu as measured and verified by conducting and reporting the results of a one-time initial stack test in accordance with methods approved by the department;

(2) If the unit is a biomass unit rated equal to or greater than 30 Mmbtu/hr design gross heat input, and has an average particulate emission rate of less than or equal to 0.02 lbs/Mmbtu as measured and verified under RSA 362-F:12;

(3) If the unit is a biomass unit rated less than 100 Mmbtu/hr design gross heat input, and it implements Best Management Practices as determined by the department; and

(4) If the unit is a biomass unit rated equal to or greater than 100 Mmbtu/hr design gross heat input, and it has a quarterly average NOx emission rate of less than or equal to 0.075 Mmbtu/hr as measured and verified under RSA 362-F:12.

8 Electric Renewable Energy Classes. Amend RSA 362-F:4, III to read as follows:

III. Class III (Existing Biomass/Methane) shall include the production of electricity from any of the following, provided the source began operation prior to January 1, 2006:

(a) Eligible biomass technologies having a gross nameplate capacity of 25 MWs or less.

(b) Methane gas. *Effective for electricity production commencing January 1, 2014, methane gas shall not qualify for class III if the production is from a source which began operation prior to January 1, 2006 and which source exceeds a total gross nameplate capacity of 10 MWs in the aggregate located at any single landfill site. All phases, stages, cells, lifts, expansions, and other landfill areas shall be combined in determining the single landfill site. Only class III and potential class III eligible sources at any single landfill site shall be included in determining whether the 10 MW aggregate limitation has been exceeded.*

9 Electric Renewable Energy Classes. Amend RSA 362-F:4, IV(a) to read as follows:

IV.(a) Class IV (Existing Small Hydroelectric) shall include the production of electricity from hydroelectric energy, provided the facility*:*

(1) Began operation prior to January 1, 2006[*.*]*;*

(2) When required, has documented applicable state water quality certification pursuant to section 401 of the Clean Water Act for hydroelectric projects; and

(3) Either:

(a) Has a total nameplate capacity of 5 MWs or less as measured by the sum of the

nameplate capacities of all the generators at the facility[~~,~~] ***and*** has actually installed both upstream and downstream diadromous fish passages and such installations have been approved by the Federal Energy Regulatory Commission, [~~and when required, has documented applicable state water quality certification pursuant to section 401 of the Clean Water Act for hydroelectric projects~~] ***or;***

(b) Has a total nameplate capacity of one MW or less as measured by the sum of the nameplate capacities of all generators at the facility, is in compliance with applicable Federal Energy Regulatory Commission fish passage restoration requirements, and is interconnected with an electric distribution system located in New Hampshire.

10 Commission Review and Report. Amend RSA 362-F:5, VI to read as follows:

VI. The timeframe and manner in which new renewable class I and II sources might transition to and be treated as existing renewable sources and if appropriate, how corresponding portfolio standards of new and existing sources might be adjusted;

11 Renewable Energy Certificates. Amend RSA 362-F:6, II to read as follows:

II. The commission shall establish procedures by which electricity ***and useful thermal energy*** production not tracked by ISO-New England from customer-sited sources, including behind the meter production, may be included within the certificate program, provided such sources are located in New Hampshire. The procedures may include the aggregation of sources and shall be compatible with procedures of the certificate program administrator, ***where possible***. The production shall be monitored and verified by an independent entity designated by the commission, which may include electric distribution companies, ***or by such other means as the commission finds adequate in verifying that such production is occurring. The commission may also establish a methodology for estimating production from customer-sited sources for which certificates are not issued and giving credit for such production in certificate equivalents, in an equitable manner.***

12 New Paragraph; Renewable Energy Certificates. Amend RSA 362-F:6 by inserting after paragraph IV the following new paragraph:

V. A qualified producer of useful thermal energy shall provide for the metering of useful thermal energy produced in order to calculate the quantity of megawatt-hours for which renewable energy certificates are qualified, and to report to the public utilities commission under rules adopted pursuant to RSA 362-F:13. Monitoring, reporting, and calculating the useful thermal energy produced in each quarter shall be expressed in megawatt-hours, where each 3,412,000 BTUs of useful thermal energy is equivalent to one megawatt-hour.

13 Sale, Exchange, and Use of Certificates. Amend RSA 362-F:7, I to read as follows:

I. 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. A certificate may only be used once for compliance with the requirements of this chapter. It may not be used for compliance with this chapter if it has been or will be used for compliance with any similar requirements of another

non-federal jurisdiction, or otherwise sold, retired, claimed, or represented as part of any other electrical energy output or sale. Certificates shall only be used by providers of electricity for compliance with the requirements of RSA 362-F:3 in the year in which the generation represented by the certificate was produced, except that unused certificates of the proper class issued for production during the prior 2 years [~~or the first quarter of the subsequent year~~] may be used to meet up to 30 percent of a provider's requirements for a given class obligation in the current year of compliance.

14 Renewable Energy Fund. Amend RSA 362-F:10, II to read as follows:

II. In lieu of meeting the portfolio requirements of RSA 362-F:3 for a given year if, and to the extent sufficient certificates are not otherwise available at a price below the amounts specified in this paragraph, an electricity provider may, at the time of report submission for that year under RSA 362-F:8, make payment to the commission at the following rates for each megawatt-hour not met for a given class obligation through the acquisition of certificates:

(a) Class I--$57.12, ***except for that portion of the class minimum electric renewable portfolio standards to be met by qualifying renewable energy technologies producing useful thermal energy under RSA 362-F:3 which shall be $28 beginning January 1, 2013.***

(b) Class II--$150.

(c) Class III--$28.

(d) Class IV--$28.

15 Renewable Energy Fund. Amend RSA 362-F:10, X to read as follows:

X. Consistent with RSA 362-F:10, VI, the commission shall, over each 2-year period commencing July 1, 2010, reasonably balance overall amounts expended, ***allocated, or obligated*** from the fund, net of administrative expenditures, between residential and nonresidential sectors. Funds from the renewable energy fund awarded to renewable projects in the residential sector shall be in approximate proportion to the amount of electricity sold at retail to that sector in New Hampshire, and the remaining funds from the renewable energy fund shall be awarded to projects in the nonresidential sector which include commercial and industrial sited renewable energy projects, existing generators, and developers of new commercial-scale renewable generation in New Hampshire.

16 New Paragraph; Application. Amend RSA 362-F:11 by inserting after paragraph III the following new paragraph:

IV. A biomass facility otherwise meeting the eligibility requirements of class III, but which as of January 1, 2012 was not an eligible biomass technology due to the inability to achieve the particulate matter emissions rate specified in RSA 362-F:2, VIII(a), may consult with the department and submit a plan to meet the alternative requirement under that paragraph. The plan shall contain reductions, in the aggregate or individually, in emissions from other emission sources and demonstrate that the reductions will be quantifiable. The department shall expeditiously

review the plan and, if approved, provide such information it deems relevant to the commission. The application submitted under this section shall inform the commission of the plan and the commission shall certify the source in accordance with the plan approved by the department.

17 New Paragraph; Rulemaking. Amend RSA 362-F:13 by inserting after paragraph VI the following new paragraph:

VI-a. Adopt procedures for the metering, verification, and reporting of useful thermal energy output.

18 New Paragraph; Rulemaking. Amend RSA 362-F:13 by inserting after paragraph VII the following new paragraph:

VIII. The department may adopt rules, under RSA 541-A, to determine Best Management Practices for qualifying renewable energy technologies producing useful thermal energy.

19 New Sections; Economic Benefits Retention; Phase-In for Existing Supply Contract Load. Amend RSA 362-F by inserting after section 13 the following new sections:

362-F:14 Economic Benefits Retention. The commission shall, in all decisions affecting class eligible technologies or class standards, consider regional and state job loss, job retention, economic impacts, and certificate production from class eligible and potentially eligible technologies. The proposed action shall aid job retention or job creation, economic activities, and certificate demand, taking into account the certificate supply potential from these technologies.

362-F:15 Phase-In for Existing Supply Contract Load.

I. The increases in the annual purchase percentages in RSA 362-F:3 as compared to those in effect as of January 1, 2012 shall apply to the electrical load under any electrical power supply contracts for a term of years entered into by providers of electricity prior to or on July 1, 2012, upon the expiration of the term of any such contract. Providers of electricity shall inform the commission by July 1 of each year of all such contracts and their terms, including but not limited to the execution date and expiration date of the contract and the annual volume of electrical energy supplied.

II. A "provider of electricity" as defined in RSA 362-F:2, XIV shall not include any non-residential customer contract in effect for a term of years until the term of such contract has expired. The supplier of electrical power under any such contract shall inform the commission by July 1 of each year of such contract and its terms, including but not limited to, the execution date and expiration date and the annual volume of electrical energy supplied.

20 Effective Date.

I. RSA 362-F:2, XIV, as amended by section 2 of this act, shall take effect January 1, 2013.

II. The remainder of this act shall take effect upon its passage.

Energy and Natural Resources
March 16, 2012
2012-1283s
06/09

Floor Amendment to SB 218-FN

Amend the bill by replacing section 3 with the following:

3 Minimum Electric Renewable Portfolio Standards. Amend RSA 362-F:3 to read as follows:

362-F:3 Minimum Electric Renewable Portfolio Standards. For each year specified in the table below, each provider of electricity shall obtain and retire certificates sufficient in number and class type to meet or exceed the following percentages of total megawatt-hours of electricity supplied by the provider to its end-use customers that year, except to the extent that the provider makes payments to the renewable energy fund under RSA 362-F:10, II:

	2008	2009	2010	2011	2012	2013	2014	2015	2025 *and thereafter*
Class I	0.0%	0.5%	1%	2%	3%	[~~4%~~] ***4.2%***	[~~5%~~] ***5.4%***	[~~6%~~] ***6.6%***	[~~16%~~] ***18.6%*** (*)
Class II	0.0%	0.0%	0.04%	0.08%	0.15%	0.2%	0.3%	0.3%	0.3%
[~~Class III~~	~~3.5%~~	~~4.5%~~	~~5.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%~~]
Class III	***3.5%***	***4.5%***	***5.5%***	***6.5%***	***6.5%***	***6.5%***	***9.0%***	***9.0%***	***9.0%***
[~~Class IV~~	~~0.5%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~]
Class IV	***0.5%***	***1%***	***1%***	***1%***	***1%***	***1.5%***	***1.5%***	***1.5%***	***1.5%***

*Class I increases an additional [~~one~~] ***1.2*** percent per year from 2015 through 2025. ***A minimum percentage of the class 1 totals shall be satisfied annually by the acquisition of renewable energy certificates from qualifying renewable energy technologies producing useful thermal energy as defined in RSA 362-F:2, XV-a. The minimum percentage to be satisfied by the acquisition of renewable energy certificates from qualifying renewable energy technologies producing useful thermal energy shall be 0.2 percent in 2013, 0.4 percent in 2014, and increased annually by 0.2 percent per year from 2015 through 2025.*** Classes II, ***III, and*** IV remain at the same percentages from 2015 through 2025 except as provided in RSA 362-F:4, V-VI.

Committee Minutes

Printed: 02/08/2012 at 2:37 pm

SENATE CALENDAR NOTICE
ENERGY AND NATURAL RESOURCES

Senator Bob Odell Chairman
Senator John Gallus V Chairman
Senator Jeb Bradley
Senator Gary Lambert
Senator Amanda Merrill

For Use by Senate Clerk's Office ONLY
☐ Bill Status
☐ Docket
☐ Calendar
Proof: ☐ Calendar ☐ Bill Status

Date: February 8, 2012

HEARINGS

Thursday **2/16/2012**

(Name of Committee)	(Place)	(Time)
ENERGY AND NATURAL RESOURCES	LOB 102	9:00 AM

EXECUTIVE SESSION MAY FOLLOW

9:00 AM	SB396	declaring the Temple Mountain ski area a historic site.
9:15 AM	SB400	including owls within the definition of raptor for the purpose of falconry.
9:30 AM	SB218-FN	relative to electric renewable portfolio standards.

Sponsors:

SB396
Sen. Gary Lambert
Sen. Jim Luther

SB400
Sen. Peter Bragdon
Rep. Jennifer Daler

SB218-FN
Sen. Jeb Bradley
Rep. Robert Introne
Rep. Sam Cataldo
Sen. John Barnes, Jr.
Sen. Gary Lambert
Sen. Bob Odell
Sen. John Gallus
Sen. Jeanie Forrester
Sen. Jim Luther

START: 9:33am
END: 11:37am

Richard Parsons 271-3076

Sen. Bob Odell
Chairman

Energy and Natural Resources Committee

Hearing Report

FROM: Richard Parsons, Legislative Aide

SB 218-FN – **relative to electric renewable portfolio standards.**

HEARING DATE: February 16, 2012

MEMBERS PRESENT: Senators Odell, Gallus, Bradley, Lambert, Merrill

MEMBERS ABSENT: No one.

Sponsor(s): Sen. Bradley, Dist 3; Sen. Barnes, Jr., Dist 17; Sen. Lambert, Dist 13; Sen. Odell, Dist 8; Sen. Gallus, Dist 1; Sen. Forrester, Dist 2; Sen. Luther, Dist 12; Rep. Introne, Rock 3; Rep. Cataldo, Straf 3

What the bill does: This bill modifies the electric renewable portfolio standards.

Who supports the bill: Senator Luther, Dist. 12; Senator Gallus, Dist. 1; Senator Bradley, Dist. 3; Rep. Smith, Graf 7; Jim O'Brien, The Nature Conservancy; Kevin McKinnon, Town of Colebrook; Heidi Kroll, Granite State Hydropower Association; Brad Simpkins, NH DRED; Chris Way, NH DRED; Michael Licata, BIA; Joanne Morin, OEP; Donna Gamache, PSNH; Rick Labrecque, PSNH; Harry Smith, Green Clean Heat; Michael Fitzgerald, DES; Jasen Stock, NH Timberland Owners Association; Steve Walker, NE Wood Pellet; Charlie Niebling, NE Wood Pellet; Susan Arnold, AMC; Will Abbott, SPNHF; Scott Nichols, Tarm Biomass; Joe Short, Northern Forest Center; Malcolm Milre, Durgin & Crowell Lumber Co.; Scott Pipen, Northeast BioEnergy Systems; Michael O'Leary, Bridgewater Power; Mark Coelson, Hottiem Hydro Hebron;

Who opposes the bill: Ted Vansant; Dan Allegretti, Constellation Energy; Mark Weissflog, KW Management; Catherine Cockery, NH Sierra Club;

Neutral position: Jack Ruderman, PUC; Clay Mitchell, Revolution Energy; Carolyn Demorest, NH Sustainable Energy Association; Pablo Fleischmann, NH Sustainable Energy Association; Deb Hale, National Grid;

Summary of testimony received:
Hearing opened at 9:33 AM

Senator Bradley, District 3 – Prime Sponsor
Amendment 0735s is being submitted for consideration and it would replace the entire bill. We need a fix to the RPS laws in order to ensure the level playing field that exists continues while at the same time we are able to attract new renewable sources to the state. This bill

seeks to strike a balance between attracting new renewable sources while maintaining and supporting the renewable facilities we already have.
In the biomass section, the bill remedies a discrepancy by creating a cap of 10MWs for class III methane, which will allow us to slightly expand the capabilities for existing wood-to-energy facilities so that they remain within the existing cap.
There is also a provision that will allow a creative environmental solution to occur that would enable one of the existing wood plants to be able to operate, and if they can't meet the environment standards that they would have the opportunity to find the environmental improvements elsewhere. This is important to help keep the existing wood plants fully functioning.
There would be a new category under the law for thermal heating. This would be an innovative approach because thermal heating is an important component and it is ignored in our current RPS law. There are potentially a lot of jobs at stake.
If you are a small hydro facility this bill will fix the provision that requires small hydro facilities to have fish passages and it will allow many small hydro facilities to qualify for RECs. The legislation proposes to increase the class IV requirement from 1% to 1.5% to make this achievable.
The overall cost of the RPS law is something that should be mentioned. The PUC in their 2011 report reviewed the compliance cost at .0015 cents per kilowatt hour. So there obviously is a cost. But, while there is a cost, the RPS standard produces a significant number of jobs and these are logging, and energy facilities that offer diversity in our energy mix which has significant benefits to avoid energy price spikes and other variables.

Joanne Morin, Office of Energy and Planning
Increasing our own energy resources is very important.
The thermal component, which would be added by this bill, has consistently come up throughout the years and believe the time is now to tackle that component.

Ted Vansant, RGS Energy
Opposed to the proposed changes for the reasons stated on testimony. First, changes to RPS would signal uncertain investment environment for renewable energy investors. Second, the bill proposes to remove class II solar as a renewable energy source and combine it into Class I with other technologies. Third, these changes will reduce the value of Solar RECs. Any reduction in incentives will push solar businesses out of the state.
Solar is one of the most appropriate renewable energy technology for the state because they are easily deployable, there is little permitting needed, there is minimal test or studies needed to establish feasibility, there is plenty of sunshine, it is scalable, and it allows homeowners, businesses and institutions to buy their power at fixed rates for the next 25+ years.
This is a booming industry with significant investments being made throughout the country and NH has the potential to attract some of these.
Senator Odell asked if you would like to see a free standing class for solar remain in RPS. Mr. Vansant stated that he would like to leave class II as is.

Kevin McKinnon, Town of Colebrook
The town is in the middle of a feasibility study to build a district heating system within Colebrook. Have already done a pre-feasibility study that stated it is a viable project. District heating is currently very difficult to fund and this bill would help those projects. These projects would help jobs in the North Country and that is why it is vital thermal energy be included in the RPS.

Deb Hale, National Grid
National Grid is neutral on the bill but have several concerns. The increase in class III is a concern because with that kind of jump it could cost National Grid upward of $1.5 million and with this kind of jump there could be a shortage unless there are a number of new biomass plants that will be coming online.

Have concerns regarding thermal and wonder how this would be tracked because it could become a manual process for tracking and
Last concern deals with if this would be implemented in this year as that would create significant changes within the calendar year.

Heidi Kroll, Granite State Hydropower Association
In support of this bill as amended. Particularly, sections 3 and 5 which address small scale hydro facilities. Would suggest taking out the comma between "facility, and" and on page 3 line 22.
Small scale hydro is really being used locally and is good for the environment. The small scale hydro changes are a win-win and will allow facilities that are 1MW or less to qualify for class IV regardless of upstream or downstream fish passages, and also the change reflects a modest increase in the class IV requirements.
The proposed changes are needed, as highlighted in the PUC review process, because suppliers have had difficulty finding class IV RECs which means suppliers have had to make alternative compliance payments and they are the most costly form of compliance. A few of NH's hydropower facilities qualify and there is actually only one facility right now in NH, and it is causing us to buy out-of-state for RECs which are more expensive. The risk of small scale hydro power facilities shutting down is a high risk as they are capital intensive and closely regulated. Testimony being submitted highlights the GSHA members and the positive impacts these companies have on the state. This bill may also even have a slight excess of class IV facilities so this would help keep the cost impact down.

Brad Simpkins and Christopher Way, DRED
Brad stated the RPS is very important to the long-term health of the forest. Thermal heating being included will be good for the forest and also makes sense policy-wise.
Chris stated that when you look at the amount of investment made because of the RPS standards they are impressive numbers.

Rep. Suzanne Smith, Grafton 7
In support of this bill particularly as it affects the small hydro facilities.
This bill will help small scale facilities that are in dire straits.
The current law is good but this makes modest, but important, changes.

Michael Licata, BIA
For many members, especially manufacturers, the price of energy is a huge cost. Members understand the need for short-term investment. Believe the bill makes simple, common sense changes that keep the demand at a stable rate, increase the number of facilities that qualify, and keep the money in NH.
Think Class I increases in the amount of range of renewable that can qualify but not in the percentage will help keep demand level.
In looking at RPS fund there is a concern about ensuring that money the state is spending is going towards programs that are producing RECs. BIA would support an amendment that would help smaller projects, that don't get RECs already, ensure all the programs get RECs that ratepayers are funding in order to help eliminate the need for future alternative compliance payments.
In speaking to the amendment, have a concern over the limitation on methane generation. One chief concern is in cost and if you are limiting the RECs that can be gained by methane, but increasing class III, there may cost implications that should be looked at closer.

Donna Gamache and Rick Labrecque, PSNH
Overall PSNH supports the concept of the RPS and providing a level playing field for renewable projects. PSNH often implements public policy and the goal is to always implement policy at the lowest possible cost and the existing RPS has had barriers that has not allowed PSNH to do that and this bill addresses most of those barriers.
One technical suggested change would be on page 1, line 29, need to add the words "and thereafter" after 2025 so that it does not imply that the RPS goes away after 2025.

Also, the language on co-firing, page 2, line 33, is the opposite of what we are trying to do and will work to present the committee with alternative language.
Support the BIA's position that the money in the fund should be used to support projects that will increase NH RECs.
Would recommend that the committee consider that the goal of the RPS should be met through the distribution companies and not the energy providers. The reason for that are long-term contracts because the energy suppliers do not know year-to-year exactly what their customer base is going to be whereas the distribution companies do know year-to-year and that allows us to enter into long-term contracts for the energy and for the RECs.
Senator Bradley asked to highlight how potentially moving this charge to the distribution companies gives the ability to lower rates. Mr. Labrecque answered that the distribution utilities are in a better position to implement renewable energy policy because the utility is definitely going to be around for years to come. PSNH and the other distribution utilities would be able to deploy a wider variety of procurement methods including long term contracting and potential construction under 374-g of our own small renewable facilities. Would be able to put together a lower cost portfolio of renewable assets to comply with the RPS and would be passing that on to customers in the form of lower rates.

Dan Allegretti, Constellation Energy and NE Retail Energy Supply Association
In opposition to this bill. Do not have a fundamental opposition to RPS, but have concerns with the implementation. This bill raises several concerns for competitive electric suppliers. Competitive suppliers enter into contracts with their customers under which the price is firm for the duration of the contract and significant adverse impacts would be seen on existing agreements particularly when changes increase the overall percentage of renewable resources which must be procured and delivered, as this bill does for Class III and IV. This would increase the cost to the customers and impose new and unrecoverable costs and put a chilling effect on the competitive retail energy market. Other states that have enacted changes to their RPS have included grandfathering language for these pre-existing retail contracts, as well as wholesale default service supply contracts, to avoid serious market disruption and frustration of commercial expectations. This bill lacks the appropriate grandfathering language.
RESA is not opposed to the introduction of thermal resources but there are implementation issues. The regional Generator Information System, which tracks renewable electricity production, does not, at this time, support thermal energy certificate trading. The qualification, measurement, accounting and verification associated with these resources will require additional resources. The committee may wish to provide clarification, specific to rulemaking authority, and possibly additional administrative resources the address thermal resource implementation issues.
Finally, implementing half way through 2012 by saying upon passage would create compliance concerns for both suppliers and the Commission. Starting this in 2013 would give time to prepare for the changes and would require less retail contracts to be grandfathered.
In regards to the PSNH comment about putting it on distribution companies, Mr. Allegretti would be opposed to the change because competitive electric suppliers compete with each other to find the least costly, most innovative ways of meeting RPS requirements and that is done by going to the marketplace. Believe this change would discourage the creative and innovative approaches competitive electric suppliers make today and would like this to stay in the competitive market.

Clay Mitchell, Revolution Energy
It is important that the incentives in place are maintained. Revolution Energy is the largest owner of solar PV in the state. Revolution Energy is very close to offering a grid parity rate, which is a long term stable investment on energy costs. This is done by looking forward to the class II RECs and the concern is that a disruption in the Class II RECS would interfere with modeling and finances. Overall, it creates a problem when the company and investors are trying to look out a few years at the sustainability of these projects and incentives.
Also participate in thermal projects and want to make sure that it is sustained once it is implemented. Also, support biomass and this new policy would allow Revolution Energy to

implement these projects as well. The innovation and creativity that occurs from these projects can only happen with sustained support on the state level.

Pablo Fleischmann, NH Energy Sustainability Energy Association
Membership is supportive of adding the thermal section to RPS. However, eliminating class II, new solar, altogether could have a negative effects as the people of NH are supportive of solar projects.

Michael Fitzgerald, DES
DES believes the amendment represents good policy but would urge that the long term nature of the RPS should be left in place. Currently, it is unclear that the policy would continue past 2025 to give the long term certainty to business that is needed.
Particulate matter (PM) emissions are of growing concern to DES. Emissions from wood stoves in the southwestern portion of the state have contributed to poor air quality, resulting in public alerts being issued by DES. In the coming years DES will be required to implement a plan to reduce PM emissions to comply with federal standards. This bill proposes to amend "eligible biomass technologies" by allowing DES the authority to approve an alternative emission rate at .02 lbs/mmBtu rate. DES believes this is a reasonable requirement to be met and the department can support the amendment being proposed.
In regards to solar, one of the incentives for solar in NH are not as significant as those in other states which are often significantly higher. The PUC report, dated November 2011, makes a recommendation to maintain existing class obligations in favor of policy consistency and predictability but also support the recommendation that RPS be expanded to thermal.

Jasen Stock, NH Timberland Association
In support of this bill. The association is interested based on members that grow, harvest and sell low grade wood and this would give a healthier market for low grade wood which helps the forest. Another interest includes members with property that could be used for wind power and for landowners this has become another means to supplement income. There was a stakeholder effort that ran parallel to the PUC process that included a fairly broad group of stakeholders. The RPS does not need to be completely overhauled and the current RPS structure does a good job at encouraging current projects but also giving incentives for new generation which result in a net gain.
In regards to the class changes in class III that has to do with the addition of two power plants in the state (Alexandria and Bridgewater facilities) that were not contemplated in the original RPS bill. These class III changes are trying to strike the balance between supply and demand.
Handouts given to the committee look at economic data which only captures direct costs. As of February 13th, it adds up to $111 million dollars in local economic activity and taxes/fees collected. It is a significant industry. There are two biomass and three wind projects going through the process to get approval currently. These produce 1245 jobs and about a third of those jobs will be permanent jobs. Almost $3 million payment in lieu of taxes will be paid.

Steve Walker and Charlie Niebling, NH Wood Pellet
Support a role for state government in setting aggressive renewable energy targets and establishing the structure and incentives to meet these requirements. Support continuation of RPS incentives for the biomass electric industry in NH but only if equivalent policy treatment is extended through the RPS to include thermal renewable energy.
In response to a question about how thermal energy would be measured, Mr. Walker stated it is measured just like electricity on components similar to electric meters. Thermal energy tends to replace oil which would lower our dependency on foreign oil.
Charlie Niebling clarified that the thermal provision shows up in section II and the term "useful" is necessary because a lot of waste energy is produced in the process as well. The thermal would be added to Class I, which would apply to new projects and incentivize the market for future growth. The amendment gives the PUC rulemaking authority to develop the standards, procedures and protocols for consistent independently verifiable measuring and metering of heat energy.

The other key provisions is how the PUC will certify heat energy and provide that information to ISO so the thermal RECs can be included in and become part of the regional trading platform. ISO New England is already looking at adding thermal to their regional trading platform based on Massachusetts passing legislation and because thermal can be measured in MW hours it is a fairly straightforward proposition.
There is a national heat metering standard being developed, so there is a recognition nationally that we need to standardize measures for heat.
One suggestion for an amendment is based on how Class I would likely be significantly oversubscribed in the next several years mostly because of the mandated REC purchase provision of the Berlin Power purchase agreement. That agreement may effectively swamp the class and if that happens the thermal provision in Class I would be a symbolic gesture but would not have any real practical consequence because of a lack of a market for the RECs. Proposing a Class I "carve out" equal to a 2.6% percent addition to Class I that would be phased in at .2% per year from 2013 to 2025 that would have a carve out mechanism that would require that portion of Class I be for thermal energy certificates and attach to that a very low alternative compliance payment amount of $28 per MW/h. The effect of this would be to guarantee a market for thermal RECs. The effect would add .9 cents a month to the average residential bill. The modest incremental phase in would help keep REC prices significantly below the ACP. Drafted language for consideration that would add a single paragraph and the alternative compliance payment language.
Senator Odell asked that the amendment would roll solar into Class I and there would be a provision for a thermal carve out to make it feasible for thermal that would cost roughly 9 cents to customers. Mr. Niebling responded that was correct. **Senator Odell** asked that other than creating the carve out thermal would have no economic benefit of being added. Mr. Niebling responded that the Berlin project agreement guarantees a significant portion of RECs and it is an important dynamic in the class that would have implications for the capacity of the class to add anything new. Thermal deserves this consideration because it is a third of the energy that we consume in NH and there haven't been any major incentives, either on the state of federal level, for thermal energy at this time. The people of NH know how reliant we are on heating oil and how much thermal could help make a dent in our reliance.

Susan Arnold, AMC
In support of this bill and wanted to speak on the language about fish passage for small scale hydro. MW size is not always related to actual environmental impacts but rather the location of the passages for fish that could have affects on the biological needs of the fish. Current law does not require fish passage if there is not a demonstrated need for fish passages without regard to the MW size. Would like the committee to consider this while looking at possible changes.

Mark Weissflog, KW Management
In opposition of the bill as currently written and in opposition because of the elimination of the Class II elimination. Portioning Class II RECs as Class I RECs would not be good. A potential carve out should include dedicating some of each class to NH only. The recommended language would have that carve out and Massachusetts currently requires 100% of their Class II solar RECS are from their state.
Most RECs sold in NH are only generating through a few utilities.
The other reason Class I and Class II are not equal is because one burns a fuel.

Scott Nichols, Tarm Biomass
It is important to level of the playing field for biomass power and biomass thermal. When you include a thermal component you are talking about oil. Could offset 18.5% of our heating oil in the sate by using thermal. Although the costs for RPS may be a concern the benefits on the back end for the savings to the state are significant.

Joe Short, Northern Forest Center

In support largely because of the inclusion of thermal energy. This will have a large economic benefit for the local communities particularly in the North Country. (1:57:45) Homeowners in Berlin could save 40-50% annually on their heating fuel costs if they switch to a district heating system. A transition to thermal energy brings an opportunity to capture and keep local wealth in the community.

Mark Coelson, Hottiem Hydro Hebron
Business operates the small hydro facilities that are mentioned in the bill.
Economically, it is urgent that we fix this for the small hydro operators in the state.
Senator Odell asked about Susan Arnold's comments regarding the fish passages. Mr. Coelson responded that the dams in Rochester and Campton were installed in the 1930s and there have been hydro there since the Civil War. There were FERC hearings in the 1980s and at that time no upstream and downstream passages were required at the time. Installing fish passages were there aren't any further down at another dam would be costly and pointless.

Hearing closed at 11:37 am

Funding: The Public Utilities Commission and Department of Environmental Services state this bill will have an indeterminable fiscal impact on state restricted revenue, state restricted expenditures, county expenditures, and local expenditures, and may decrease county and local revenue by an indeterminable amount in FY 2013 and each year thereafter.

Future Action: *Pending.*

RMP
[file: SB 0218 report]
Date: 2/21/12

Speakers

Senate Energy and Natural Resources Committee: Sign-In Sheet

Date: 2/16/2012 Time: 9:30 am Public Hearing on SB 218-FN

SB 218-FN relative to electric renewable portfolio standards.

Name	Representing	Support	Oppose	Speaking?	Yes	No
Sen. Gallus	Dist. #12	☑	☐		☐	☒
Jim O'Brien	The Nature Conservancy	☒	☐		☐	☒
Ted Vansant		☐	☒		☒	☐
Kevin McKinnon	Town of Colebrook	☑	☐		☑	☐
Deb Hale	nGrid	☐	☒		☒	☐
Heidi Kroll	Granite State Hydropower Assoc.	☒	☐		☒	☐
Jack Ruderman	PUC	☐	☐		☐	☑
Brad Simpkins and Chris Way	NH DRED	☑	☐		☑	☐
Suzanne Smith	Grafton 7	☒	☐		☒	☐
MICHAEL LICATA	BIA	☑	☐		☑	☐
JOANNE MORIN	OEP	☑	☐		☑	☐
Donna Gamade & Rick Labrecque	PSNH	☑	☐		☑	☐
Dan Allegretti	Constellation	☐	☑		☑	☐
CLAY MITCHELL	REVOLUTION ENERGY	☐	☐		☒	☐
CAROLYN DEMEREST	NH Sus. En. Assn	☐	☐		☐	☑
PABLO FLEISCHMANN	NH Sust. Energy Assn	☐ ×	☐		☒	☐
HARRY SMITH	GREEN CLEAN HEAT	☒	☐		☐	☒
		☐	☐		☐	☐
		☐	☐		☐	☐

Senate Energy and Natural Resources Committee: Sign-In Sheet

Date: 2/16/2012 Time: 9:30 am Public Hearing on SB 218-FN

SB 218-FN relative to electric renewable portfolio standards.

Name	Representing	Support	Oppose	Speaking? Yes	Speaking? No
Michael Fitzgerald	DES	☒	☐	☒	☐
Jasen Stock	NH Timberland Owners Assoc.	☒	☐	☒	☐
Steve Walker Charlie Niebling	NE Wood Pellet	☒	☐	☒	☐
Susan Arnold	AMC	☒	☐	☒	☐
Will Abbott	SPNHF	☒	☐	☒	☐
Mark Weissflog	KW Management	☐	☒	☒	☐
Scott Nichols	Tarm Biomass	☒	☐	☒	[scribbled out]
Joe Short	Northern Forest Ctr	☒	☐	☒	☐
		☐	☐	☐	☐
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		☐	☐	☐	☐
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Senate Energy and Natural Resources Committee: Sign-In Sheet

Date: 2/16/2012 Time: 9:30 am Public Hearing on SB 218-FN

SB 218-FN relative to electric renewable portfolio standards.

Name	Representing	Support	Oppose	Speaking? Yes	Speaking? No
Malcolm Milne	Durgin & Crowell Lumber Co.	☒	☐	☐	☒
Scott Piper	Northeast BioEnergy Syst	☒	☐	☐	☒
Michael O'Leary	Bridgewater Power	☒	☐	☐	☒
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		☐	☐	☐	☐
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Senate Energy and Natural Resources Committee: Sign-In Sheet

Date: 2/16/2012 Time: 9:30 am Public Hearing on SB 218-FN

SB 218-FN relative to electric renewable portfolio standards.

Name	Representing	Support	Oppose	Speaking? Yes	Speaking? No
MARK Coulson	Ho Hum Hydro Hebron	☒	☐	☒	☐
Catherine Corkery	NH Sierra Club	☐	☒	☐	☒
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Testimony

GRANITE STATE HYDROPOWER ASSOCIATION, INC.

TWO COMMERCIAL STREET
BOSCAWEN, NEW HAMPSHIRE 03303

TELEPHONE: 603-753-4577
EMAIL: gsha@essexhydro.com
WEBSITE: www.granitestatehydro.org

February 16, 2012

Hon. Bob Odell
Chairman, Senate Energy & Natural Resources Committee
State House
107 North Main Street
Concord, NH 03301

RE: Senate Bill 218-FN, Relative to Electric Renewable Portfolio Standards

Dear Chairman Odell and Members of the Committee:

On behalf of the Granite State Hydropower Association (GSHA), thank you for the opportunity to testify on Senate Bill 218-FN. As explained below, GSHA supports the Bill As Amended by Amendment 2012-0735s introduced by Senator Bradley today, specifically Sections 3 and 5 of the bill that address existing small-scale hydroelectric facilities ("Class IV").

By way of background, GSHA is a voluntary, non-profit trade association for the small-scale, independent hydropower industry in New Hampshire. Members of GSHA own, operate and manage more than 50 hydroelectric facilities located in 18 towns and cities throughout the state, totaling more than 40 megawatts (MWs) of distributed generating capacity. GSHA members are part of New Hampshire's small business community, with facilities that are 5 MWs or less and typically below 1 MW in size. Hydroelectricity is an emissions-free, renewable, reliable and locally distributed source of electricity that provides important economic, recreational, and environmental benefits to New Hampshire.

New Hampshire's small-scale hydro industry provides notable economic benefits. All GSHA members pay New Hampshire business taxes, unlike out-of-state generators. Furthermore, New Hampshire's small hydro plants (≤ 5 MW) pay an estimated $1.5 million per year in state and local property taxes and an estimated $300,000 in lease-payments for state-owned dams and water-user fees for state and federal impoundments. Although small hydro facilities are not labor-intensive, GSHA members' plants directly employ more than 50 New Hampshire residents, at an estimated payroll of approximately $3 million, and purchase an estimated $1 million per year in supplies and services from businesses statewide. Additionally, GSHA plants remove more than 50 tons of trash per year from our state's rivers, and many provide and maintain recreational facilities including boat ramps and picnic areas. GSHA members also serve an important public safety function by maintaining the infrastructure at existing dams and monitoring water-flows – tasks that would otherwise be borne by state and local government and paid for by taxpayers.

GSHA believes that the proposed changes to New Hampshire's RPS law relative to existing small-scale hydro, as set forth in SB 218-FN As Amended, will be a win-win for

New Hampshire's citizens, the electricity suppliers complying with our RPS law, and the small-scale hydro plants located throughout the state.

The proposed changes will allow small-scale hydro facilities of 1 MW or less that are interconnected with the New Hampshire electric distribution system to qualify for the state's RPS Program under Class IV (the class for existing small-scale hydro), regardless of whether or not these facilities have upstream and downstream fish passages. You may recall that our current RPS law requires all hydro facilities of 5 MWs or less to have upstream and downstream fish passages in order to be eligible for Class IV. By making the proposed modest expansion in the Class IV eligibility, more small-scale hydro facilities located in-state will qualify to generate Class IV Renewable Energy Certificates (RECs). GSHA estimates that approximately 50 in-state facilities totaling roughly 20 MWs could potentially qualify. This in turn will increase the supply of Class IV RECs and make it easier for suppliers of electricity to purchase these RECs in the marketplace. It also means that more of the money spent on Class IV RECs will go to small-scale hydro facilities right here in New Hampshire. As locally distributed generation resources, these facilities enhance local reliability and avoid certain transmission and distribution costs including line losses.

The current RPS requirement is that all hydro facilities of 5 MWs or less must have upstream and downstream fish passages in order to be eligible for Class IV. This provision was enacted in recognition of the substantial capital and operating costs of fish passages imposed on these plants, and the difficulty in recovering these costs through market prices. The practical effect of the fish passage requirement under the current law is that New Hampshire's smallest hydro facilities do not qualify for Class IV. SB 218's modest proposed changes to Class IV will allow their participation in New Hampshire's RPS program.

These smaller hydro facilities are currently struggling to sustain their operations and avoid shutting down. The risk of New Hampshire's small-scale hydro facilities shutting down is very real in today's environment. There has been a precipitous drop in wholesale electricity prices driven by historically low natural gas prices resulting from the "shale gas revolution". New Hampshire's small-scale hydro facilities are paid hourly rates that often do not exceed 3-4 ¢/kWh. In comparison, New Hampshire's existing biomass facilities are being paid significantly higher, guaranteed energy prices of approximately 7 ¢/kWh,[1] and the biomass facility in Berlin will be paid comparable energy prices[2] plus capacity and REC prices when the facility comes on-line, all as a result of ratepayer-funded contracts with PSNH. Hydro plants are capital intensive and closely regulated. The financial and regulatory burdens are especially great for small hydro plants, which do not benefit from

[1] NHPUC Docket No. DE 11-184, "Revised Master Power Purchase and Settlement Agreements," November 29, 2011. http://www.puc.state.nh.us/Regulatory/CASEFILE/2011/11-184/INITIAL%20FILING%20-%20PETITION/11-184%202011-11-29%20WOOD%20IPP'S%20REVISED%20PPA%20SETTLEMENT%20AGREEMENT.PDF

[2] NHPUC Docket No. DE 10-195, Amended and Restated Power Purchase Agreement between PSNH, Laidlaw Berlin BioPower, LLC, and Berlin Station, LLC, May 18, 2011. http://www.puc.state.nh.us/Regulatory/CASEFILE/2010/10-195/LETTERS,%20MEMOS/10-195%202011-05-18%20PSNH%20AMENDED%20AND%20RESTATED%20PPA.PDF

economies-of-scale. In the absence of a state policy that would give all New Hampshire renewable facilities an equal opportunity to earn these higher rates, it is more important than ever for New Hampshire to have an RPS policy with the refinements proposed in Senate Bill 218-FN. These refinements will help existing small-scale hydro facilities sustain their operations and continue providing economic, recreational, and environmental benefits to New Hampshire.

The proposed changes in SB 218-FN also modestly increase the annual Class IV requirement from 1.0% to 1.5%. This is needed for the important reason of keeping supply and demand for Class IV RECs in relative balance. If supply is increased (by expanding Class IV eligibility) without increasing the percentage requirement (demand), then Class IV RECs will have little to no value and the small-scale hydro facilities that sell them will not earn any revenue from them. Keeping Class IV supply and demand in relative balance helps to maintain a fair market value for Class IV RECs.

In sum, the changes proposed in SB 218-FN relative to Class IV, existing small-scale hydro facilities, will achieve the following key benefits:

- increase the supply of Class IV Renewable Energy Certificates (RECs), making it easier for suppliers of electricity to purchase these RECs in the marketplace;
- allow New Hampshire's hydro plants that are 1 MW or less, namely those struggling the most, to participate in our RPS; and
- maintain a fair market value for Class IV RECs by keeping their supply and demand relatively in-balance.

GSHA appreciates your time and consideration of this testimony and is happy to answer any questions or provide further information if needed. Thank you very much.

Sincerely,

GRANITE STATE
HYDROPOWER ASSOCIATION

Richard Norman
RAN

Richard A. Norman
President

Copies:
Members of the Committee

The State of New Hampshire
Department of Environmental Services
Thomas S. Burack, Commissioner

Celebrating 25 years of protecting New Hampshire's environment.

February 16, 2012

The Honorable Bob Odell, Chairman
Senate Energy and Natural Resources Committee
Legislative Office Building, Room 102
Concord, NH 03301

Re: SB 218-FN Relative to Renewable Energy Portfolio Standards

Dear Chairman Odell and Members of the Committee:

The Department of Environmental Services (DES) appreciates the opportunity to comment on SB 218, relative to renewable energy portfolio standards. This bill seeks to revise New Hampshire's renewable portfolio standard (RPS, codified in RSA 362-F *Electric Renewable Portfolio Standard*).

New Hampshire is one of twenty-six states to have a renewable portfolio standard. New Hampshire's RPS, RSA Chapter 362-F was passed in 2007 (House Bill 873, *An Act establishing minimum renewable standards for energy portfolios*). The RPS legislation was the result of a thorough and deliberate two year stakeholder effort involving the state's business interests, environmental organizations, utilities, renewable electricity suppliers and developers, and other energy interests. As the discussions proceeded and in the interest of the greater good, nearly every interest involved put aside specific issues and came to support the legislation without seeking to add their particular interest provisions. This widespread support was reflected in bipartisan support in the General Court, including a vote of 253 to 37 in the House of Representatives and a unanimous 24-0 vote in the Senate.

Particulate matter (PM) emissions are of growing concern to DES. Emissions from wood stoves in the southwestern portion of the state have contributed to poor air quality, resulting in public alerts being issued by DES. In the coming years, DES will be required to implement a plan to reduce PM emissions to comply with federal standards, and controlling PM emissions from wood-fired power plants may be part of that plan. The bill proposes to amend the definition of "eligible biomass technologies" by providing DES with the authority to approve an alternative emission rate to the 0.02 lbs/mmBtu rate specified in the current statute. Several existing plants are currently meeting this rate. Those that do not are still allowed to operate and generate and sell electricity; they are just not eligible to receive additional revenue from the sale of Renewable Energy Certificates (RECs). DES believes that it is reasonable to require those few facilities to upgrade their technology to meet the 0.02 lbs/mmBtu rate or to provide for PM emissions

reductions from other sources (e.g., wood stove change-outs), rather than relaxing the requirement. DES has worked with the sponsors and stakeholders to further refine the bill language, and it is DES's understanding that an amendment that DES could support will be proposed.

The bill also proposes to amend the definition of "renewable energy source" by adding "or useful thermal energy". This proposed expansion of the definition is overly broad and may encompass unintended nonrenewable energy sources. DES would welcome the opportunity to work with the sponsors and stakeholders to further refine the bill language, in order to better clarify statutory intent. In addition, the percentage requirements in the existing statute were based on renewable energy alone, and adding useful thermal energy without raising the percentages could significantly lower market prices for RECs. Impacts such as this should be carefully studied prior to implementation. In its report[1], the Public Utilities Commission (PUC) recommends, and DES supports the recommendation, to:

"Study the ways in which the RPS could be expanded to include thermal only renewable sources which do not also generate electricity or displace electric use."

The bill proposes amendments to the percentage requirements for some REC classes, namely zeroing out the Class II solar requirements and increasing the Class III existing biomass and Class IV existing small hydro requirements. The PUC conducted an extensive review of the program, including stakeholder meetings. In its report[2], the PUC recommends, and DES supports the recommendation, to:

> *"Maintain the existing class obligations in favor of policy consistency and predictability for the renewable energy industry, particularly given the inability of NH to significantly affect the regional REC market and the potential for increased rate impacts if the class obligations were to increase."*

DES supports other recommendations in the report, including ones calling for further study of various other issues. DES strongly supports the following recommendation from the report:

"Clarify the extent of the RPS obligations beyond 2025, specifically, whether or not the 2025 obligations continue indefinitely absent further legislative change."

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[1] PUC Report dated November 1, 2011
http://www.puc.nh.gov/Sustainable%20Energy/RPS/RPS%20Review%202011.pdf
[2] PUC Report dated November 1, 2011
http://www.puc.nh.gov/Sustainable%20Energy/RPS/RPS%20Review%202011.pdf

Thank you for your consideration in this matter, Should you have any questions or require further information, please contact Robert Scott, Director of the Air Resources Division (rscott@des.nh.gov, 271-1088) or Michael Fitzgerald, Administrator, Technical Services Bureau (mfitzgerald@des.nh.gov, 271-6390).

Sincerely,

Thomas S. Burack
Commissioner

cc: SB 218 sponsors
Amy Ignatius, Commissioner, Public Utilities Commission

Cost/Benefit Analysis of Thermal Renewable Energy in the NH RPS Class I

SB218 proposes a carve-out for renewable thermal energy technologies (biomass, solar, geothermal) in the NH Renewable Portfolio Standard Class I, with an increased compliance mandate of 2.6 % through 2025, phased in at 0.2% each year for 13 years, and an alternative compliance payment of $28/MWH.

Below is a summary of estimated costs and benefits of adding thermal to the RPS.

COSTS

Cost of Compliance at a projected REC market value of $14/MWH = $26,754,000 over 13 years[1]

Compliance Cost on average residential ratepayer bill[2] = $0.098 per month or $1.18 per year

BENEFITS

Reduction in imported heating oil = 47,229,000 gallons over 13 years

Retention of wealth in NH economy by investment in local economy rather than export to purchase imported fuel = $149,604,000 over 13 years

Job equivalents created by retention and circulation of avoided oil expenditures in NH economy = 1,994 jobs over 13 years

Homeowner, government and business savings on cost of heating buildings = $74,802,000 over 13 years

In addition, the incentives provided by thermal RECs will create incalculable local jobs and economic development in the biomass heating (pellet, wood chip), solar thermal and geothermal industries in New Hampshire

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[1] Because 2.6% is very small relative to total heat used in NH, assumes plentiful supply of RECs and thus REC value well below ACP value.

[2] Adds 2.6% to total compliance mandate of 23.8% by 2025. Based on average compliance cost of $0.0015/KWh from 2008-2010 (NH PUC), thermal carve-out would increase cost by $0.00016. Average homeowner bill is 600 KWh/month or 7.2 MWh/year.

Cost/Benefit Analysis of Addition of Thermal Renewable Energy to NH RPS Class I

Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	TOTALS
Class I Thermal Carve Out %	0.2	0.4	0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.6	
MWH of thermal energy (x1,000)[3]	21	42	63	84	105	126	147	168	189	210	231	252	273	**1,911,000 MWH**
Projected Cost (x$1,000) @ $14/MWH	$294	$588	$882	$1,176	$1,470	$1,764	$2,058	$2,352	$2,646	$2,940	$3,234	$3,528	$3,822	**$26,754,000 over 13 years**
Worst Case Cost with ACP (x$1,000) @ $28/MWH	$588	$1,176	$1,764	$2,352	$2,940	$3,528	$4,116	$4,704	$5,292	$5,880	$6,468	$7,056	$7,644	$53,508,000 over 13 years
REDUCED HEATING OIL (GALLONS X 1,000)[4]	519	1,038	1,557	2,076	2,595	3,114	3,633	4,152	4,671	5,190	5,709	6,228	6,747	**47,229,000 gallons**
RETENTION OF OIL EXPENDITURES IN NH ECONOMY (x$1,000)[5]	$1,644	$3,288	$4,932	$6,576	$8,220	$9,864	$11,508	$13,152	$14,796	$16,440	$18,084	$19,728	$21,372	**$149,604,000 retained in NH economy**
JOB EQUIVALENTS BY RETENTION OF OIL EXPENDITURE IN NH ECONOMY (@$75,000/JOB)	21.92	43.84	65.76	87.68	109.60	131.52	153.44	175.36	197.28	219.20	241.12	263.04	284.96	**1,994 jobs retained or created by reduces oil imports**
DIRECT SAVINGS ON HEATING BILLS TO NH HOMEOWNERS AND BUSINESSES (x$1,000)[6]	$821	$1,644	$2,466	$3,288	$4,110	$4,932	$5,754	$6,576	$7,398	$8,221	$9,042	$9,864	$10,686	**$74,802,000 total savings on heat cost**

[3] Assume 1% of REC Qualified NH load = 105,000 MWH

[4] 1 MWH = 3,412,000 btu, 1 gallon heating oil = 138,000 btu

[5] Using NH statewide average retail delivered price as of 2/20/2012 of $3.96/gallon; EIA estimates $0.80 of every $1.00 in heating oil expenditure leaves NH economy

[6] Assumes biomass, solar thermal or geothermal reduces annual heating bill by ½ (amortized capital cost plus operating cost)

NEW ENGLAND WOOD PELLET

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February 27, 2012

The Honorable Robert Odell
State House
107 North Main Street
Concord, NH 03301

Dear Senator Odell:

Attached is a summary of estimated costs and benefits associated with the addition of thermal to NH RPS Class I, based on the carve-out provision that is currently under consideration. Wherever possible, I have used very conservative assumptions. I will circulate this to your colleagues on the Senate Energy and Natural Resources Committee, and to all stakeholders. I think it makes a persuasive case that the very modest additional compliance cost is far outweighed by potential benefits to the NH economy.

Sincerely,

Charlie Niebling
General Manager
New England Wood Pellet LLC

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STATE OF NEW HAMPSHIRE
DEPARTMENT of RESOURCES and ECONOMIC DEVELOPMENT
OFFICE of the COMMISSIONER
172 Pembroke Road P.O. Box 1856 Concord, New Hampshire 03302-1856

GEORGE M. BALD
Commissioner

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george.bald@dred.state.nh.us

February 16, 2012

The Honorable Robert Odell, Chairman
Senate Energy and Natural Resources Committee
Legislative Office Building Room 102
107 N. Main Street
Concord NH 03301

Re: SB 218 – Relative to Renewable Energy Portfolio Standards.

Dear Chairman Odell and Members of the Committee:

Thank you for the opportunity to comment upon SB218. As a general concept, The Department of Resources and Economic Development is supportive of SB 218, as we believe the Renewable Portfolio Standard has a positive impact on investment in energy related projects and has contributed to job growth.

New Hampshire's continued participation in the Renewable Portfolio Standard (RPS) is a benefit to the State's economic and long-term energy needs. Data from the NH Timberland Owners Association has documented that, from its inception, over 111 million dollars in RPS related investments with over 1100 jobs have been created. Adding "useful thermal energy" to the process will provide additional opportunities for NH businesses to invest in alternative heating measures; savings from which will increase NH jobs. From our perspective, every dollar that remains in NH is one less dollar exported to energy alternatives in other states. RPS provides a means to reduce that dependency and reduce that export of hard earned dollars.

An argument has been made that NH's participation in RPS causes an increase in the cost of electricity, and can be a disincentive to business recruitment. We have not found this to be the case, particularly given that a company's decision to move or not move to New Hampshire is typically based upon a multitude of decision points. In fact New Hampshire's average business electric rates are below the average of other New England states. But in the event that energy costs are a determining factor a business will go to locations where electric rates are *significantly* less than New England's rates. We believe the benefits of a robust RPS outweigh the costs, add to the economy, and simply give our businesses more options to address their energy supply options.

We recognize that amendments may be introduced that will help to further characterize the impact and measurement of the thermal contribution. Adding some definition and metrics to the process is a preferable next step, and we look forward to working with the committee to help refine the process.

Sincerely,

George M. Bald
Commissioner

February 16, 2012

Chairman Bob Odell,
Energy and Natural Resources
Legislative Office Building

Re: SB 218 Relative to Electric Portfolio Standards

As always, thank you for the opportunity to participate in your hearing process. We are Revolution Energy. We are the largest owner of solar PV in the state of New Hampshire. We are pleased to report that since our last visit, in 2010, we hired two employees. In 2011, we have already hired an additional employee and are in the process of hiring for our fourth position to manage the educational components of our projects. We have built this growth on our innovative model to deploy renewable energy through creative financing. We are in the process of installing the first solar thermal air system deployed under our energy purchase contract ever completed in the world at Sanborn High School in Kingston NH – saving the taxpayers on fuel oil costs. Although we are not able to fully participate in the legislative process as much or as often as we would like, we are uniform in our primary comments on energy programs; sustainable programs create a sustainable economic and business environment.

Our experience in developing renewable and clean thermal energy through solar thermal air systems will benefit from the proposed thermal incentives. In fact, solar thermal air is completely emission free and is one of the most cost-effective means to provide clean, renewable heat to NH. As such, we support the policy foundations and the implementation of the thermal incentives. The inclusion of these systems in the Class I program is a creative and progressive development that we are happy to support.

The elimination of the Class II program is not, however, something that we can support. This program, supporting solar electric systems, has only truly been in effect for less than a year. Furthermore, it has already supported a delicate network of smaller businesses and systems that will be disproportionately impacted by such a drastic and sudden inclusion in Class I, resulting in its effective elimination. Although the true purpose of an incentive is to decline over time following a period of market transformation, we have only just begun to see the signs of the development of this critical distributed generation. Such a sudden change interrupts years of business development in the field.

The Class II (Solar) program provides assistance to allow businesses to plan for the deployment of solar. The interruption of this program will have a deleterious effect merely by creating an atmosphere of disruption. This disruption will suppress activity in the industry, drive business opportunities from our state, and retard the recently developed and expanding financial opportunities from private investment – these are the signs of market transformation that were just beginning to appear. Solar electric is a different form of distributed generation, it is a longer investment with the lowest of maintenance costs that has a profound stabilizing effect on electric costs, without this program, we will lose out on these opportunities.

We respectfully ask that you continue your efforts for the thermal program and that you do not change the existing programs – support the growing businesses in this state with a sustainable program.

Very truly yours,

Clay Mitchell, Esq. PhD
Revolution Energy LLC

BEFORE THE NEW HAMPSHIRE GENERAL COURT

HOUSE SCIENCE, TECHNOLOGY AND ENERGY COMMITTEE

FEBRUARY 169, 2012

TESTIMONY OF DANIEL ALLEGRETTI

ON BEHALF OF

THE RETAIL ENERGY SUPPLY ASSOCIATION

SENATE BILL 218

Good morning, my name is Daniel Allegretti. I am a Vice President for energy policy with Constellation Energy, a fortune 200 company located in Baltimore, Maryland and a licensed retail electric supplier here in New Hampshire. Today I am before you in my capacity as the New England chair of the Retail Energy Supply Association, a nonprofit organization and trade association that represents the interests of its members in regulatory and legislative proceedings in the Mid-Atlantic, Great Lakes, New York and New England regions. RESA's members include providers of competitive supply and related services throughout the five New England states that have implemented electric restructuring, including in New Hampshire.[1]

RESA opposes Senate Bill 218 in its present form. Although the bill is commendable for its attempt to simplify New Hampshire's Renewable Portfolio Standards it also raises concerns for competitive electric suppliers.

First, modifications to the existing renewable portfolio standards have a significant adverse impact on existing contractual relationships between competitive electric suppliers and their customers. This is particularly so when changes increase the overall percentage of renewable resources which must be procured and delivered, as this bill does for Calss 3 and Class 4. Unlike regulated utility companies, who can file a change to their tariff with the Public Utilities Commission at any time, competitive suppliers enter into contracts with their customers under which the price is firm for the duration of the

[1] Constellation is a RESA member company, as are ConEdison Solutions; Constellation NewEnergy, Inc.; Direct Energy Services, LLC; Energy Plus Holdings, LLC; Exelon Energy Company; GDF SUEZ Energy Resources NA, Inc.; Gexa Energy; Green Mountain Energy Company; Hess Corporation; Integrys Energy Services, Inc.; Just Energy; Liberty Power; PPL EnergyPlus; Reliant Energy Northeast LLC; and Noble Americas Energy Solutions, LLC

contract, usually several years. Suppliers are able to quote and meet a fixed price because they purchase the necessary resources under forward contracts in the wholesale market. In other words, they lock in their supply at the time they contract with their customer. Imposing higher renewable resource procurement and delivery obligations on suppliers for sales under pre-existing contracts will impose new and unrecoverable costs, engender contract disputes and put a chilling effect on the competitive retail energy market. Other states which have enacted changes to their renewable resource portfolio standards have in nearly every case "grandfathered" these pre-existing retail contracts (as well as wholesale default service supply contracts) to avoid serious market disruption and frustration of commercial expectations. This bill's failure to include appropriate grandfathering language is a major shortcoming.

Secondly, while RESA is not opposed to the introduction of thermal resources as a source of renewable energy the bill raises some implementation issues. Since the regional Generator Information System, which tracks renewable electricity production, does not at this time support thermal energy certificate trading the qualification, measurement, accounting and verification associated with these resources will require additional resources. It is also unclear how far away these resources may be located. The Committee may, therefore, wish to consider providing additional clarification, specific rulemaking authority, and possibly additional administrative resources to address these thermal resource implementation issues.

Finally, the Committee may wish to consider an effective date beginning with the 2013 compliance year, rather than from the date of passage. Since renewable resource portfolio compliance is generally done on an annual basis, starting with the 2013 calendar year will enable both suppliers and the Commission to prepare for changes effected by the bill and will reduce the number of affected retail contracts that must be grandfathered.

In conclusion, I hope the Committee will give due consideration to RESA's concerns as you move forward with consideration of this bill and if RESA may be of any assistance we invite you to call on us.

Appalachian Mountain Club

To: The Honorable Bob Odell, Chairman
Senate Energy and Natural Resources Committee

From: Susan Arnold, Vice President for Conservation

RE: SB 218, relative to electric renewable portfolio standards

Date: February 16th, 2012

Mr. Chairman and Members of the Committee:

On behalf of AMC's 10,000 members in New Hampshire, thank you for the opportunity to speak in support of SB 218, relative to renewable portfolio standards. AMC is the oldest conservation and recreation organization in the country, with 100,000 members, supporters, and advocates from Maine to Washington, DC. Our mission is to promote the protection, enjoyment, and understanding of the mountains, forests, waters, and trails of the region. For more than two decades we have conducted air quality research in the White Mountains, and are acutely aware of the negative impacts of burning fossil fuels on both the environment, and on the health of people recreating in the outdoors. We have supported New Hampshire's adoption of a renewable portfolio standard for many years, as it is an important tool for reducing the use of fossil fuels in generating electricity. We are pleased to note that SB 218 will expand the law to recognize "useful thermal generation" as another tool in NH's toolbox to achieve reductions in the use of fossil fuels.

Over the years AMC has also been involved in FERC relicensing processes for hydro-electric dams in the region, and so we'd like to comment on the addition of language in section IV(a) concerning fish passage. MW size is not always related to actual environmental impact; for example, a 1 MW or less project on a coastal stream could be quite detrimental without a fish passage requirement, whereas the same sized project in another location might have little or no impact. The determination of the need for fish passage should be biologically based, not based on a project's MW size. Current law does not require fish passage if there is not a demonstrated need for fish passage, whether the project is 1 MW or 5 MW. The Committee may want to consider thinking further about this section of the bill.

Thank you.

Main office • Five Joy Street, Boston, MA 02108-1490 617-523-0655
Pinkham Notch Visitor Center • Route 16, Box 298, Gorham, NH 03581-0298 603-466-2721
Highland Center at Crawford Notch • General Delivery, Route 302, Bretton Woods, NH 03575-9999 603-278-4453
www.outdoors.org

Amendment to SB 218-FN with Thermal Carve-Out in Class I

Amend the bill by replacing all after the enacting clause with the following:

1 Electric Renewable Portfolio Standards; Definitions; Eligible Biomass Technologies. Amend RSA 362-F:2, VIII(a) to read as follows:

(a) Has a quarterly average nitrogen oxide (NOx) emission rate of less than or equal to 0.075 pounds/million British thermal units (lbs/Mmbtu), and ***either has*** an average 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***; and

2 Definitions; Renewable Energy Source; Useful Thermal Energy. Amend RSA 362-F:2, XV to read as follows:

XV. "Renewable energy source," "renewable source," or "source" means a class I, II, III, or IV source of electricity ***or useful thermal energy*** [~~or 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.

XV-a. "Useful thermal energy" means energy 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.

3 Minimum Electric Renewable Portfolio Standards. Amend RSA 362-F:3 to read as follows:

362-F:3 Minimum Electric Renewable Portfolio Standards. For each year specified in the table below, each provider of electricity shall obtain and retire certificates sufficient in number and class type to meet or exceed the following percentages of total megawatt-hours of electricity supplied by the provider to its end-use customers that year, except to the extent that the provider makes payments to the renewable energy fund under RSA 362-F:10, II:

	2008	2009	2010	2011	2012	2013	2014	2015	2025
Class I	0.0%	0.5%	1%	2%	3%	4.2%	5.4%	6.6%	~~16~~18.6% (*)

~~[Class II 0.0% 0.0% 0.04% 0.08% 0.15% 0.2% 0.3% 0.3% 0.3%]~~

Class II 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%

~~[Class III 3.5% 4.5% 5.5% 6.5% 6.5% 6.5% 6.5% 6.5% 6.5%]~~

Class III 3.5% 4.5% 5.5% 6.5% 9.0% 9.0% 9.0% 9.0% 9.0%

~~[Class IV 0.5% 1% 1% 1% 1% 1% 1% 1% 1%]~~

Class IV 0.5% 1% 1% 1% 1% 1.5% 1.5% 1.5% 1.5%

Class I increases an additional ~~one~~ 1.2 percent per year from 2015 through 2025. A minimum percentage of the Class I totals shall be satisfied annually by the acquisition of renewable energy certificates from qualifying renewable energy technologies producing useful thermal energy as defined in 362-F:2, XV-a. The minimum percentage to be satisfied by the acquisition of renewable energy certificates from qualifying renewable energy technologies producing useful thermal energy shall be 0.2 percent in 2013, 0.4 percent in 2014, increasing annually by 0.2 percent per year from 2015 through 2025. Classes [~~II~~] ***III and*** IV remain at the same percentages from 2015 through 2025 except as provided in RSA 362-F:4, V-VI.

4 Electric Renewable Energy Classes. Amend RSA 362-F:4, I(g) through (j), II, and III to read as follows:

(g) [~~The equivalent displacement of electricity, as determined by the commission, by end-use customers, from solar hot water heating systems used instead of electric hot water heating~~] ***Solar thermal energy.***

(h) Class II sources [~~to the extent that they are not otherwise used to satisfy the minimum portfolio standards of other classes~~].

(i) The incremental new production of electricity in any year from an eligible biomass or methane source or any hydroelectric generating facility licensed or exempted by Federal Energy Regulatory Commission (FERC), regardless of gross nameplate capacity, over its historical generation baseline, provided the commission certifies demonstrable completion of capital investments attributable to the efficiency improvements, additions of capacity, or increased renewable energy output that are sufficient to, were intended to, and can be demonstrated to increase annual renewable electricity output. The determination of incremental production shall not be based on any operational changes at such facility but rather on capital investments in efficiency improvements or additions of capacity.

(j) The production of electricity from a class III or IV source that has begun operation as a new facility by demonstrating that 80 percent of its resulting tax basis of the source's plant and equipment, but not its property and intangible assets, is derived from capital investment directly related to restoring generation or increasing capacity including department permitting requirements for new plants. Such production shall not qualify for class III or IV certificates. ***Commencing July 1, 2013 a class III source eligible as a class I source under this subparagraph or subparagraph (i) may submit a notice to the commission electing to be a class III source instead of a class I source. Once such notice is given, the production from such a source shall qualify for class III certificates, provided the source meets the other requirements of a class III eligible biomass technology.***

(k) Class I facilities using eligible sources may be co-fired with fossil fuels, provided that only the renewable energy fraction of production from class I multi-fuel facilities shall be considered eligible.

II. Class II (New Solar) shall include the production of electricity from solar technologies, provided the source began operation after January 1, 2006. ***Class II technologies may be used to satisfy the minimum portfolio standards of class I.***

III. Class III (Existing Biomass/Methane) shall include the production of electricity from any of the following, provided the source began operation prior to January 1, 2006:

(a) Eligible biomass technologies having a gross nameplate capacity of 25 MWs or less.

(b) Methane gas. ***Effective for electricity production commencing July 1, 2012, methane gas shall not qualify for class III if the production is from a source which began operation prior to January 1, 2006 and which source exceeds a total gross nameplate capacity of 10 MWs in the aggregate located at any single landfill site. All phases, stages, cells, lifts, expansions, and other landfill areas shall be combined in determining the single landfill site. Only class III and potential class III eligible sources at any single landfill site shall be included in determining whether the 10 MW aggregate limitation has been exceeded.***

5 Electric Renewable Energy Classes. Amend RSA 362-F:4, IV(a) to read as follows:

IV.(a) Class IV (Existing Small Hydroelectric) shall include the production of electricity from hydroelectric energy, provided the facility*:*

(1) Began operation prior to January 1, 2006[*.*]*;*

(2) When required, has documented applicable state water quality certification pursuant to section 401 of the Clean Water Act for hydroelectric projects; and

*(3) **Either*** has a total nameplate capacity of 5 MWs or less as measured by the sum of the nameplate capacities of all the generators at the facility, ***and*** has actually installed both upstream and downstream diadromous fish passages and such installations have been approved by the Federal Energy Regulatory Commission, [~~and when required, has documented applicable state water quality certification pursuant to section 401 of the Clean Water Act for hydroelectric projects~~] ***or has a total nameplate capacity of 1 MW or less as measured by the sum of the nameplate capacities of all generators at the facility and is interconnected with an electric distribution system located in New Hampshire.***

6 Electric Renewable Energy Classes. Amend RSA 362-F:4, V to read as follows:

V. For good cause, and after notice and hearing, the commission may accelerate or delay by up to one year, any given year's incremental increase in class I [~~or II~~] renewable portfolio standards requirement under RSA 362-F:3.

7 Commission Review and Report. Amend RSA 362-F:5, IV to read as follows:

IV. Increasing the class requirements relative to [~~classes~~] ***class*** I [~~and II~~] beyond 2025;

8 Commission Review and Report. Amend RSA 362-F, VI to read as follows:

VI. The timeframe and manner in which new renewable class I [~~and II~~] sources might transition to and be treated as existing renewable sources and if appropriate, how corresponding portfolio standards of new and existing sources might be adjusted;

9 Renewable Energy Certificates. Amend RSA 362-F:6, II to read as follows:

II. The commission shall establish procedures by which electricity ***and useful thermal energy*** production not tracked by ISO-New England from customer-sited sources, including behind the meter production, may be included within the ***class I*** certificate program, provided such sources are located in New Hampshire. The procedures may include the aggregation of sources and shall be compatible with procedures of the certificate program administrator. The production shall be monitored and verified by an independent entity designated by the commission, which may include electric distribution companies.

10 New Paragraph; Renewable Energy Certificates. Amend RSA 362-F:6 by inserting after paragraph IV the following new paragraph:

V. A qualified producer of useful thermal energy shall provide for the metering of useful thermal energy produced in order to calculate the quantity of megawatt-hours for which renewable energy certificates are qualified, and to report to the public utilities commission under rules adopted pursuant to RSA 362-F:13. Monitoring, reporting, and calculating the useful thermal energy produced in each quarter shall be expressed in

megawatt-hours, where each 3,412,000 BTUs of useful thermal energy is equivalent to one megawatt-hour.

11 Renewable Energy Fund. Amend RSA 362-F:10, I and II to read as follows:

I. There is hereby established a renewable energy fund. This nonlapsing, special fund shall be continually appropriated to the commission to be expended in accordance with this section. The state treasurer shall invest the moneys deposited therein as provided by law. Income received on investments made by the state treasurer shall also be credited to the fund. All payments to be made under this section shall be deposited in the fund. The moneys paid into the fund under paragraph II of this section[~~, excluding class II moneys,~~] shall be used by the commission to support thermal and electrical renewable energy initiatives. [~~Class II moneys shall only be used to support solar energy technologies in New Hampshire.~~] All initiatives supported out of these funds shall be subject to audit by the commission as deemed necessary. All fund moneys [~~including those from class II~~] may be used to administer this chapter, but all new employee positions shall be approved by the fiscal committee of the general court.

II. In lieu of meeting the portfolio requirements of RSA 362-F:3 for a given year if, and to the extent sufficient certificates are not otherwise available at a price below the amounts specified in this paragraph, an electricity provider may, at the time of report submission for that year under RSA 362-F:8, make payment to the commission at the following rates for each megawatt-hour not met for a given class obligation through the acquisition of certificates:

(a) Class I ***and II***--$57.12; except for that portion of the Class Minimum Electric Renewable Portfolio Standards to be met by qualifying renewable energy technologies producing useful thermal energy pursuant to 362-F:3, which shall be $28.

(b) [~~Class II--$150~~.

~~(c)~~] Class III--$28.

[~~(d)~~] ***(c)*** Class IV--$28.

12 New Paragraph; Application. Amend RSA 362-F:11 by inserting after paragraph III the following new paragraph:

IV. A biomass facility otherwise meeting the eligibility requirements of class III, but which as of January 1, 2012 was not a class III eligible biomass technology due to the inability to achieve the particulate matter emissions rate specified in RSA 362-F:2, VIII(a), may consult with the department and submit a plan to meet the alternative particulate matter requirement under that paragraph. The plan shall contain reductions, in the aggregate or individually, in particulate matter emissions from other emission sources and demonstrate that the reductions will be quantifiable. The department shall expeditiously

review the plan and, if approved, provide such information it deems relevant to the commission. The application submitted under this section shall inform the commission of the plan and the commission shall certify the source in accordance with the plan approved by the department.

13 New Paragraph; Rulemaking. Amend RSA 362-F:13 by inserting after paragraph VI the following new paragraph:

VI-a. Adopt procedures for the metering, verification, and reporting of useful thermal energy output.

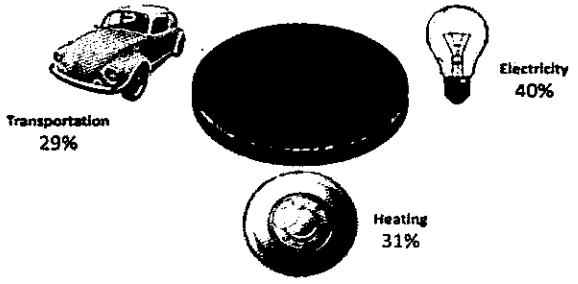
14 New Section; Economic Benefits Retention. Amend RSA 362-F by inserting after section 13 the following new section:

362-F:14 Economic Benefits Retention. The commission shall, in all decisions affecting class III biomass technologies or class III standards, consider job loss and job retention, forestry economic impacts in the region and the state, and certificate production from class III eligible and potentially eligible biomass technologies. The proposed action shall aid job retention, forestry economic benefits, and certificate demand, given the certificate supply potential from these technologies.

15 Effective Date. This act shall take effect upon its passage.

New Hampshire's Opportunity to achieve its Renewable Energy Goals: A Technology-Neutral Renewable Portfolio Standard that Awards Both Electric and Thermal Renewable Energy Credits

- ✓ **Thermal (heating) is a major component of national energy consumption, but largely ignored in national energy policy** (**National Average Energy Use by Sector**, source: 2010 US Energy Information Administration)



- ✓ **Together, electricity and thermal account for 66% of NH energy consumption** (**New Hampshire Energy Consumption by Sector**, source: 2008 NH Office of Energy and Planning)

Electricity	118 TBtu (38% of total)
Transportation	106 TBtu (34% of total)
Thermal	87 TBtu (28% of total)

(TBtu = Trillions of British Thermal Units)

- ✓ **New Hampshire is heavily dependent on non-renewable, imported fossil fuels to provide our thermal energy needs – space heating, domestic hot water, and industrial process heat** (**New Hampshire *Renewable Energy* Consumption by Sector**, source: 2008 NH Office of Energy and Planning)

Renewable Thermal:	**3.8 TBtu (4.4%)** Biomass =3.8 TBtu, Geothermal =.02 TBtu, Solar is indeterminable
***Non-renewable* Thermal:**	**83.2 TBtu (95.6%)** Primarily heating oil, propane, natural gas

- ✓ **NH citizens and businesses spend over $1 Billion annually on heating oil and propane, nearly 80% of which flows out of our economy. Incentives for renewable thermal energy technologies will help to retain this wealth in the NH economy** (source: 2011 US Census data; analysis by FutureMetrics). The amount that does not stay in the state is based on EIA estimates of the components of heating oil costs. In 2007 (the most recent data available at time of analysis) 62% of the cost of a gallon was from the cost of crude and 16% of the cost was from refining. The remaining 22% is for regional and local distribution costs and profits. Thus 78% of every dollar spent on heating oil leaves the state.

Number of NH Households and Businesses That Use Heating Oil	Average Gallons of Heating Oil Used Per Year In NH	Average Total Expenditure Per Year (#2 at $3.65/gal)	Amount That Does Not Stay In The State (Exported)
409,000	278,342,000	$1,056,586,232	$792,439,674

✓ **The RPS represents a simple policy platform to provide modest incentives for thermal renewable energy**

Both electricity and thermal energy can be measured in Megawatt Hours. Useful thermal energy from biomass, solar and geothermal can be measured and verified using heat meters. The PUC can certify this energy output for renewable energy certificates. These certificates have value in the REC market that could provide a modest financial incentive to encourage renewable thermal energy.

RPS Example: If renewable heating technologies qualify for RECs under Class I, the following scenario is possible. Class I RECs have been trading at around $20/MWh. A renewable energy heating system producing 500 MWh/year (e.g. a 250 kW biomass boiler operating 2,000 hours at full capacity) would qualify for 500 RECs annually. This revenue would help to overcome the comparatively high capital cost of these advanced technologies (e.g. $150-200K for a 250 kW boiler). Adding the value of thermal RECs to already robust fuel cost savings would encourage the use of renewable biomass in thousands of buildings.

✓ **Adding thermal to RPS Class I, with a low ACP of $28, combined with rolling Class II (solar PV) with its high ACP of over $163 into Class I (as proposed in SB218) will save ratepayers up to $11 million through 2025**

✓ **NH could displace our demand for heating oil and propane by at least 18.5% utilizing sustainably sourced wood and agricultural biomass alone, thus retaining over $250 million annually in our economy, and creating/retaining up to 6,500 jobs** (2011 Futuremetrics Analysis)

✓ **Many other states have added or are considering adding thermal to their state RPS programs: MA, VT, WI, AZ, IA, NC, OH**

✓ **The time is right for New Hampshire to add thermal renewable energy to its RPS program**

Contact:

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NHTOA 1911 2011

Celebrating 100 years of New Hampshire's working forests

February 16, 2012

Senator Bob Odell, Chairman
Senate Energy and Natural Resources Committee
Legislative Office Building
Concord, NH 03301

RE: Senate Bill 218; *AN ACT relative to electric renewable portfolio standards.*

Dear Chairman Odell and members of the Committee:

The New Hampshire Timberland Owners Association would like to thank you for the opportunity to speak in support of Senate Bill 218; *AN ACT relative to electric renewable portfolio standards* and Senator Bradley's amendment.

Founded in 1911, the New Hampshire Timberland Owners Association (NHTOA) is a membership organization representing New Hampshire's timberland owners and all aspects of the forest products industry. The NHTOA's interest in SB 218 comes from our member's involvement in New Hampshire's electric renewable portfolio standard law (RPS). NHTOA members grow, harvest and convert biomass (wood chips) into electricity and heat and in recent years more members have begun pursuing wind power projects on their property.

The NHTOA believes Senate Bill 218 makes several much needed modifications to New Hampshire's RPS law. We believe these modifications will strengthen the law by making it simpler, correcting a couple unintended oversights in the original law while supporting the original premise of the RPS which is support the retention of existing renewable power generation and provide incentives for the development of new renewable energy projects.

New Hampshire's RPS law is a great example of where utility policy intersects with natural resource management policy and rural economic development. In preparation for this hearing I, in conjunction with members of the Granite State Hydropower Association and a wind development company quantified the economic benefits New Hampshire's RPS law provides the state. I am attaching data gathered from the New Hampshire Department of Resources and Economic Development, New Hampshire Department of Revenue Administration, one-on-one interviews with the companies producing the power and supplying the fuel to demonstrate the direct economic impact. On an annual basis the direct economic impact New Hampshire's RPS law currently generates is just over $111 million. Looking forward, I

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pulled the Site Evaluation Commission filings for the 5 renewable power projects in the planning stage. This data shows the creation of an additional 785 short-term construction jobs, 460 long-term permanent jobs and $2.9 million in local property taxes paid. In calculating these figures I was careful to only include direct benefits. This data does not include indirect benefits our communities glean from the circulation of the $111 million in their economy. Depending on which economist you speak with it could be argued an additional 180 to 300 percent could be added to this figure to capture the total economic activity.

In addition to the economic benefits to New Hampshire's residents and communities the low-grade wood markets this law supports are also critical to the state's timberland owners and forestry businesses. Strong low-grade wood markets are necessary for the ability to manage timberland in an economic manner. These markets provide a home for the timber that is weeded out of timber stands that is malformed or otherwise not merchantable as saw timber. Which according to the United States Forest Services Forest Inventory Analysis as much as two-thirds of New Hampshire's standing timber is considered "low-grade".

For these reasons we are speaking in support or Senator Bradley's amendment to Senate Bill 218.

Sincerely,

Jasen A. Stock
Executive Director

Attch.

2012 Renewable Portfolio Standard - White Paper

February 13, 2012

Background

Since 2007 New Hampshire has had a Renewable Portfolio Standard law (RPS). This law requires each supplier of electricity (i.e, regulated utilities and competitive suppliers) to obtain renewable energy certificates (RECs) for a certain percentage of the power they supply to New Hampshire customers. A REC, issued by ISO New England Generation Information System, represents the renewable attributes associated with one MWh (1,000 kWh) of power generation from renewable sources of energy. The revenue from the sale of RECs goes to the owner of the renewable power plant. In lieu of purchasing a REC, an electricity supplier can make an Alternative Compliance Payment (ACP) into a fund dedicated to supporting renewable energy initiatives in New Hampshire. During the 3-year period 2008-2010, the total cost to comply with New Hampshire's RPS averaged $0.0015 per kilowatt-hour or $0.75/household/month. ("2011 Renewable Portfolio Standard Review," NHPUC, 11/1/11)

Twenty-nine States plus DC and PR have RPS (all New England states either have an RPS or renewable energy goals). In New Hampshire, 84 percent of the electricity produced (2008 data) comes from non-renewable fuels: coal, natural gas, oil, & nuclear. The remaining 16 percent of the electricity produced comes from the following renewable fuels:

- Biomass (2.7%)
- Hydro less than 5 MegaWatts (MW) (1.2%)
- Hydro between 5 MW and 30 MW (2.2%)
- Hydro greater than 30 MW (3.2%)
- Landfill gas (0.3%); Municipal solid waste (0.4%)

Current renewable power projects in New Hampshire;

- 7 biomass power plants (6 privately owned merchant facilities and one facility owned by PSNH) producing 120 MW of electricity.

- 75 FERC-regulated small hydroelectric power projects of 5 MWs or less producing about 80 MW of electricity,

- 1 operating wind farm producing 24 MW of electricity, and

- Over 600 residential/commercial solar power projects producing just over 2 MW of electricity.

In addition to these projects there are three wind energy and two biomass power projects in the construction phase and numerous residential/commercial solar energy projects under construction.

Direct Benefits of NH's RPS

Economic (2010 data)

Local economic activity and employment

$71.8 million into the NH economy through the purchase of fuel (wood chips) and the use of local vendors.

- NH's 7 biomass power plants purchase approximately $46.8 million (1.8 million tons) of wood chips from local loggers and landowners.
- The power plants directly employ 150 people with an annual payroll of $15.6 million.
- The logging companies producing the wood chips employ over 300 people with an annual payroll of more than $9 million and purchase over $18 million in goods and services from local businesses.
- NH's small hydroelectric facilities employ more than 50 people with an annual payroll of $3 million and purchase an estimated $1 million in goods and services from local businesses.
- NH's solar power rebate program continues to create economic activity for hundreds of electrical contractors and system installers.
- New Hampshire's wind energy industry spends approximately $75,000 each year in goods and services from local businesses and currently has an annual payroll of approximately $250,000.

Local and Statewide taxes

$6.8 million goes to local municipalities and state agencies each year in the form of taxes and fees.

- NH's 7 biomass power plants paid $991,000 in local property taxes in 2010
- The 6 independent biomass power plants paid $193,866 in statewide utility property taxes and $354,256 in emission fees in 2010.
- Biomass harvesting occurs statewide. In 2010, of the states 234 incorporated towns and unincorporated places, 212 received timber tax from 1,296 biomass harvests and the logging companies producing the wood chips paid over $3 million in timber tax, vehicle registrations and other local and state taxes.
- NH's small hydroelectric projects (those under 5 MWs) paid approximately $360,000 in statewide utility property taxes and over $1 million in local property taxes.
- NH's small hydroelectric projects pay approximately $300,000 per year in lease payments to NH's dam maintenance fund (increasing the safety of all state-owned dams) and in "water user fees" to the state.
- New Hampshire's wind energy industry pays approximately $345,000 in statewide utility property taxes and over $700,000 in local property taxes.

Indirect Benefits of NH's RPS

Land Use/Environmental

- Approximately two-thirds of New Hampshire's snowmobile trails occur on logging roads. The snowmobile industry generates $1.15 billion in annual economic activity. (N.H. Department of Resources and Economic Development, Trails Bureau and New Hampshire Snowmobile Association)

- Wood chip harvesting is a critical component of NH's entire forest products industry. Disruptions of the biomass market will negatively impact the state's entire log and timber markets. The annual value of shipments from these markets (paper and lumber) is $974 million. (Northeast State Foresters Association, "Economic Importance of NH Forests", 2011)

- Wood chip harvesting is an important tool for habitat management for game and non-game species. Hunting, fishing and wildlife viewing generates $560 million in annual economic activity. (U.S. Department of the Interior, Fish and Wildlife Service, and U.S. Department of Commerce, U.S. Census Bureau. 2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation)

- Wood chip harvesting is used by New Hampshire's largest water utilities on their watershed land to enhance water quality and quantity. (Manchester, Pennichuck, etc.)

- Wood chip harvesting is an important forestry tool used to enhance forest health by removing dead and diseased timber and timber impacted by invasive species (e.g. timber damaged by ice storms or the October Nor'easter, trees infested with the Asian long-horn beetle). Forest-related tourism (camping, hiking and foliage viewing) annually generates $850 million in economic activity in New Hampshire. (Northeast State Foresters Association, "Economic Importance of NH Forests", 2011)

- Annually, small scale hydroelectric power projects remove more than 50 tons of trash from the rivers, and many provide and maintain recreational facilities including boat ramps, portage facilities and picnic areas, all contributing to New Hampshire's tourism industry.

Policy/Energy Security

- Keeps New Hampshire's energy dollars in our local communities by reducing our dependence on imported fuels and energy,

- Encourages electricity production from cleaner energy sources,

- Provides fuel diversity to NH's electricity industry, a hedge against volatile energy costs

- Encourage development of new and maintains existing renewable energy facilities,

RPS Statewide Economic Benefits

2/13/2012

Local Economic Activity Current Industry and Projects				
	Fuel (wood chip) Purchases	Payments to Local Vendors	Payroll	
Biomass**	$46,800,000	$6,000,000	$15,650,000	
biomass producers*		$18,000,000	$9,281,000	
Small-scale hydro	$0	$1,000,000	$3,000,000	
Wind	$0	$3,045,000	$520,000	
Total	**$46,800,000**	**$28,045,000**	**$28,451,000**	**$103,296,000**

Taxes and Fees				
	local taxes**	statewide utility (DRA data)	other state and fed. taxes/fees**	
Biomass	$991,790	$193,866	$354,256	
biomass producers	$405,722	$0	$2,642,880	
Wind	$1,195,000	$345,000	$0	
Small-scale hydro	$1,000,000	$360,000	$300,000	
Total	**$3,592,512**	**$898,866**	**$3,297,136**	**$7,788,514**

Total local economic activity and taxes/fees collected **$111,084,514**

** Data based on estimates developed through surveys of actual power plants and logging companies

* This is a very conservative estimate as this figures is based on a survey of 20 individual logging companies

Local Economic Activity Upcoming Projects			
	Facility Construction Jobs	Long-term Jobs	Local Taxes
Biomass (Laidlaw and Concord Steam)	470	55	$1,560,000
biomass producers and vendors	0	300	
Wind (3 projects)	315	15	$1,373,500
vendors		90	
Total	**785**	**460**	**$2,933,500**

Total Jobs **1245**

NEW ENGLAND WOOD PELLET

Pride in Every Pellet.™

February 16, 2012

The Honorable Robert Odell
Chair, Energy and Natural Resources Committee
Room 102 Legislative Office Building
Concord NH 03301

RE: SB218, AN ACT relative to electric renewable portfolio standards

Dear Senator Odell and Members of the Committee:

New England Wood Pellet is supportive of Senate Bill 218.

New England Wood Pellet is a NH-based manufacturer of wood pellet fuel, with a plant in Jaffrey and two in New York State. We employ 85 people and our renewable heating fuel annually displaces the equivalent of 32 million gallons of heating oil.

We support a role for state government in setting aggressive renewable energy targets and establishing the structure and incentives to meet these requirements. American energy policy has for over a century been heavily biased in favor of fossil and non-renewable energy through mandates, tax and regulatory policies that annually cost ratepayers and taxpayers billions, and NH residents some $66 million annually (Taxpayers for Common Sense). The RPS helps to level the playing field, at very modest near-term cost to NH ratepayers, and with long-term benefit for NH's economy, environment and energy security.

However, an RPS that focuses on only one renewable energy pathway – electricity – creates unfair and mostly unintended consequences for other energy pathways, notably heat energy. Our company competes for a wood biomass resource with the biomass electric industry that is heavily subsidized (both state and federal policy) to make electric energy with that resource. Yet with our renewable heating fuel we achieve all the public policy objectives of the RPS. We pay more for wood, and thus our customers pay more for heating fuel, because we compete in a marketplace heavily influenced by the existence of RPS incentives. **We support continuation of RPS incentives for the biomass electric industry in NH but only if equivalent policy treatment is extended through the RPS to include thermal renewable energy**.

(over)

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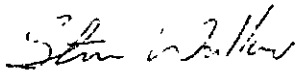
Among a number of modest reforms being proposed to the RPS, SB218 explicitly qualifies renewable thermal energy technologies for inclusion in the RPS. I have attached a two-page fact sheet to this testimony that articulates the need for and mechanism to extend the RPS to include thermal renewable energy. NH is not alone among states in considering the inclusion of heat energy in their RPS objectives; at least eleven states have already done this or are considering modifications to their RPS program to include thermal in a more technology/fuel neutral energy platform.

NH is second only to Maine among states in its dependence on oil for heating. NH residents annually export over $1 billion in wealth for imported fossil heating fuels. This is a serious issue of job loss, energy security and social cost that deserves greater attention our elected officials.

We would like to recommend a further improvement to the bill, whereby the Class I percentage mandate is increased to accommodate the addition of thermal technologies, and this increase is explicitly earmarked for thermal – a so-called "thermal carve-out". In fact, the additional cost associated with this is less than the avoided cost of rolling Class II (solar PV) with its very high cost ACP, into Class I. **Thus, our proposal actually results in a net decrease in ratepayer cost when combined with the merger of Class I and II.**

To summarize, we favor reforming the RPS to be more cost effective and less technology-biased in achieving the renewable energy goals that are important to New Hampshire's economic and environmental health and well-being. A key provision worthy of further exploration is the inclusion of thermal energy such as is proposed in SB218.

Sincerely,



Steven J. Walker
President and CEO
New England Wood Pellet
603 532 4666
swalker@pelletheat.com

DATE: February 16, 2012

TO: NH Senate – Energy and Natural Resources Committee

FROM: Ted Vansant, Director Project Development, RGS Energy

RE: Testimony in opposition to Senate Bill 218-FN

I am a New Hampshire resident and for the past 12 years have been employed in the solar industry. I work with businesses and institutions across New England to help them develop solar projects. The company I work for, Real Goods Solar, employs over 400 people across the U.S., has installed more than 12,000 systems for a total of 80MW of solar electricity.

SUMMARY

I am opposed to the proposed changes to the NH RPS under Senate Bill 218 because:

1) Changes to the RPS signal an uncertain investment environment for renewable energy investors who are helping fuel the growth of the solar industry and the resulting jobs.
2) The bill proposes to remove Class II solar as a renewable energy source and combine it into Class I with other technologies. The reason that Class II solar has a higher value in the current NH RPS is to accelerate development of solar and push it down the cost curve. Both of these are happening today, why would we want to change that?
3) These changes will reduce the value of Solar Renewable Energy Credits (RECs). Any reduction in incentives will push solar businesses (and their jobs) out of the state.

BACKGROUND

Solar Energy systems have the greatest potential for producing a significant portion of our energy needs in state from renewable sources. Solar is one of, if not the, most appropriate renewable energy technologies for the state of New Hampshire for the following reasons:

- Systems are easily deployable on rooftops of buildings or on the ground.
- There is little permitting needed for local or state approvals
    - No emissions
    - No view shed issues
    - No environmental impact
- Minimal tests or studies are needed to determine if a project is feasible. This allows solar projects to be built quickly and efficiently.
- There is plenty of sunshine in NH to justify the investment
- Solar Energy is scalable, a project can be easily built on a single residence while the same technology can be used to build a utility scale solar power plant.
- Solar power systems allow homeowners, businesses and institutions to buy their power at a fixed rate for the next 25+ years. This predictability allows for sound financial planning and can make our state attractive to businesses, fueling more jobs in our state.

In an economy plagued by high unemployment and slow growth, the solar industry is experiencing continual growth with an optimistic future. A recent jobs census shows that the solar industry employs more than 100,000 Americans, double the number since 2009. The solar industry is made up of 5,000 American companies, most of which are small businesses. The solar industry in the U.S. increased its workforce by 6.8% from August 2010 to August 2011, a growth of nearly ten times faster than the overall economy. More good news is that the U.S. is actually a net exporter of solar products. This means that we export more than we import, even to China. New Hampshire is home to at least one manufacturer, GT Solar in Merrimack.

RENEWABLE ENERGY INVESTMENT

The trend in ownership for solar energy projects has moved from outright purchase to financing. Across the U.S. homeowners, businesses and institutions are either borrowing or leasing or in most cases purchasing the energy generated by the system from a 3rd party owner through a Power Purchase Agreement (PPA). A PPA allows a homeowner, a school or a business to generate power from their land or rooftop without paying any money for the equipment. They simply purchase the power that is generated by the system at a fixed rate, almost always saving them money in the short and long term.

Solar energy systems are robust and typically have a 25+ year service life with a track record of producing the energy that it was designed to produce with very low maintenance costs. The prevalence of investors and banks now financing the solar industry speaks to the credibility of the technology. We are now "bankable". This financing has allowed for the tremendous growth of the solar industry over the past few years and the resultant jobs that come with this growth.

The reason that solar financing is relevant to a discussion about changing the NH RPS is that we need financial institutions to invest in New Hampshire solar projects and solar companies to help create jobs here in our state. The greatest growth in the solar industry is in states where there is a solid RPS and associated solar "carve out" and incentive program that help make investment in solar attractive. If investors fear that a state's RPS can change at the stroke of a pen or every 2 years they will stay away from that state because of the uncertainty.

RETAIN CLASS II RENEWABLE ENERGY SOURCE

The current proposal in SB218 to remove Class II as a Renewable Energy Source is just this kind of uncertainty that will push investors away from our state.

Other states in the US and other countries that have a solar "carve out" or higher incentive for solar energy are reaping the benefits of a booming solar industry. By combining Class I and Class II sources, SB 218 reduces the potential $ value of a NH Solar REC from $150 to $57.12, a 62% drop. A drop in REC values of any amount will make it so that solar projects are not financeable in New Hampshire and solar businesses will be forced to move to our neighboring states with more favorable solar incentives.

The states with the most robust solar industries place higher values on solar generated credits, similar to our current RPS. These solar "carve outs" have encouraged investment and jobs in those states, both by the growth of existing in state companies as well as getting companies from outside the state to move in, hire people and create new business in the state. The solar industry in these states, including MA, VT, CT, RI, NJ is growing fast and they are creating and retaining solar jobs.

For the past decade, New Hampshire has lagged behind our neighboring states in creating solar jobs and a robust solar industry. The New Hampshire RPS, established in 2007 has helped to increase solar jobs and the establishment of new businesses over the past few years in the state. We are heading in the right direction. If enacted into law, Senate Bill 218 would most certainly drive solar jobs out of the state of New Hampshire.

This is a booming,booming industry and there are significant investments being made in the industry. With the right incentives and a pro-solar approach, NH could attract these investments and become the home of new manufacturers, installers, developers, and jobs.

Thank you for your consideration of my comments.

Data from NHPUC RPS Report - Nov 2011				
Utilities	**2008**	**2009**	**2010**	**Total**
Sales - MWh	9,988,926	8,377,043	7,556,408	25,922,377
RPS Obligation - MWh	399,557	506,825	569,753	1,476,135
RPS Cost (RECs)	6,196,784	12,362,463	11,889,852	30,449,099
RPS Cost (ACP)	4,286,560	951,598	301,179	5,539,337
Total RPS Cost	10,483,344	13,314,061	12,191,031	35,988,436
Avg RPS Cost ($/MWh)	26.24	26.27	21.40	24.38
Suppliers	**2008**	**2009**	**2010**	**Total**
Sales - MWh	561,615	1,755,143	3,075,349	5,392,107
RPS Obligation - MWh	22,465	105,309	231,881	359,655
RPS Cost (RECs)	455,093	2,830,679	3,646,668	6,932,440
RPS Cost (ACP)	192,818	396,691	2,334,399	2,923,908
Total RPS Cost	647,911	3,227,370	5,981,067	9,856,348
Avg RPS Cost ($/MWh)	28.84	30.65	25.79	27.41
Utility Savings ($/MWh)	2.60	4.38	4.40	3.02

Calendar Year	Class I	Class II	Class III	Class IV	NH Total Sales (MWh)	Portion Served by Suppliers (MWh)	Supplier REC Obligation	Savings	Cumulative Savings
2008	0.00%	0.00%	3.50%	0.50%	10,550,541	561,615	22,465	58,487	58,487
2009	0.50%	0.00%	4.50%	1.00%	10,132,186	1,755,143	105,309	460,951	519,438
2010	1.00%	0.04%	5.50%	1.00%	10,631,757	3,075,349	231,881	1,019,499	1,538,937
2011	2.00%	0.08%	6.50%	1.00%	10,791,233	4,316,493	413,520	1,250,827	2,789,764
2012	3.00%	0.15%	6.50%	1.00%	10,953,102	4,381,241	466,602	1,411,391	4,201,155
2013	4.00%	0.20%	6.50%	1.00%	11,117,398	4,446,959	520,294	1,573,801	5,774,956
2014	5.00%	0.30%	6.50%	1.00%	11,284,159	4,513,664	577,749	1,747,591	7,522,547
2015	6.00%	0.30%	6.50%	1.00%	11,453,422	4,581,369	632,229	1,912,384	9,434,931
2016	7.00%	0.30%	6.50%	1.00%	11,625,223	4,650,089	688,213	2,081,727	11,516,658
2017	8.00%	0.30%	6.50%	1.00%	11,799,601	4,719,841	745,735	2,255,720	13,772,378
2018	9.00%	0.30%	6.50%	1.00%	11,976,595	4,790,638	804,827	2,434,464	16,206,842
2019	10.00%	0.30%	6.50%	1.00%	12,156,244	4,862,498	865,525	2,618,063	18,824,905
2020	11.00%	0.30%	6.50%	1.00%	12,338,588	4,935,435	927,862	2,806,623	21,631,528
2021	12.00%	0.30%	6.50%	1.00%	12,523,667	5,009,467	991,874	3,000,250	24,631,777
2022	13.00%	0.30%	6.50%	1.00%	12,711,522	5,084,609	1,057,599	3,199,054	27,830,832
2023	14.00%	0.30%	6.50%	1.00%	12,902,195	5,160,878	1,125,071	3,403,148	31,233,979
2024	15.00%	0.30%	6.50%	1.00%	13,095,728	5,238,291	1,194,330	3,612,644	34,846,624
2025	16.00%	0.30%	6.50%	1.00%	13,292,164	5,316,865	1,265,414	3,827,660	38,674,283

Notes:

1/ - NH Total Sales is actual thru 2010 and escalated at 1.5% thereafter

2/ - Portion served by Suppliers is estimated at 40% in all years

3/ - Savings is actual 2008 - 2010 and estimated thereafter using average (see Note 4)

4/ - Average REC savings of $3.02 based on actual 2008 - 2010 data (NHPUC RPS Report, Nov 2011)

Sen. Bradley, Dist. 3
February 13, 2012
2012-0735s
06/10

Work Session draft 2-22-12

Amendment to SB 218-FN

Amend the bill by replacing all after the enacting clause with the following:

1 Electric Renewable Portfolio Standards; Definitions; Eligible Biomass Technologies. Amend RSA 362-F:2, VIII(a) to read as follows:

(a) Has a quarterly average nitrogen oxide (NOx) emission rate of less than or equal to 0.075 pounds/million British thermal units (lbs/Mmbtu), and ***either has*** an average 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***; and

2 Definitions; Renewable Energy Source; Useful Thermal Energy. Amend RSA 362-F:2, ***XIV and XV*** to read as follows:

XIV. "Provider of electricity" means a distribution company providing default service, ***a non-residential customer meeting its retail load through direct purchases from the wholesale electricity market,*** or an electricity supplier as defined in RSA 374-F:2, II, but does not include municipal suppliers.

XV. "Renewable energy source," "renewable source," or "source" means a class I, II, III, or IV source of electricity ***or useful thermal energy*** ~~[or 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.

XV-a. "Useful thermal energy" means energy 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.

3 Minimum Electric Renewable Portfolio Standards. Amend RSA 362-F:3 to read as follows:

362-F:3 Minimum Electric Renewable Portfolio Standards. For each year specified in the table below, each provider of electricity shall obtain and retire certificates sufficient in number and class type to meet or exceed the following percentages of total megawatt-hours of electricity supplied by the provider to its end-use customers that year, except to the extent that the provider makes payments to the renewable energy fund under RSA 362-F:10, II:

	2008	2009	2010	2011	2012	2013	2014	2015	2025
Class I	0.0%	0.5%	1%	2%	3%	4.2%	5.4%	6.6%	~~18.6%~~ (*)
~~[Class II~~	~~0.0%~~	~~0.0%~~	~~0.04%~~	~~0.08%~~	~~0.15%~~	~~0.2%~~	~~0.3%~~	~~0.3%~~	~~0.3%]~~

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Class II	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
~~[Class III~~	~~3.5%~~	~~4.5%~~	~~5.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%]~~
Class III	*3.5%*	*4.5%*	*5.5%*	*6.5%*	*6.5%*	*9.0%*	*9.0%*	*9.0%*	*9.0%*
~~[Class IV~~	~~0.5%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%]~~
Class IV	*0.5%*	*1%*	*1%*	*1%*	*1%*	*1.5%*	*1.5%*	*1.5%*	*1.5%*

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Class I increases an additional one ~~and two-tenths~~ percent per year from 2015 through 2025. *A minimum percentage of the Class I totals shall be satisfied annually by the acquisition of renewable energy certificates from qualifying renewable energy technologies producing useful thermal energy as defined in 362-F:2, XV-a. The minimum percentage to be satisfied by the acquisition of renewable energy certificates from qualifying renewable energy technologies producing useful thermal energy shall be 0.2 percent in 2013, 0.4 percent in 2014, increasing annually by 0.2 percent per year from 2015 through 20-25.* Classes ~~[II-]~~ *III and* IV remain at the same percentages from 2015 through 2025 except as provided in RSA 362-F:4, V-VI.

4 Electric Renewable Energy Classes. Amend RSA 362-F:4, I(g) through (j), II, and III to read as follows:

(g) ~~[The equivalent displacement of electricity, as determined by the commission, by end-use customers, from solar hot water heating systems used instead of electric hot water heating]~~ *Solar thermal energy.*

(h) Class II sources ~~[to the extent that they are not otherwise used to satisfy the minimum portfolio standards of other classes]~~.

(i) The incremental new production of electricity in any year from an eligible biomass or methane source or any hydroelectric generating facility licensed or exempted by Federal Energy Regulatory Commission (FERC), regardless of gross nameplate capacity, over its historical generation baseline, provided the commission certifies demonstrable completion of capital investments attributable to the efficiency improvements, additions of capacity, or increased renewable energy output that are sufficient to, were intended to, and can be demonstrated to increase annual renewable electricity output. The determination of incremental production shall not be based on any operational changes at such facility but rather on capital investments in efficiency improvements or additions of capacity.

(j) The production of electricity from a class III or IV source that has begun operation as a new facility by demonstrating that 80 percent of its resulting tax basis of the source's plant and equipment, but not its property and intangible assets, is derived from capital investment directly related to restoring generation or increasing capacity including department permitting requirements for new plants. Such production shall not qualify for class III or IV certificates. *Commencing July 1, 2013 a class III source eligible as a class I source under this subparagraph or subparagraph (i) may submit a notice to the commission electing to be a class III source instead of a class I source. Once such notice is given, the production from such a source shall qualify for class III certificates, provided the source meets the other requirements of a class III eligible biomass technology.*

(k) Class I facilities using eligible sources may be co-fired with fossil fuels, provided that only the renewable energy fraction of production from class I multi-fuel facilities shall be considered eligible.

II. Class II (New Solar) shall include the production of electricity from solar technologies, provided the source began operation after January 1, 2006. ***Class II technologies may be used to satisfy the minimum portfolio standards of class I.***

III. Class III (Existing Biomass/Methane) shall include the production of electricity from any of the following, provided the source began operation prior to January 1, 2006:

(a) Eligible biomass technologies having a gross nameplate capacity of 25 MWs or less.

(b) Methane gas. ***Effective for electricity production commencing January 1, 2013, methane gas shall not qualify for class III if the production is from a source which began operation prior to January 1, 2006 and which source exceeds a total gross nameplate capacity of 10 MWs in the aggregate located at any single landfill site. All phases, stages, cells, lifts, expansions, and other landfill areas shall be combined in determining the single landfill site. Only class III and potential class III eligible sources at any single landfill site shall be included in determining whether the 10 MW aggregate limitation has been exceeded.***

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5 Electric Renewable Energy Classes. Amend RSA 362-F:4, IV(a) to read as follows:

IV.(a) Class IV (Existing Small Hydroelectric) shall include the production of electricity from hydroelectric energy, provided the facility*:*

(1) Began operation prior to January 1, 2006[*.*]*;*

(2) When required, has documented applicable state water quality certification pursuant to section 401 of the Clean Water Act for hydroelectric projects; and

(3) Either has a total nameplate capacity of 5 MWs or less as measured by the sum of the nameplate capacities of all the generators at the facility, *and* has actually installed both upstream and downstream diadromous fish passages and such installations have been approved by the Federal Energy Regulatory Commission, [~~and when required, has documented applicable state water quality certification pursuant to section 401 of the Clean Water Act for hydroelectric projects~~] ***or has a total nameplate capacity of 1 MW or less as measured by the sum of the nameplate capacities of all generators at the facility and is interconnected with an electric distribution system located in New Hampshire.***

6 Electric Renewable Energy Classes. Amend RSA 362-F:4, V to read as follows:

V. For good cause, and after notice and hearing, the commission may accelerate or delay by up to one year, any given year's incremental increase in class I [~~or II~~] renewable portfolio standards requirement under RSA 362-F:3.

7 Commission Review and Report. Amend RSA 362-F:5, IV to read as follows:

IV. Increasing the class requirements relative to [~~classes~~] ***class*** I [~~and II~~] beyond 2025;

8 Commission Review and Report. Amend RSA 362-F:5, VI to read as follows:

VI. The timeframe and manner in which new renewable class I [~~and II~~] sources might transition to and be treated as existing renewable sources and if appropriate, how corresponding portfolio standards of new and existing sources might be adjusted;

9 Renewable Energy Certificates. Amend RSA 362-F:6, II to read as follows:

II. The commission shall establish procedures by which electricity ***and useful thermal energy*** production not tracked by ISO-New England from customer-sited sources, including behind the meter production, may be included within the ***class I*** certificate program, provided such sources are located in New Hampshire. The procedures may include the aggregation of sources and shall be compatible with procedures of the certificate program administrator. The production shall be monitored and verified by an independent entity designated by the commission, which may include electric distribution companies.

10 New Paragraph; Renewable Energy Certificates. Amend RSA 362-F:6 by inserting after paragraph IV the following new paragraph:

11 Sale, Exchange, and Use of Certificates. Amend RSA 362-F:7, I to read as follows:

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. A certificate may only be used once for compliance with the requirements of this chapter. It may not be used for compliance with this chapter if it has been or will be used for compliance with any similar requirements of another non-federal jurisdiction or otherwise sold, retired, claimed, or represented as part of any other electrical energy output or sale. Certificates shall only be used by providers of electricity for compliance with the requirements of RSA 362-F:3 in the year in which the generation represented by the certificate was produced, except that unused certificates of the proper class issued for production during the prior 2 years or the first quarter of the subsequent year may be used to meet up to 30 percent of a provider's requirements for a given class obligation in the current year of compliance.

V. A qualified producer of useful thermal energy shall provide for the metering of useful thermal energy produced in order to calculate the quantity of megawatt-hours for which renewable energy certificates are qualified, and to report to the public utilities commission under rules adopted pursuant to RSA 362-F:13. Monitoring, reporting, and calculating the useful thermal energy produced in each quarter shall be expressed in megawatt-hours, where each 3,412,000 BTUs of useful thermal energy is equivalent to one megawatt-hour.

12 Renewable Energy Fund. Amend RSA 362-F:10, I, II, and X to read as follows:

Deleted: 1

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I. There is hereby established a renewable energy fund. This nonlapsing, special fund shall be continually appropriated to the commission to be expended in accordance with this section. The state treasurer shall invest the moneys deposited therein as provided by law. Income received on investments made by the state treasurer shall also be credited to the fund. All payments to be made under this section shall be deposited in the fund. The moneys paid into the fund under paragraph II of this section[~~, excluding class II moneys,~~] shall be used by the commission to support thermal and electrical renewable energy initiatives. [~~Class II moneys shall only be used to support solar energy technologies in New Hampshire.~~] All initiatives supported out of these funds shall be subject to audit by the commission as deemed necessary. All fund moneys [~~including those from class II~~] may be used to administer this chapter, but all new employee positions shall be approved by the fiscal committee of the general court.

II. In lieu of meeting the portfolio requirements of RSA 362-F:3 for a given year if, and to the extent sufficient certificates are not otherwise available at a price below the amounts specified in this paragraph, an electricity provider may, at the time of report submission for that year under RSA 362-F:8, make payment to the commission at the following rates for each megawatt-hour not met for a given class obligation through the acquisition of certificates:

(a) Class I *and II* ~~$57.12~~ *except for that portion of the Class I minimum electric renewable portfolio standard to be met by qualifying renewable energy sources producing useful thermal energy output pursuant to RSA 362-F:3, which shall be $28.*

(b) [~~Class II--$150~~.

~~(c)~~] Class III--$28.

[~~(d)~~] *(c)* Class IV--$28.

X. Consistent with RSA 362-F:10, VI, the commission shall, over each 2-year period commencing July 1, 2010, reasonably balance overall amounts expended, ***allocated, or obligated*** from the fund, net of administrative expenditures, between residential and nonresidential sectors. Funds from the renewable energy fund awarded to renewable projects in the residential sector shall be in approximate proportion to the amount of electricity sold at retail to that sector in New Hampshire, and the remaining funds from the renewable energy fund shall be awarded to projects in the nonresidential sector which include commercial and industrial sited renewable energy projects, existing generators, and developers of new commercial-scale renewable generation in New Hampshire

13 New Paragraph; Application. Amend RSA 362-F:11 by inserting after paragraph III the following new paragraph:

IV. A biomass facility otherwise meeting the eligibility requirements of class III, but which as of January 1, 2012 was not a class III eligible biomass technology due to the inability to achieve the particulate matter emissions rate specified in RSA 362-F:2, VIII(a), may consult with the department and submit a plan to meet the alternative particulate matter requirement under that paragraph. The plan shall contain reductions, in the aggregate or individually, in particulate matter emissions from other emission sources and demonstrate that the reductions will be quantifiable. The department shall expeditiously review the plan and, if approved, provide such information it deems relevant to the commission. The application submitted under this section shall inform the commission of the plan and the commission shall certify the source in accordance with the plan approved by the department.

14 New Paragraph; Rulemaking. Amend RSA 362-F:13 by inserting after paragraph VI the following new paragraph:

VI-a. Adopt procedures for the metering, verification, and reporting of useful thermal energy output.

15 New Section; Economic Benefits Retention. Amend RSA 362-F by inserting after section 13 the following new section:

362-F:14 Economic Benefits Retention. The commission shall, in all decisions affecting class III biomass technologies or class III standards, consider job loss and job retention, forestry economic impacts in the region and the state, and certificate production from class III eligible and potentially eligible biomass technologies. The proposed action shall aid job retention, forestry economic benefits, and certificate demand, given the certificate supply potential from these technologies.

16 New Section; Phase-in For Existing Supply Contract Load. Amend RSA 362-F by inserting after section 14 the following new section:

362-F:15 Phase-in For Existing Supply Contract Load

I. The increases in the purchase percentages in RSA 362-F:3 shall apply to the electrical load under any electrical power supply contracts for a term of years entered into by providers of electricity prior to or on January 1,

2012, upon the expiration of the term of any such contract. Providers of electricity shall inform the commission by July 1 of each year of all such contracts and their terms, including but not limited to, the execution date and expiration date of the contract and the annual volume of electrical energy supplied.

II. The change in the definition of "provider of electricity" in RSA 362-F:2 XIV shall be effective as of January 1, 2013, but shall not apply to any non-residential customer contracts for a term of years in effect until the the term of such contract has expired. The supplier of electrical power under any such contract shall inform the commission by July 1 of each year of such contract and its terms including but not limited to the execution date and expiration date and the annual volume of electrical energy supplied.

17 Effective Date. This act shall take effect upon its passage.

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SB 218 amendments

Co-Firing language correction (version in existing language is on page 2 of the Bradley Amendment, lines 33 – 35)

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(k) The production of electricity from any New Hampshire fossil-fueled generating facility that originally commenced operation prior to January 1, 2006, if after January 1, 2012 such facility first co-fires on a commercial basis with biomass fuels to displace the combustion of an amount of fossil fuels. The portion of the total electrical energy output that qualifies as class I from such a facility in a given time period shall be the fraction of electrical production derived from the combustion of biomass fuels at the facility in that time period as determined by the commission

Distribution company language below. This could be added as a new section 13 and renumber the others through a new section 16. These are found on page 5 of the amendment.

362-F:2 Definitions. – In this chapter:

XIV. "Provider of electricity" means **companies franchised by the commission to provide retail electric delivery service and rural electric cooperatives for which certificates of deregulation are on file with the commission pursuant to RSA 301:57,** ~~a distribution company providing default service or an electricity supplier as defined in RSA 374-F:2, II,~~ but does not include municipal suppliers.

Change to ensure that the RPS is not repealed as of 2025, on page 1 of the amendment, line 29

2008 2009 2010 2011 2012 2013 2014 2015 2025 **and thereafter**

Business and Industry Association
New Hampshire's Statewide Chamber of Commerce

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February 16, 2012

The Honorable Chairman, Senator Bob Odell
Senate Energy and Natural Resources Committee
Legislative Office Building - Room 102
Concord, New Hampshire 03301

SB 218 – An act relative to electric renewable portfolio standards

Mr. Chairman, members of the Energy and Natural Resources Committee,

Thank you for the opportunity to discuss SB 218 before you today. My name is Michael Licata and I am a vice president at the Business & Industry Association (BIA), the state's leading business advocacy group. The BIA represents more than 400 members in a variety of industries, including advanced manufacturing, high technology, professional services, financial services, health care, hospitality and tourism, public utilities, higher education and insurance. Our member firms employ 86,000 people throughout the state and contribute $4.5 billion annually to the state's economy.

I come before you today to register the BIA's support for SB 218. We believe this legislation will have a positive impact on electricity costs in New Hampshire. As members of the committee know, New Hampshire has some of the highest electricity rates in the nation. The high cost of electricity impairs businesses' ability to grow and prosper in our state and puts New Hampshire at a competitive disadvantage in retaining and attracting employers. We believe that SB 218 will lower the cost of complying with the state's renewable portfolio standard (RPS) by increasing the supply of renewable energy certificates.

The legislation before you today contains a number of elements that would simplify and improve the existing RPS. While any requirement placed on providers of electricity to procure power from renewable sources will result in a short-term increase in cost, the BIA believes that the long-term benefits of the RPS outweigh these costs. It is because of this belief that the BIA supported HB 873, an act establishing minimum renewable standards for energy portfolios, in 2007. We believe that the bill before you today will help to improve the existing RPS, while retaining the state's commitment to renewable energy. By eliminating the Class II solar requirement and allowing solar, useful thermal energy and co-fired generation to satisfy the Class I new generation requirement, SB 218 will expanding the types of renewable fuels eligible under the RPS. We believe that the inclusion of these forms of generation, while maintaining the existing percentage requirements for Class I, will help mitigate the impact of the RPS on ratepayers.

SB 218 would also expand the number of facilities that qualify for Class III biomass and Class IV existing hydroelectric through a number of simple, common sense changes to the qualifying requirements. These changes will increase the number of facilities in New Hampshire that can qualify under the RPS. This will help the RPS achieve one of its main goals, the development and retention of instate resources. By supporting instate generation, SB 218 will increase economic activity and make New Hampshire less reliant on foreign sources of electricity.

The BIA commends the bill's sponsor Senator Bradley for working with numerous stakeholders in the development of this legislation. We urge you to pass SB 218 and the BIA would be happy to work with the committee on this legislation.

Mr. Chairman, this concludes my testimony. I would be happy to try to address any questions the committee may have.

Respectfully submitted,

Michael Licata
Vice President

New Hampshire Public Utilities Commission
2011 RPS Review

The Status of State RPS Efforts

- Observations & Trends -

Mark Sinclair
Clean Energy States Alliance
February 14, 2011

Clean Energy States Alliance

NH Review Issue:
Should RPS Encourage More In-State Development?

- Rules for RPS geographic eligibility and electricity delivery vary greatly across states. Why?
  - Degree of state interest in supporting in-state or in-region development
  - Market structure and geography (NEPOOL, NE siting and transmission constraint)
  - Interpretation of federal commerce clause
  - Broader eligibility should reduce cost of RPS to ratepayer

CleanEnergy States Alliance

Geographic Eligibility: Major Approaches

- In-state generation requirement: HI, IA
- Delivery to state required
  - Direct transmission inter-tie to state: NV, TX
  - In-state delivery requirement: AZ, CA, MN, MT, NM, NY, WI
  - Delivery required to broader region/control areas: NEPOOL and PJM states
- In-state generation encouragement:
  - In-state multiplier for in-state projects: CO, DE (in-state wind)
  - Limit on RECs from out of state generators: NC – up to 25% compliance with RECs from outside state, 75% in-state or delivered
- Other approaches: rebates, tax credits, net metering, system benefit funds

Clean Energy States Alliance

Issues in Limiting Out of State Generation

- Dormant commerce clause restricts states from unjustifiably setting regulatory measures to benefit in-state economic interests by burdening out of state competitors
- Express in-state generation requirements are at legal risk
- Options for states:
  - Use eligibility requirements based on functional elements such as project's ability to interconnect with in-state distribution or deliver power in-state
  - Consider regional location requirements rather than in-state
  - Use distributed generation requirements and solar set-aside: imposes minimal burden on commerce and meets legitimate state goals (improved reliability, diverse supply, etc.)

Clean Energy States Alliance

Amendment to SB 218-FN with Thermal Carve-Out in Class I

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Amend the bill by replacing all after the enacting clause with the following:

1 Electric Renewable Portfolio Standards; Definitions; Eligible Biomass Technologies. Amend RSA 362-F:2, VIII to read as follows:

Deleted: (a)

VIII. "Eligible biomass technologies" means either:

(a) Electricity generating technologies that use biomass fuels, provided that the electricity generation unit has a quarterly average nitrogen oxide (NOx) emission rate of less than or equal to 0.075 pounds/million British thermal units (lbs/Mmbtu), and ***either has*** an average 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 either NOx or particulate matter emissions or both from other emission sources comparable to the difference between the generation unit's NOx emissions rate and the 0.075 lbs/Mmbtu rate and particulate matter emissions rate and the 0.02 lbs/Mmbtu rate, respectively***; or

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(a)

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Deleted: and

(b) Qualifying renewable energy technologies producing useful thermal energy, provided that:

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1. *If the unit is a biomass unit rated between 3 and 30 Mmbtu/hr design gross heat input, then it either has an average particulate emission rate of less than or equal to 0.10 lbs/Mmbtu as measured and verified by conducting and reporting the results of a one-time initial stack test in accordance with methods approved by the department, or it 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 0.10 lbs/Mmbtu rate;*
2. *If the unit is a biomass unit rated equal to or greater than 30 Mmbtu/hr design gross heat input, then it either has an average 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;*

3. *In addition, if the unit is a biomass unit rated less than 100 Mmbtu/hr design gross heat input, then it implements Best Management Practices as determined by the department; and*

4. *If the unit is a biomass unit rated equal to or greater than 100 Mmbtu/hr design gross heat input, then it has a quarterly average NOx emission rate of less than or equal to 0.075 Mmbtu/hr 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 NOx emissions from other emission sources comparable to the difference between the generation unit's NOx emissions rate and the 0.075 lbs/Mmbtu rate.*

2 Definitions; Renewable Energy Source; Useful Thermal Energy. Amend RSA 362-F:2, XV to read as follows:

XV. "Renewable energy source," "renewable source," or "source" means a class I, II, III, or IV source of electricity ***or a class I source of useful thermal energy*** [~~or 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.

XV-a. "Useful thermal energy" means renewable energy delivered from class I sources that can be metered, and is delivered to an end user in the form of direct heat, steam, hot water, or other thermal form that is used in production and beneficial measures 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 in New Hampshire.

3 Minimum Electric Renewable Portfolio Standards. Amend RSA 362-F:3 to read as follows:

362-F:3 Minimum Electric Renewable Portfolio Standards. For each year specified in the table below, each provider of electricity shall obtain and retire certificates sufficient in number and class type to meet or exceed the following percentages of total megawatt-hours of electricity supplied by the provider to its end-use customers that year, except to the extent that the provider makes payments to the renewable energy fund under RSA 362-F:10, II:

2008 2009 2010 2011 2012 2013 2014 2015 2025

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Deleted: *"Useful thermal energy" means energy 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.*

Class I	0.0%	0.5%	1%	2%	3%	4.2%	5.4%	6.6% 18.6% (*)
[~~Class II~~	~~0.0%~~	~~0.0%~~	~~0.04%~~	~~0.08%~~	~~0.15%~~	~~0.2%~~	~~0.3%~~	~~0.3%~~]
Class II	***0.0%***	***0.0%***	***0.0%***	***0.0%***	***0.0%***	***0.0%***	***0.0%***	***0.0%***
[~~Class III~~	~~3.5%~~	~~4.5%~~	~~5.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%~~	~~6.5%~~]
Class III	***3.5%***	***4.5%***	***5.5%***	***6.5%***	***9.0%***	***9.0%***	***9.0%***	***9.0%***
[~~Class IV~~	~~0.5%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~	~~1%~~]
Class IV	***0.5%***	***1%***	***1%***	***1%***	***1%***	***1.5%***	***1.5%***	***1.5%***

Class I increases an additional 1.2 percent per year from 2015 through 2025. A minimum percentage of the Class I totals shall be satisfied annually by the acquisition of renewable energy certificates from qualifying renewable energy technologies producing useful thermal energy as defined in 362-F:2, XV-a. The minimum percentage to be satisfied by the acquisition of renewable energy certificates from qualifying renewable energy technologies producing useful thermal energy shall be 0.2 percent in 2013, 0.4 percent in 2014, increasing annually by 0.2 percent per year from 2015 through 2025. Classes [~~II~~] ***III and*** IV remain at the same percentages from 2015 through 2025 except as provided in RSA 362-F:4, V-VI.

4 Electric Renewable Energy Classes. Amend RSA 362-F:4, I(f) through (j), II, and III to read as follows:

(f) Eligible biomass technologies, including the production of electricity from any New Hampshire fossil-fueled generating facility that originally commenced 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. The portion of the total electrical energy output that qualifies as class I from a facility in a given time period shall be the fraction of electrical production derived from the combustion of biomass fuels based on the heat input at the facility in that time period as determined by the commission in consultation with the department.

(g) [~~The equivalent displacement of electricity, as determined by the commission, by end use customers, from solar hot water heating systems used instead of electric hot water heating~~] ***Solar thermal energy.***

(h) Class II sources [~~to the extent that they are not otherwise used to satisfy the minimum portfolio standards of other classes~~].

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(i) The incremental new production of electricity in any year from an eligible biomass or methane source or any hydroelectric generating facility licensed or exempted by Federal Energy Regulatory Commission (FERC), regardless of gross nameplate capacity, over its historical generation baseline, provided the commission certifies demonstrable completion of capital investments attributable to the efficiency improvements, additions of capacity, or increased renewable energy output that are sufficient to, were intended to, and can be demonstrated to increase annual renewable electricity output. The determination of incremental production shall not be based on any operational changes at such facility but rather on capital investments in efficiency improvements or additions of capacity.

(j) The production of electricity from a class III or IV source that has begun operation as a new facility by demonstrating that 80 percent of its resulting tax basis of the source's plant and equipment, but not its property and intangible assets, is derived from capital investment directly related to restoring generation or increasing capacity including department permitting requirements for new plants. Such production shall not qualify for class III or IV certificates. ***Commencing July 1, 2013 a class III source eligible as a class I source under this subparagraph or subparagraph (i) may submit a notice to the commission electing to be a class III source instead of a class I source. Once such notice is given, the production from such a source shall qualify for class III certificates, provided the source meets the other requirements of a class III eligible biomass technology.***

Deleted: *(k) Class I facilities using eligible sources may be co-fired with fossil fuels, provided that only the renewable energy fraction of production from class I multi-fuel facilities shall be considered eligible.*

II. Class II (New Solar) shall include the production of electricity from solar technologies, provided the source began operation after January 1, 2006. ***Class II technologies may be used to satisfy the minimum portfolio standards of class I.***

III. Class III (Existing Biomass/Methane) shall include the production of electricity from any of the following, provided the source began operation prior to January 1, 2006:

(a) Eligible biomass technologies having a gross nameplate capacity of 25 MWs or less.

(b) Methane gas. ***Effective for electricity production commencing July 1, 2012, methane gas shall not qualify for class III if the production is from a source which began operation prior to January 1, 2006 and which source exceeds a total gross nameplate capacity of 10 MWs in the aggregate located at any single landfill site. All phases, stages, cells, lifts, expansions, and other landfill areas shall be combined in determining the single landfill site. Only class III and potential class III eligible sources at any single landfill site shall be included in determining whether the 10 MW aggregate limitation has been exceeded.***

5 Electric Renewable Energy Classes. Amend RSA 362-F:4, IV(a) to read as follows:

IV.(a) Class IV (Existing Small Hydroelectric) shall include the production of electricity from hydroelectric energy, provided the facility:

(1) Began operation prior to January 1, 2006[~~,~~];

(2) When required, has documented applicable state water quality certification pursuant to section 401 of the Clean Water Act for hydroelectric projects; and

(3) Either has a total nameplate capacity of 5 MWs or less as measured by the sum of the nameplate capacities of all the generators at the facility, ***and*** has actually installed both upstream and downstream diadromous fish passages and such installations have been approved by the Federal Energy Regulatory Commission, [~~and when required, has documented applicable state water quality certification pursuant to section 401 of the Clean Water Act for hydroelectric projects~~] ***or has a total nameplate capacity of 1 MW or less as measured by the sum of the nameplate capacities of all generators at the facility and is interconnected with an electric distribution system located in New Hampshire.***

6 Electric Renewable Energy Classes. Amend RSA 362-F:4, V to read as follows:

V. For good cause, and after notice and hearing, the commission may accelerate or delay by up to one year, any given year's incremental increase in class I [~~or II~~] renewable portfolio standards requirement under RSA 362-F:3.

7 Commission Review and Report. Amend RSA 362-F:5, IV to read as follows:

IV. Increasing the class requirements relative to [~~classes~~] ***class*** I [~~and II~~] beyond 2025;

8 Commission Review and Report. Amend RSA 362-F, VI to read as follows:

VI. The timeframe and manner in which new renewable class I [~~and II~~] sources might transition to and be treated as existing renewable sources and if appropriate, how corresponding portfolio standards of new and existing sources might be adjusted;

9 Renewable Energy Certificates. Amend RSA 362-F:6, II to read as follows:

II. The commission shall establish procedures by which electricity ***and useful thermal energy*** production not tracked by ISO-New England from customer-sited sources, including behind the meter production, may be included within the ***class I*** certificate program, provided such sources are located in New Hampshire. The procedures may include the aggregation of sources and shall be compatible with procedures of the certificate program administrator. The production shall be monitored and verified by an independent entity designated by the commission, which may include electric distribution companies.

10 New Paragraph; Renewable Energy Certificates. Amend RSA 362-F:6 by inserting after paragraph IV the following new paragraph:

V. A qualified producer of useful thermal energy shall provide for the metering of useful thermal energy produced in order to calculate the quantity of megawatt-hours for which renewable energy certificates are qualified, and to report to the public utilities commission under rules adopted pursuant to RSA 362-F:13. Monitoring, reporting, and calculating the useful thermal energy produced in each quarter shall be expressed in megawatt-hours, where each 3,412,000 BTUs of useful thermal energy is equivalent to one megawatt-hour.

11 Renewable Energy Fund. Amend RSA 362-F:10, I and II to read as follows:

I. There is hereby established a renewable energy fund. This nonlapsing, special fund shall be continually appropriated to the commission to be expended in accordance with this section. The state treasurer shall invest the moneys deposited therein as provided by law. Income received on investments made by the state treasurer shall also be credited to the fund. All payments to be made under this section shall be deposited in the fund. The moneys paid into the fund under paragraph II of this section[~~, excluding class II moneys,~~] shall be used by the commission to support thermal and electrical renewable energy initiatives. [~~Class II moneys shall only be used to support solar energy technologies in New Hampshire.~~] All initiatives supported out of these funds shall be subject to audit by the commission as deemed necessary. All fund moneys [~~including those from class II~~] may be used to administer this chapter, but all new employee positions shall be approved by the fiscal committee of the general court.

II. In lieu of meeting the portfolio requirements of RSA 362-F:3 for a given year if, and to the extent sufficient certificates are not otherwise available at a price below the amounts specified in this paragraph, an electricity provider may, at the time of report submission for that year under RSA 362-F:8, make payment to the commission at the following rates for each megawatt-hour not met for a given class obligation through the acquisition of certificates:

(a) Class I ***and II***--$57.12; except for that portion of the Class Minimum Electric Renewable Portfolio Standards to be met by qualifying renewable energy technologies producing useful thermal energy pursuant to 362-F:3, which shall be $28, commencing January 1, 2013.

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(b) [~~Class II $150~~.

~~(c)~~] Class III--$28.

[~~(d)~~] ***(c)*** Class IV--$28.

12 New Paragraph; Application. Amend RSA 362-F:11 by inserting after paragraph III the following new paragraph:

IV. A biomass facility otherwise meeting the eligibility requirements of either class I or III, but which as of January 1, 2012 was not an eligible biomass technology due to the inability to achieve the NOx or particulate matter emissions rate or both specified in RSA 362-F:2, VIII(a), may consult with the department and submit a plan to meet the alternative requirement under that paragraph. The plan shall contain reductions, in the aggregate or individually, in emissions from other emission sources and demonstrate that the reductions will be quantifiable. The department shall expeditiously review the plan and, if approved, provide such information it deems relevant to the commission. The application submitted under this section shall inform the commission of the plan and the commission shall certify the source in accordance with the plan approved by the department.

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Deleted: particulate matter

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13 New Paragraph; Rulemaking. Amend RSA 362-F:13 by inserting after paragraphs VI and VII the following new paragraphs:

VI-a. Adopt procedures for the metering, verification, and reporting of useful thermal energy output.

VIII. The department may adopt rules, under RSA 541-A, to determine Best Management Practices for qualifying renewable energy technologies producing useful thermal energy.

14 New Section; Economic Benefits Retention. Amend RSA 362-F by inserting after section 13 the following new section:

362-F:14 Economic Benefits Retention. The commission shall, in all decisions affecting class III biomass technologies or class III standards, consider job loss and job retention, forestry economic impacts in the region and the state, and certificate production from class III eligible and potentially eligible biomass technologies. The proposed action shall aid job retention, forestry economic benefits, and certificate demand, given the certificate supply potential from these technologies.

15 Effective Date. This act shall take effect upon its passage.

Parsons, Richard

From: Heidi L. Kroll [kroll@gcglaw.com]
Sent: Monday, March 05, 2012 10:04 AM
To: Parsons, Richard; Bradley, Jeb
Cc: 'Susan Arnold'; 'Dick Norman'; 'al@essexhydro.com'; 'Jim OBrien'
Subject: RE: Hydro Language for SB 218-FN

Dear Senator Bradley and Richard,

Per your request at the SB 218-FN work session on February 23rd, GSHA and AMC have agreed to the changes shown in yellow below.

If you have any questions or would like to discuss, please feel free to call me at 603-496-2345 (cell) or 603-545-3710 (direct line). Thank you very much.

Sincerely,
Heidi

5. Electric Renewable Energy Classes. Amend RSA 362-F:4, IV(a) to read as follows:

IV. (a) Class IV (Existing Small Hydroelectric) shall include the production of electricity from hydroelectric energy, provided the facility:

(1) Began operation prior to January 1, 2006;;
(2) When required, has documented applicable state water quality certification pursuant to section 401 of the Clean Water Act for hydroelectric projects; and
(3) Either (a) has a total nameplate capacity of 5MWs or less as measured by the sum of the nameplate capacities of all the generators at the facility; ***and*** has actually installed both upstream and downstream diadromous fish passages and such installations have been approved by the Federal Energy Regulatory Commission, ~~[and when required, has documented applicable state water quality certification pursuant to section 401 of the Clean Water Act for hydroelectric projects]~~ ***or (b) has a total nameplate capacity of 1 MW or less as measured by the sum of the nameplate capacities of all generators at the facility, is in compliance with applicable Federal Energy Regulatory Commission fish passage restoration requirements and is interconnected with an electric distribution system located in New Hampshire.***

From: Parsons, Richard [mailto:Richard.Parsons@leg.state.nh.us]
Sent: Monday, March 05, 2012 8:33 AM
To: Heidi L. Kroll
Subject: Hrydro Language

Heidi,

I am just emailing because I was wondering if you were able to discuss possible fish passage language with the AMC?

Thanks,

Rich

Richard M. Parsons
Legislative Aide
Assistant to Senator John Gallus, District 1
Aide to the Senate Energy and Natural Resources Committee
NH State Senate
State House, Room 115
Concord, NH 03301
(603) 271-3076

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February 20, 2012

Senator Bob Odell
Chair, Senate Energy and Natural Resources Committee
Statehouse, Room 302
107 North Main Street
Concord, NH 03301

Re: Senate Bill 218 – Renewable Portfolio Standard

Dear Chairman Odell:

I hope this finds you well. I miss working with you in the legislature.

Today I am writing to ask you to support Senate Bill 218 – the renewal and update of the Renewable Portfolio Standard law. The policy that is embodied in the original law – to encourage increased use of renewable sources of electricity – is still sound and, therefore, deserves to continue.

Senate Bill 218, as you know, also adds thermal energy to the mix of energy covered under the law. Nearly 30% of our energy use in New Hampshire is for thermal purposes – primarily for heating buildings. It only makes sense that this use, which is covered mostly by using biomass fuel grown and harvested in the Granite State, be included in this policy. Given our ample supply of biomass resources in N.H., adding thermal energy to the RPS will result in increased demand for thermal energy produced from renewable sources – thus encouraging jobs and strengthening our economy here at home.

Thank you for your consideration.

Sincerely,

Charlie

Charles A. Levesque

Cc: Sen. Andy Sanborn

Parsons, Richard

From: Charlie Niebling [cniebling@pelletheat.com]
Sent: Wednesday, March 07, 2012 3:18 PM
To: Parsons, Richard
Subject: follow up

I didn't have the language in front of me when you called. How about this:

"useful thermal energy" means renewable energy delivered from class I sources that can be metered, and is delivered to an end user in the form of direct heat, stem, hot water, or other thermal form that is used ~~in production and beneficial measures~~ for heating, cooling, humidity control, process use, or other valid thermal end use energy requirement and for which fuel or electricity would otherwise be consumed.

Charlie Niebling
Genl Mgr

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Email: cniebling@pelletheat.com
Web: www.pelletheat.com

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Biomass Thermal Energy Council
www.biomassthermal.org

Parsons, Richard

From: elizabeth.tillotson@nu.com

Sent: Wednesday, March 07, 2012 10:59 PM

To: Parsons, Richard

Cc: Wright, Craig; donna.gamache@nu.com; Fontaine, Joe; Fitzgerald, Mike

Subject: Re: SB 218 Draft Amendment

Hi Mike. Leo and I have worked up an example for calculating the number of RECs based on the ratio of biomass BTUs to total BTUs (fossil BTUs plus biomass BTUs). I was hoping we could have a quick conversation on how best to present it to make it most helpful for on-going discussions. (i.e. by month, by year, etc.; list of assumptions)

I also had a quick question about the revised language RSA 362-F:2, VIII (a), beginning at line 10 regarding participation in a plan approved by the department...for reductions in NOx. The language goes on to discuss a program that results in reductions in NOx from other emission sources comparable to the difference between the generation unit's NOx emissions rate and the 0.075 lbs/Mmbtu rate.
My question is does this NOx language need to be clarified as an alternative to the first criteria listed (line 7 and 8) requiring a quarterly average NOx emission rate of less than or equal to 0.075 lbs/Mmbtu.

Please let me know when it would be convenient for us to talk on Thursday. I am in the office all day.
Thank you.
Lynn

Elizabeth H. Tillotson
Public Service Company of New Hampshire
email: tilloeh@nu.com
Tele: 603-634-2440
Fax: 603-634-2703

-----"Parsons, Richard" <Richard.Parsons@leg.state.nh.us> wrote: -----

> To: "Parsons, Richard" <Richard.Parsons@leg.state.nh.us>
> From: "Parsons, Richard" <Richard.Parsons@leg.state.nh.us>
> Date: 03/07/2012 05:27PM
> Cc: Jodi Grimbilas <jgrimbilas@biancopa.com>, Charlie Niebling <cniebling@pelletheat.com>, Michael Licata <mlicata@nhbia.org>, "Kroll, Heidi" <kroll@gcglaw.com>, "Fitzgerald, Mike" <Michael.Fitzgerald@des.nh.gov>, Elizabeth H. Tillotson/NUS@NU, Charlie Niebling NE Wood Pellet <cniebling@pelletheat.com>, "Scott Nichols (Tarm USA, Inc)" <scott@tarmusa.com>, "Steve Walker (NE Wood Pellet)" <swalker@pelletheat.com>, "Scott, Bob" <Robert.Scott@des.nh.gov>, "Wright, Craig" <Craig.Wright@des.nh.gov>, "Parsons, Richard" <Richard.Parsons@leg.state.nh.us>, "Fontaine, Joe" <Joseph.Fontaine@des.nh.gov>, "Ohler, Becky" <Rebecca.Ohler@des.nh.gov>, "Anne Ross (PUC)" <F.ANNE.ROSS@PUC.NH.GOV>, "Jack Ruderman (PUC)" <jack.ruderman@puc.nh.gov>, "Jasen Stock (NHTOA)" <jstock@nhtoa.org>, Donna M. Gamache/NUS@NU, "Robert A. Olson" <rolson@bowlaw.com>, "Bradley, Jeb" <Jeb.Bradley@leg.state.nh.us>, "Monroe, Pamela"

Parsons, Richard

From: Ross, F. Anne [F.Anne.Ross@puc.nh.gov]
Sent: Thursday, March 08, 2012 2:59 PM
To: Merrill, Amanda; Bradley, Jeb
Cc: Parsons, Richard; Robert A. Olson; Ross, F. Anne
Subject: More technology neutral language for RSA 362-F:14
Follow Up Flag: Follow up
Flag Status: Red

Currently RSA 362-F:4, V allows the commission after notice and hearing to accelerate or delay up to a year increases in class I and II RPS requirements. Also, RSA 362-F:4, VI allows the commission after notice and hearing to modify class III and IV RPS requirements to 85%-95% of reasonably expected potential annual output of available eligible sources after taking into account demand from similar programs in other states.

The final policy directive in SB 218 proposed as section 14 on Economic Benefits Retention should guide the commission's determination in these two earlier sections. Below is suggested more general technology neutral language. See what you think.

"RSA 362-F:14 Economic Benefits Retention. The commission shall, in all decisions affecting class eligible technologies or class standards, consider job loss and job retention, economic impacts in the region and the state, and certificate production from class eligible and potentially eligible technologies. The proposed action shall aid job retention, economic benefits and certificate demand, given the certificate supply potential from eligible technologies."

F. Anne Ross, Esq.
General Counsel
New Hampshire Public Utilities Commission
21 S. Fruit Street, Suite 10
Concord, NH 03301-2429
603-271-6005 (phone)
603-271-4033 (fax)

Parsons, Richard

From: Merrill, Amanda

Sent: Friday, March 09, 2012 2:14 AM

To: Parsons, Richard

Subject: FW: More technology neutral language for RSA 362-F:14

Rich- I'm not sure if you got this version earlier from Anne Ross and/or me--- but this is the language Sen. Bradley and I agree should be discussed at this morning's work session. Thanks.

RSA 362-F:14 Economic Benefits Retention. The commission shall, in all decisions affecting class eligible technologies or class standards, consider job loss and job retention or job creation, economic impacts in the region and the state, and certificate production from class eligible and potentially eligible technologies. The proposed action shall aid job retention or job creation, economic benefits and certificate demand, taking into account the certificate supply potential from eligible technologies.

Parsons, Richard

From: Charlie Niebling [cniebling@pelletheat.com]
Sent: Friday, March 09, 2012 4:49 PM
To: 'Charlie Niebling'; Parsons, Richard; 'Jasen Stock (NHTOA)'; lambert@unitil.com; 'Michael Licata'; dpatch@orr-reno.com; rag@orr-reno.com; 'Erin Hass'; 'Anne Ross (PUC)'; labrerc@psnh.com; michele.roberge@des.nh.gov; 'Kroll, Heidi'; jmonahan@dupontgroup.com; molite@metrocast.net; debra.hale@us.ngrid.com
Subject: RE: Word version of SB 218 Amendment
Follow Up Flag: Follow up
Flag Status: Red
Attachments: 2012-1123s 3 9 12 Niebling Edits (2).docx

On further review, I neglected to remove the last sentence from the emissions language (362-F:4, I(l) as it pertains to biomass thermal as this sentence was not relevant to thermal units. My apologies for jumping the gun earlier. Richard please use this version.

Page 4, lines 3-5 now reads: (4) If the unit is a biomass unit rated equal to or greater than 100
Mmbtu/hr design gross heat input, and it has a quarterly average NOx emission rate of less than or equal to 0.075 Mmbtu/hr as measured and verified under RSA 362-F:12.

From: Charlie Niebling [mailto:cniebling@pelletheat.com]
Sent: Friday, March 09, 2012 2:22 PM
To: 'Parsons, Richard'; 'Jasen Stock (NHTOA)'; 'lambert@unitil.com'; 'Michael Licata'; 'dpatch@orr-reno.com'; 'rag@orr-reno.com'; 'Erin Hass'; 'Anne Ross (PUC)'; 'labrerc@psnh.com'; 'michele.roberge@des.nh.gov'; 'Kroll, Heidi'; 'jmonahan@dupontgroup.com'; 'molite@metrocast.net'; 'debra.hale@us.ngrid.com'
Subject: RE: Word version of SB 218 Amendment

Attached is a version of today's working draft that reflects the change that I was entrusted with making: moving the emissions language specific to biomass thermal to a new section (l) under RSA 362-F:4(l).

In doing this, I noticed that by adding thermal technologies to the list of qualifying technologies under Class I, the title of 362-F:4 ("**Electric** Renewable Energy Classes") needs to be changed to be neutral as to energy source. I proposed dropping "Electric" from this title so it reads "Renewable Energy Classes". I also noticed that a began operation date of January 1, 2006 currently applies to all technologies in this class unless otherwise noted. It is not the intent of adding thermal to make it apply retroactively to any project installed since 2006, but rather to apply only to new installations going forward. Therefore I am proposing a "began operation date" of January 1, 2013 that applies only to useful thermal energy from geothermal (b), solar thermal (h), and the new biomass thermal section (l).

If you have any questions or concerns please let me know.

Charlie Niebling
532 0122

Granite State Hydropower Association

Producing Electricity from a Renewable Resource

Highlights of Small-Scale Hydropower in NH

- GSHA members are an important part of NH's small business community.

- GSHA members own and/or operate more than 50 hydropower plants in NH, with a total capacity of more than 40 MWs.

- GSHA plants produce an estimated 142,000,000 kilowatt-hours of renewable power each year, which represents a savings of roughly 83,000 barrels of oil per year.

- Small-scale hydropower plants paid approximately $360,000 in statewide utility property taxes and over $1 million in local property taxes in 2010. These plants also pay business taxes.

- The leasing of state-owned dams to generate renewable power provides hundreds of thousands of dollars per year to NH's Dam Maintenance Fund, increasing the safety of all state-owned dams.

- Hydroelectric producers provide income to the state by paying tens of thousands of dollars in water user fees at facilities using state and federal impoundments.

- GSHA plants directly employ more than 50 New Hampshire residents and purchase an estimated $1 million per year in supplies and services from New Hampshire companies.

About the Association

The Granite State Hydropower Association (GSHA) is a voluntary, non-profit trade association for the small-scale independent hydropower industry in New Hampshire. Members of GSHA own, operate and manage more than 50 hydroelectric facilities located in 18 towns and cities throughout the state, totaling around 40 megawatts (MWs). GSHA members are part of New Hampshire's small business community, with facilities that are 5 MWs or less and typically below 1 MW.

The Benefits of Small Hydropower Plants

Hydropower is an emissions-free, renewable, reliable and locally distributed source of electricity. It provides important economic, environmental, and recreational benefits to New Hampshire. Small hydro plants (≤ 5 MW) pay millions of dollars per year in state and local property taxes, businesses taxes, lease-payments for state-owned dams, and water-user fees for state and federal impoundments. Although small hydro facilities are not labor-intensive, GSHA plants directly employ more than 50 New Hampshire residents and purchase an estimated $1 million per year in supplies and services from companies statewide. Furthermore, GSHA plants remove more than 50 tons of trash per year from the rivers, and many provide and maintain recreational facilities including boat ramps, portage facilities and picnic areas.

Longstanding History of Hydropower in NH

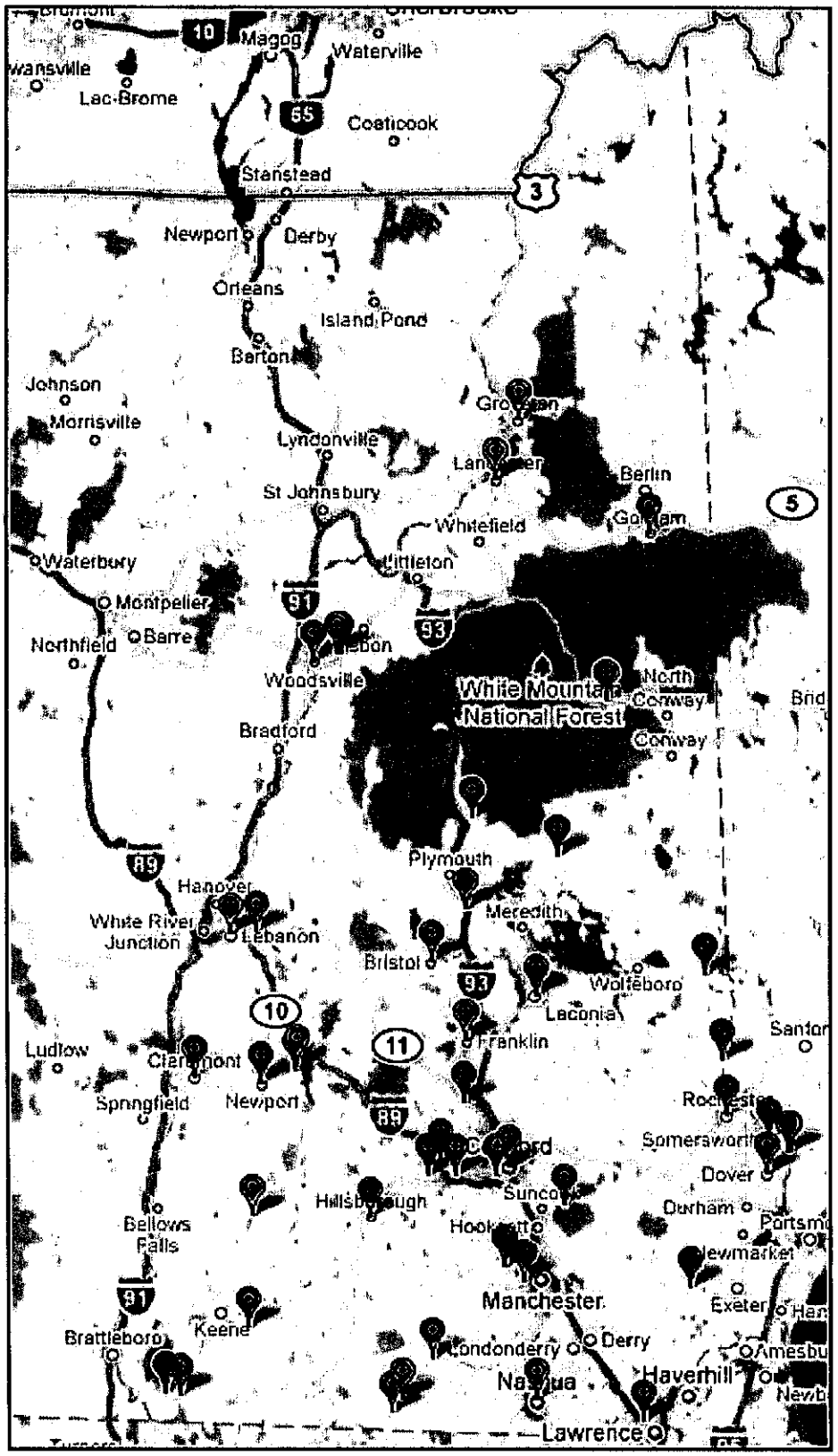
Small hydro plants are typically located at dams near old mill buildings or town centers that were constructed in the 1800's or early 1900's. Many of these plants were redeveloped following the federal Public Utility Regulatory Policies Act (PURPA) of 1978. Virtually all GSHA facilities are regulated by the Federal Energy Regulatory Commission (FERC), and all work closely with state agencies and local officials on matters of public safety. Using existing dams to produce power increases public safety because the infrastructure is maintained and water-flows are regularly monitored.

Challenges for Small Hydropower Plants

Hydro plants are capital intensive and closely regulated. The financial and regulatory burdens are especially great for small hydro plants, which do not benefit from economies-of-scale and are currently earning low electricity prices in the New England wholesale market. In recent years, New Hampshire and other New England states have adopted Renewable Portfolio Standard (RPS) programs that provide financial benefits to qualified renewables. RPS not only helps develop new renewables but also helps maintain existing ones which are already sited and providing benefits. However, even with RPS programs, if market prices continue to stay low as predicted, development of new or expanded hydropower will not be economic. Of even greater concern, many existing small hydro plants may not be able to sustain their operations and will be forced to shut down. This would be a very unfortunate outcome given the many advantages to New Hampshire from continued operation of small hydro.

GSHA Member Projects

Project	Project Location	kW
Ammonoosuc River Dam	Bath	300
Ashuelot	Winchester	900
Avery	Laconia	270
Briar/Penacook Upper Falls	Concord	3020
Briar/Rolfe Canal	Concord	4285
Campton Dam	Campton	485
Chamberlain Falls	Greenville	150
China Mills Dam	Allenstown	1000
Cocheco Falls	Dover	708
Contoocook Hydro LLC	Contoocook	250
Exeter River Hydro	Brentwood	33
Franklin Falls Hydro	Franklin	700
Glen House	Gorham	10
Goffstown Hydro	Goffstown	250
Golden Pond Hydro	Ashland	105
Goodrich Hydroelectric	Bartlett	500
Hadley Falls	Goffstown	250
Hopkinton	Hopkinton	250
Hosiery Mill	Hillsborough	1250
Kelleys Falls	Manchester	400
Lower Great Falls, Somersworth	Somersworth	1200
Lower Robertson	Winchester	900
Lower Valley Hydro	Lebanon	900
Lower Village	Claremont	1300
Marlow Power LLC	Marlow	212
Mascoma Hydro Corp.	Lebanon	1500
Methuen Falls Hydro	Methuen, MA	250
Minnewawa Hydro	Marlborough	1100
Nashua Hydro Associates	Nashua	1000
Newfound Hydro	Bristol	1450
Newport Mills - Sugar River I and II	Newport	350
Old Nash Dam	Marlow	212
Otis	Greenville	150
Otter Lane Hydro (Forsters Mill)	Sutton Mills	90
Penacook Lower Falls	Boscawen	4600
Pettyboro Hydro	Bath	59
Pine Valley Mill Hydro	Wilton	500
Rivermill-Mascoma	Lebanon	200
Rollinsford	Rollinsford	1500
Salmon Brook Station #3	Franklin	375
Salmon Falls Hydro Co.	S. Berwick, ME	1200
Spaulding Pond Hydro	Milton	300
Squam River Hydro	Ashland	210
Sunapee Hydro	Sunapee	650
Sunnybrook #1	Lancaster	18
Sunnybrook #2	Lancaster	50
Sweetwater Hydro	Claremont	900
Tolles Energy Resource	Sandwich	40
Union Village Dam	Wakefield	67
Waterloom	New Ipswich	150
Watson Dam	Dover	250
West Hopkinton, EHC	West Hopkinton	750
Weston Dam	Groveton	524
Woodsville Hydro	Woodsville	320
Wyandotte Hydro	Rochester	80



Printed 11/4/11

Committee Report

STATE OF NEW HAMPSHIRE

SENATE

REPORT OF THE COMMITTEE

Date: 3/15/2012

THE COMMITTEE ON Energy and Natural Resources

to which was referred Senate Bill 218-FN

AN ACT relative to electric renewable portfolio standards.

Having considered the same, the committee recommends that the Bill:

OUGHT TO PASS WITH AMENDMENT

BY A VOTE OF: 5-0

AMENDMENT # 1235s

Senator Jeb E. Bradley
For the Committee

Richard Parsons 271-3076

New Hampshire General Court - Bill Status System

Docket of SB218

Docket Abbreviations

Bill Title: relative to electric renewable portfolio standards.

Official Docket of **SB218**:

Date	Body	Description
1/1/2012	S	**Introduced** 1/4/2012 and Referred to Energy and Natural Resources; **SJ 1**, Pg.3
2/9/2012	S	Hearing: 2/16/12, Room 102, LOB, 9:30 a.m.; **SC7**
3/15/2012	S	Committee Report: Ought to Pass with Amendment **#2012-1235s**, 3/21/12; **SC11**
3/21/2012	S	Committee Amendment 1235s; AA, VV
3/21/2012	S	Sen. Bradley Floor Amendment **#2012-1368s**, AA, VV
3/21/2012	S	**Ought to Pass with Amendment** 1235s, 1368s, MA, VV; OT3rdg
3/21/2012	H	Introduced and Referred to Science, Technology and Energy; **HJ 28**, PG.1719
3/29/2012	H	Public Hearing: 4/5/2012 10:30 AM LOB 304
4/4/2012	H	Full Committee Work Session: 4/10/2012 1:00 PM LOB 304
4/18/2012	H	Full Committee Work Session: 4/24/2012 10:00 AM LOB 304
4/18/2012	H	Full Committee Work Session: 5/3/2012 1:00 PM LOB 304
4/19/2012	H	Executive Session: 5/8/2012 10:00 AM LOB 304 ==Recessed==
5/9/2012	H	Continued Executive Session: 5/9/2012 1:10 PM LOB 304
5/9/2012	H	Committee Report: Ought to Pass with Amendment #2180h for May 15 (Vote 14-3; RC); **HC 37**, PG.2047
5/9/2012	H	Proposed Committee Amendment **#2012-2180h**; **HC 37**, PG.2066-2068
5/17/2012	H	Amendment #2180h: AA DIV 202-76; **HJ 46**, PG.2449-2450
5/17/2012	H	**Ought to Pass with Amendment** #2180h: MA **RC** 275-6; **HJ 46**, PG.2449-2452
5/23/2012	S	Sen. Odell Moved Non-concur with House Amendment #2180h; Requests C of C, MA, VV
5/23/2012	S	President Appoints: Senators Bradley, Lambert, and Merrill
5/24/2012	H	House Accedes to Senate Request for Committee of Conference (Rep Tucker) [Recessed from 5/17/2012 Session]
5/24/2012	H	Speaker Appoints: Reps J.Garrity, Holden, W.O'Connor, Levasseur [Recessed from 5/17/2012 Session]
5/24/2012	S	Committee of Conference Meeting: 5/25/2012, 1:00 p.m., Room 304, LOB
5/25/2012	S	C OF C Meeting: ==ROOM CHANGE== 5/25/2012, 1:00 p.m., Room 210-211, LOB
5/31/2012	H	Conference Committee Report **#2012-2392c**, House AM + New AM, Filed; **HC 42**, PG.2263
6/6/2012	H	Conference Committee Report #2392c Adopted, **RC** 292-52
6/6/2012	S	Conference Committee Report 2392c; **RC** 23Y-0N, Adopted

6/6/2012	H	Enrolled Bill Amendment #2499e Adopted
6/6/2012	S	Enrolled Bill Amendment **#2012-2499e** Adopted
6/6/2012	H	Enrolled
6/6/2012	S	Enrolled

NH House	NH Senate

Other Referrals

May 29, 2012
2012-2392-CofC
06/09

Committee of Conference Report on SB 218-FN, an act relative to electric renewable portfolio standards.

Recommendation:

That the Senate recede from its position of nonconcurrence with the House amendment, and concur with the House amendment, and

That the Senate and House adopt the following new amendment to the bill as amended by the House, and pass the bill as so amended:

Amend the bill by replacing section 2 with the following:

2 Definitions; Renewable Energy Source; Useful Thermal Energy. Amend RSA 362-F:2, XV to read as follows:

XV. "Renewable energy source," "renewable source," or "source" means a class I, II, III, or IV source of electricity or [~~electricity displacement by a class I source under RSA 362-F:4, I(g)~~] ***a class I source of useful thermal energy.*** 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.

XV-a. "Useful thermal energy" means 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.

Amend RSA 362-F:3 as inserted by section 3 of the bill by replacing it with the following:

362-F:3 Minimum Electric Renewable Portfolio Standards. For each year specified in the table below, each provider of electricity shall obtain and retire certificates sufficient in number and class type to meet or exceed the following percentages of total megawatt-hours of electricity supplied by the provider to its end-use customers that year, except to the extent that the provider makes payments to the renewable energy fund under RSA 362-F:10, II:

	2008	2009	2010	2011	2012	2013	2014	2015	2025
Class I	0.0%	0.5%	1%	2%	3%	4%	5%	6%	[~~16%~~] *15%* (*)
Class II	0.0%	0.0%	0.04%	0.08%	0.15%	0.2%	0.3%	0.3%	0.3%
Class III	3.5%	4.5%	5.5%	6.5%	6.5%	6.5%	[~~6.5%~~] *7.0%*	[~~6.5%~~] *8.0%*	[~~6.5%~~] *8.0%*
Class IV	0.5%	1%	1%	1%	1%	[~~1%~~] *1.3%*	[~~1%~~] *1.4%*	[~~1%~~] *1.5%*	[~~1%~~] *1.5%*

*Class I increases an additional [~~one~~] ***0.9*** percent per year from 2015 through 2025. ***A set percentage of the class I totals shall be satisfied annually by the acquisition of renewable energy certificates from qualifying renewable energy technologies producing useful thermal energy as defined in RSA 362-F:2, XV-a. The set percentage shall be 0.2 percent in 2013, 0.4 percent in 2014, and increased annually by 0.2 percent per year from 2015 through 2025.*** Classes II-IV remain at the same percentages from 2015 through 2025 except as provided in RSA 362-F:4, V-VI.

Amend RSA 362-F:10, II and III as inserted by section 14 of the bill by replacing them with the following:

II. In lieu of meeting the portfolio requirements of RSA 362-F:3 for a given year if, and to the extent sufficient certificates are not otherwise available at a price below the amounts specified in this paragraph, an electricity provider may, at the time of report submission for that year under RSA 362-F:8, make payment to the commission at the following rates for each megawatt-hour not met for a given class obligation through the acquisition of certificates:

(a) Class I—[~~$57.12~~,] ***$55, except for that portion of the class electric renewable portfolio standards to be met by qualifying renewable energy technologies producing useful thermal energy under RSA 362-F:3 which shall be $25 beginning January 1, 2013.***

(b) Class II—[~~$150~~] ***$55.***

(c) Class III—[~~$28~~] ***$31.50.***

(d) Class IV—[~~$28~~] ***$26.50.***

III. Beginning in [~~2008~~] ***2013***, the commission shall adjust these rates by January 31 of each year using the Consumer Price Index as published by the Bureau of Labor Statistics of the United States Department of Labor ***for classes III and IV and ½ of such Index for classes I and II.***

Amend the bill by replacing section 19 with the following:

19 New Section; Phase-In for Existing Supply Contract Load. Amend RSA 362-F by inserting after section 13 the following new section:

362-F:14 Phase-In for Existing Supply Contract Load. The increases in the annual purchase percentages in RSA 362-F:3 as compared to those in effect as of January 1, 2012 shall apply to the electrical load under any electrical power supply contracts for a term of years entered into by providers of electricity prior to or on July 1, 2012, upon the expiration of the term of any such contract. Providers of electricity shall inform the commission by July 1 of each year of all such contracts and their terms, including but not limited to the execution date and expiration date of the contract and the annual volume of electrical energy supplied.

The signatures below attest to the authenticity of this Report on SB 218-FN, an act relative to electric renewable portfolio standards.

Conferees on the Part of the Senate Conferees on the Part of the House

Sen. Bradley, Dist. 3

Rep. J. Garrity, Rock. 6

Sen. Lambert, Dist. 13

Rep. Holden, Hills. 4

Sen. Merrill, Dist. 21

Rep. W. O'Connor, Straf. 3

Rep. Levasseur, Hills. 11

COMMITTEE REPORT FILE INVENTORY

SB 218-FN ORIGINAL REFERRAL _____ RE-REFERRAL

1. THIS INVENTORY IS TO BE SIGNED AND DATED BY THE COMMITTEE AIDE AND PLACED INSIDE THE FOLDER AS THE FIRST ITEM IN THE COMMITTEE FILE.
2. PLACE ALL DOCUMENTS IN THE FOLDER FOLLOWING THE INVENTORY IN THE ORDER LISTED.
3. THE DOCUMENTS WHICH HAVE AN "X" BESIDE THEM ARE CONFIRMED AS BEING IN THE FOLDER.
4. THE COMPLETED FILE IS THEN DELIVERED TO THE CALENDAR CLERK.

✓ DOCKET (Submit only the latest docket found in Bill Status)

✓ COMMITTEE REPORT

✓ CALENDAR NOTICE

✓ HEARING REPORT

✓ HANDOUTS FROM THE PUBLIC HEARING

✓ PREPARED TESTIMONY AND OTHER SUBMISSIONS

✓ SIGN-UP SHEET(S)

ALL AMENDMENTS (passed or not) CONSIDERED BY COMMITTEE:

✓ - AMENDMENT # 0735s
✓ - AMENDMENT # 1207s
✓ - AMENDMENT # 1216s
✓ - AMENDMENT # 1235s

ALL AVAILABLE VERSIONS OF THE BILL:

✓ AS INTRODUCED
✓ FINAL VERSION
_____ AS AMENDED BY THE HOUSE
✓ AS AMENDED BY THE SENATE

✓ OTHER (Anything else deemed important but not listed above, such as amended fiscal notes): FLOOR AMENDMENT 1283s - AMENDED FISCAL NOTE 28
COC REPORT 2392

DATE DELIVERED TO SENATE CLERK 6/21/12

_____
BY COMMITTEE AIDE

Revised 2011