EXHIBIT 1

HB 873 -- establishing minimum renewable standards for energy portfolios
Rep. Suzanne Harvey, Hills 21

Twenty-three states have adopted a renewable portfolio standard, or RPS. New Hampshire is the only New England state that has yet to put an RPS in statute. Adopting a NH RPS will allow us to be a player in the regional and national markets.

NH needs to enact its own RPS to be able to promote those energy resources that are of significance to NH and to provide additional market demand for renewables that provide jobs and tax revenue to our state.

NH renewable resources have indeed benefited from the existence of other states' RPS statutes but are also at risk if there aren't other markets in which they can participate. We can provide reliability for investors and companies right here without forcing them to depend on the status of other states' RPS rules.

What is an RPS? Simply stated, it requires the state's electricity providers to offer a specific percentage of their energy from renewable energy sources. Each state with an RPS customizes its definition of renewable energy, for example, some states' RPS might define "renewables" only as wind and solar.

In this bill, you'll see that in the interest of promoting a diversity of energy sources in NH, we've included a broad selection: wind; geothermal; fuel cells; ocean thermal, wave, current or tidal energy; methane gas; biomass; solar; and hydroelectric. These sources are grouped into four classes—two classes addressing new sources of renewable energy and two classes addressing already existing sources.

The mechanics of an RPS include a gradual but specific percent increase in the annual retail distribution of renewable energy for electricity until a final percentage goal for each class is achieved in 2025. You can see the chart for these increases in the bill.

An RPS is a market-based program in which utilities obtain annually a renewable energy certificate, or REC, for each unit (one megawatt hour) of electricity they generate from renewable sources. If RECs are available below a certain price, the utility can make an alternative compliance payment into a Renewable Energy Fund, which will be used to support renewable energy initiatives and administer the program. This mechanism essentially caps the cost of the program and is commonly used in other states.

You will be hearing a detailed explanation of the bill from representatives of DES and the PUC, and I'd appreciate it if you could hold your technical questions for them.

But I'd like to tell you why I think it's so important for this legislature to pass an RPS.

As I see it, the main purpose of an RPS is twofold:

--to decrease our dependence on fossil fuels (one of the main sources of greenhouse gases) and their volatile prices by generating a portfolio of clean alternative energies, and

--to promote the development of renewable energy sources in NH, thus driving economic development right here in the Granite State.

To emphasize an important point: These clean energy sources do not have the negative impact on our environment and our health that the burning of fossil fuels does.

Also, although some renewable sources such as wind and solar may vary in output and some such as geothermal and others are workhorses 24/7, together they provide a diversity of energy supply that can enhance system reliability.

RPS is not new to the legislature. Last year I filed a bill in the House to establish a study committee that would look at an RPS for NH. Sen. Fuller Clark and others co-sponsored that bill. The senator sponsored a Senate bill to establish an RPS in the state. I joined others in co-sponsoring that bill.

My study committee bill was the vehicle used in a committee of conference to establish the state Energy Policy Commission chaired by our colleague, Rep. Garrity. The Senate passed Sen. Fuller Clark's bill with an amendment so it could be forwarded to the ST&E committee in the House, where it would receive more attention. It did not pass in the House.

Last year's bill has been thoroughly worked over and is a more complete bill.
In addition, this year we have an economic impact study from UNH that you've received.

It's important for you to know that there have been numerous stakeholder meetings over the last months--this term and last term--to gather input from the various organizations that would be affected by an RPS. The bill's sponsors--along with DES, the PUC and the OEP--listened to this input, engaged in productive dialogues with the participants, and drafted the bill you have before you.

Throughout this vetting process I don't think there were any voices against NH adopting an RPS but rather different approaches to take. We have attempted to incorporate as many suggestions as possible and keep as many stakeholders as satisfied as possible.

This is one of the most, if not *the* most important bill our committee will deal with this year. You'll be hearing from many stakeholders and experts today. I hope you'll all participate in the committee work sessions scheduled and I hope you'll agree with me that the time is right for a New Hampshire RPS as public policy.

Thank you.

EXHIBIT 2

06-2904
03/04

STATE OF NEW HAMPSHIRE

In the Year of Our Lord Two Thousand Six

AN ACT establishing minimum renewable standards for energy portfolios.

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

1 New Subparagraph; Application of Receipts; General Revenue Exceptions; Compliance Fund. Amend RSA 6:12, I(b) by inserting after subparagraph (242) the following new subparagraph:

(243) Moneys deposited in the compliance fund established under RSA 374-G:6.

2 New Chapter; Electric Provider Renewable Energy Requirement. Amend RSA by inserting after chapter 374-F the following new chapter:

CHAPTER 374-G

ELECTRIC PROVIDER RENEWABLE ENERGY REQUIREMENT

374-G:1 Definitions. In this chapter:

I. "Certificate" means the document or documents, either electronic or physical, produced by the New England Power Pool Generation Information System ("GIS") or any successor mechanism that represents each megawatt-hour generated by a renewable energy resource, or such alternative documentation evidencing the same if the GIS is no longer maintained and no successor mechanism has been established.

II. "Commission" means the public utilities commission.

III. "Provider of electricity" means a provider of electricity to any retail customers located in this state, including without limitation, any provider of default service, or similar service, under state law, including under RSA 374-F, but shall not include any person which provides its own electricity from on-site generation.

IV. "Renewable energy resource" means the production of electricity from any of the following: (a) solar photovoltaic or solar thermal electric energy; (b) wind energy; (c) ocean thermal, wave, or tidal energy; (d) geothermal energy; (e) fuel cells utilizing renewable fuels; (f) hydroelectric energy; (g) biologically-derived methane gas from anaerobic digestion of organic materials from such things as yard waste, food waste, animal waste, sewage sludge and septage, and landfill waste; and (h) low-emission biomass technologies using non-construction and demolition debris derived from such fuels as brush, stumps, lumber ends and trimmings, wood pallets, bark, wood chips, shavings, and slash, including agricultural or food wastes, energy crops, biogas, or biodiesel, provided that the 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 a quarterly particulate emission rate of less than or equal to 0.02 lbs/Mmbtu.

374-G:2 Minimum Renewable Standards for Energy Portfolios.

I. Providers of electricity in this state shall obtain renewable energy certificates from renewable energy resources to meet the minimum renewable standards for its energy portfolio established by this section.

II. The commission shall establish a baseline that represents the minimum percentage of load of renewable energy resources that each electricity supplier must provide in year one of the program. The baseline requirement for each provider shall increase by an additional 0.5 percent in each year.

III. If an electricity provider represents to a retail customer that the electricity provider is selling to the retail customer energy that includes renewable energy resources, such representation shall include a disclaimer indicating the minimum renewable standard for the electricity provider established in paragraph II.

374-G:3 Renewable Energy Certificates.

I. The renewable energy program established in this chapter shall utilize the regional system energy certificate tracking system (GIS) administered by the Independent System Operator-New England, Inc. (ISO-New England) and the New England Power Pool (NEPOOL) or their successors. If the regional system energy certificate tracking system (GIS) administered by the ISO-New England is no longer operational or accessible, the commission shall develop an alternative certificate program after public notice and hearing to be designed comparable to the ISO-New England GIS to the extent possible.

II. The commission shall designate New Hampshire eligible renewable resources to the ISO-New England.

III. Renewable energy certificates (RECs) obtained for purposes of complying with this chapter shall come from generation within the ISO-New England region unless an external unit contract for delivery of the energy to the ISO-New England control area is executed and such contract includes associated transmission rights for delivery of the generation unit's electrical energy over the ties from an adjacent control area to the ISO-New England control area.

374-G:4 Sale or Exchange of Certificates. A certificate may be sold or otherwise exchanged by the renewable energy resource to which it was initially issued or by any other person or entity that acquires the certificate; however, the certificate may only be used once and must be used in the calendar year in which the generation represented by the certificate was produced. RECs shall not be divisible; those RECs used to meet other resource or environmental portfolio standards in other jurisdictions are not eligible for consideration under this chapter.

374-G:5 Information Collection. Within 180 days of the end of each calendar year, each electricity provider shall submit a report to the commission, in a form approved by the commission, documenting its compliance with the requirements of this chapter. The commission may investigate compliance and collect any information necessary to verify and audit the information provided to the commission by electricity providers.

374-G:6 Alternative Compliance.

I There is hereby established a compliance fund. This nonlapsing revolving special fund shall be continually appropriated to be expended by the commission in accordance with this section. The state treasurer shall invest the monies deposited therein as provided by law. Interest 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 monies paid into the fund under paragraph II of this section shall be used by and administered by the commission for the following purposes: supporting renewable energy projects, energy efficiency, and demand-side management.

II. An electricity provider shall discharge any annual shortfall in its portfolio requirements by making a payment into the fund at the rate of $50 per megawatt-hour of shortfall for calendar year 2007. The rate per megawatt-hour shall be published by the commission by January 31 of each year thereafter, and shall be equal to the previous year's rate adjusted according to the change in the previous year's northeast region consumer price index for all urban consumers as published by the Bureau of Labor Statistics, United States Department of Labor.

374-G:7 Rulemaking. The commission shall adopt rules as necessary, pursuant to RSA 541-A, to implement this program.

3 Effective Date. This act shall take effect January 1, 2007.

EXHIBIT 3

SB 314-FN-LOCAL – AS AMENDED BY THE SENATE

03/09/06 1248s
03/22/06 1460s

06-2904
03/04

STATE OF NEW HAMPSHIRE

In the Year of Our Lord Two Thousand Six

AN ACT establishing minimum renewable standards for energy portfolios.

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

1 Statement of Purpose. The general court finds that:

I. Increased use of renewable energy technologies and continued use of existing renewable energy technologies that decrease nitrogen oxide and particulate matter emission rates can reduce air pollution in the state and air pollution transported across state lines, and thereby improve air quality and help advance long-term climate change strategies.

II. Renewable energy technologies provide fuel diversity to the state and New England generation supply and have the potential to lower and stabilize future energy costs by reducing the region's dependence on imported fossil fuels such as natural gas and oil.

III. It is in the public interest to stimulate investment in new, lower emission, renewable energy technologies and investments in improving air emission quality from existing renewable energy technologies.

IV. It is in the public interest to support incentives to reduce New Hampshire's consumption of fossil fuels consistent with regional, national, and international policy on promoting renewable energy and which also have the potential of reducing the long-term cost of energy.

2 New Subparagraph; Application of Receipts; Compliance Fund. Amend RSA 6:12, I(b) by inserting after subparagraph (242) the following new subparagraph:

(243) Moneys deposited in the compliance fund established under RSA 374-G:6.

3 New Chapter; Electric Provider Renewable Energy Requirement. Amend RSA by inserting after chapter 374-F the following new chapter:

CHAPTER 374-G

ELECTRIC PROVIDER RENEWABLE ENERGY REQUIREMENT

374-G:1 Definitions. In this chapter:

I. "Certificate" means the electronic record produced by the New England Power Pool Generation Information System (GIS) its designee or successor, identifying each mega-watt hour generated by a renewable energy resource or any successor mechanism that represents each megawatt-hour generated by a renewable energy resource, or such alternative documentation evidencing the same if the GIS is no longer maintained and no successor mechanism has been established.

II. "Commission" means the public utilities commission.

III. "Compliance year" means a calendar year beginning January 1 and ending December 31, for which a provider of electricity must demonstrate that it has met the requirements of this chapter.

IV. "Eligible biomass technologies" means biomass technologies using as their primary fuel source non-construction and demolition debris derived material such as brush, stumps, lumber ends and trimmings, wood pallets, bark, wood chips, shavings, sawdust, and slash; and energy crops, biogas, or biodiesel; provided that the 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 a quarterly average particulate emission rate of less than or equal to 0.02 lbs/Mmbtu. The term "primary fuel source" means at least 90 percent of the total energy input into the generating unit, on an Mmbtu basis.

V. "End-use customer" means any person or entity in New Hampshire that purchases electrical energy at retail.

VI. "Historical generation baseline" means the average annual electrical production from the eligible renewable energy resources, stated in megawatt-hours (MWhrs), for the 3 calendar years 1995 through 1997, or for the first 36 months after the commercial operation date if that date is after December 31, 1994 (the "baseline period"); provided however, that the historical generation baseline shall be measured regardless of whether or not the average annual electrical production during the baseline period meets the eligible requirements of this paragraph.

VII. "Provider of electricity" means a provider of electricity to any end-use customer located in this state, including, without limitation, the local distribution company providing default service or similar service under state law, including RSA 374-F, but shall not include:

(a) A person who provides his or her own electricity from on-site generation which supplies electricity exclusively from renewable energy resources, qualifying small power production facilities, and qualifying cogeneration facilities as defined in RSA 362-A:1-a; or

(b) The provision of the internal electrical needs of any electrical generating station from its generation or from affiliate generation.

VIII. "Renewable energy resources" means new renewable energy resources – class I, incremental renewable energy resources – class I, or existing renewable energy resources – class II. An electrical generating facility selling its electrical output at long-term rates established before January 1, 2006 by orders of the commission under RSA 362-A:4 shall not be a renewable energy resource – class II, until the date on which it ceases to sell its electrical output at those original long-term rates.

IX. "Renewable energy resources – new-class IA" means the production of electricity from any of the following, provided the resource has a commercial operation date after January 1, 2006:

(a) Solar photovoltaic or solar thermal electric energy;

(b) Wind energy;

(c) Geothermal energy;

(d) Fuel cells utilizing renewable fuels;

(e) Ocean thermal, wave, or tidal energy;

(f) Biologically derived methane gas from anaerobic digestion of organic materials from such sources as yard waste, food waste, animal waste, sewage sludge, and septage, and landfill waste; and

(g) Eligible biomass technologies having a gross nameplate capacity of 50 megawatts (MW) or less, including any biomass unit whose primary fuel source was coal prior to January 1, 2006.

X. "Renewable energy resource – new-class IB" means the production of electricity from solar photovoltaic or solar thermal energy and an operation date after January 1, 2006.

XI. "Renewable energy resource – new incremental (class IC)" means the incremental output in any compliance year over the historical generation baseline, provided that such existing renewable energy resource (class II) was certified by the commission to have demonstrably completed capital investments after January 1, 2006 attributable to the efficiency improvements or additions of capacity that are sufficient to, were intended to, and can be demonstrated to increase annual electricity output. The determination of incremental production shall not be based on any operational changes at such facility not directly associated with the efficiency improvements or additions of capacity.

XII. "Renewable energy resources - existing (class IIA)" means the production of electricity from any of the following, provided the resource has a commercial operation date for electrical generation before January 1, 2006:

(a) Biologically derived methane gas from anaerobic digestion of organic materials from such things as yard waste, food waste, animal waste, sewage sludge and septage, and landfill waste;

(b) Eligible biomass technologies having a gross nameplate capacity of 25 MWs or less; and

(c) Municipal solid waste combustion technologies subject to RSA 125-M.

XIII. "Renewable energy resources – existing (class IIB)" means the production of electricity from hydroelectric energy that has a gross nameplate capacity of 5 MWs or less and are constricted in their operation by fish ladders or other similar fish facilities.

374-G:2 Minimum Renewable Standards for Energy Portfolios.

I. Providers of electricity in this state shall obtain renewable energy certificates from renewable energy resources to meet the minimum renewable standards for its energy portfolio established by this section or make payments as provided in RSA 374-G:6, II, III, and IV.

II. For the period of January 1 through December 31, 2007, during that calendar year

and in each subsequent calendar year through December 31, 2013 and as provided in RSA 374-G:4 of this chapter, a provider of electricity shall obtain renewable energy certificates from the various classes of renewable energy resources, defined in RSA 374-G:1, representing the following percentages of its total kilowatt-hours of electricity supplied to its end-use customers unless modified by the provisions in paragraph IV:

	2007	2008	2009	2010	2011	2012	2013	Thereafter
Class IA +/or C	0.5%	1%	1%	1%	2%	3%	4%	4%
Class IB	0.01%	0.02%	0.04%	0.08%	0.15%	0.20%	0.30%	0.3%
Class IIA	3%	4%	5%	6%	6%	6%	6%	6%
Class IIB	1%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%

III. On or about January 1, 2010, the commission shall open a docket to conduct a review of the requirements in paragraph II and make recommendations for any changes to the legislature to be effective after July 1, 2011. In the docket the commission may also determine the adequacy or potential adequacy of renewable energy resources to meet the percentage requirements of paragraphs II and III of this section. If the commission determines an inadequacy or potential inadequacy of supplies for the required percentages, the commission shall recommend to the general court a revised schedule of required percentages to achieve the purposes of this chapter.

IV. If a provider of electricity represents to an end-use customer that the provider of electricity is selling to the retail customer energy that includes renewable energy resources, such representation shall include a statement of the minimum renewable standard for the provider of electricity established in paragraph II. The minimum renewable energy percentages set forth in RSA 374-G:2, II shall be met for each electrical energy product offered to end-use customers, in a manner that ensures that the amount of renewable energy to end-use customers voluntarily purchasing renewable energy is not counted toward meeting such percentages.

V. Wholesale and retail electric suppliers under supply contracts executed by providers of electricity as of the effective date of this chapter shall be exempt from the requirements of paragraphs II-IV, provided however, that no exemption shall extend beyond 36 months after the effective date of this chapter. Under no condition during this transition period shall a minimum renewal standard obligation be shifted to another customer or customer class in order to compensate for a delay in implementation of the minimum renewal standard to another customer or customer class due to this exemption.

374-G:3 Renewable Energy Certificates.

I. The renewable energy program established in this chapter shall utilize the regional generation information system (GIS) of energy certificates administered by the Independent System Operator-New England, Inc. (ISO-New England) and the New England Power Pool (NEPOOL) or their successors. If the regional GIS certificate tracking system administered by

the ISO-New England is no longer operational or accessible, the commission shall develop an alternative certificate program, after public notice and hearing, designed to be as comparable to the GIS certificate tracking system as possible.

II. The commission shall designate in a timely manner New Hampshire eligible renewable resources to the ISO-New England.

III. Certificates obtained for purposes of complying with this chapter shall come from renewable energy resources within the ISO-New England region unless an external unit contract for delivery of the energy to the ISO-New England control area is executed and such contract includes associated transmission rights for delivery of the generation unit's electrical energy over the ties from an adjacent control area to the ISO-New England control area.

374-G:4 Sale or Exchange of Certificates. A certificate may be sold or otherwise exchanged by the renewable energy resource to which it was initially issued or by any other person or entity that acquires the certificate; however, the certificate may only be used once for compliance with the requirements of this chapter and may not be used for compliance with this chapter if used for compliance with any requirements of another jurisdiction. Except as otherwise provided in paragraphs II and III, certificates shall be used by providers of electricity for compliance with the requirements of RSA 374-G:2 in the calendar year in which the generation represented by the certificate was produced. Compliance with each year's RSA 374-G:2 requirement shall be determined with certificates issued in the certificate trading periods associated with the calendar year of compliance.

II. A provider of electricity may use certificates associated with renewable energy resource production during one calendar year for compliance with the requirements of this chapter in either of the 2 subsequent calendar years, provided such certificates:

(a) Have not been used for compliance in another jurisdiction and are used only once;

(b) Were in excess of those needed for compliance with this chapter in the year in which they were generated;

(c) Have not otherwise been, nor will be, sold, retired, claimed, or represented as part of electrical energy output or sale, or used to satisfy obligations in jurisdictions other than New Hampshire, demonstrated by retiring banked certificates in the compliance year in which they were generated; and

(d) Used by a provider of electricity do not exceed 30 percent of the provider's obligations under this chapter for the calendar year in which such certificates are used.

III. In addition to certificates produced in calendar year 2007, a provider of electricity may use renewable energy resources class I or class II certificates associated with generation during calendar year 2006 and those associated with generation during the first calendar quarter of 2008 for compliance with its calendar year 2007 obligations under RSA 374-G:2, provided:

(a) Renewable energy resources class I certificates are used for calendar 2007 class I obligations and renewable energy resources class II certificates are used for calendar year 2007 class II obligations; and

(b) No more than 30 percent of the 2007 calendar year obligation under RSA 374-G:2 of this chapter is met with such certificates.

374-G:5 Information Collection. Within 180 days of the end of each calendar year, each provider of electricity shall submit a report to the commission, in a form approved by the commission, documenting its compliance with the requirements of this chapter. The commission may investigate compliance and collect any information necessary to verify and audit the information provided to the commission by providers of electricity.

374-G:6 Alternative Compliance.

I. There is hereby established a compliance fund. This nonlapsing revolving special fund shall be continually appropriated to be expended by the commission in accordance with this section. The state treasurer shall invest the moneys deposited therein as provided by law. Interest 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 shall be used and administered by the commission for the following purposes: supporting thermal and electrical renewable energy initiatives, energy efficiency, and demand-side management including programs that reduce demand for both electricity and non-renewable fuels used in heat production and transportation, with the exception of funds collected relative to compliance with class IB. The moneys paid into the fund relative to compliance with class IB production of electricity from solar photovoltaic or solar thermal energy shall be used by and administered by the commission for supporting solar energy resources.

II. An electricity provider may discharge any annual class IA or IC portfolio requirements by making a payment into the fund of $0 per megawatt-hour of renewable energy obligation in 2007 dollars, adjusted annually by the annual change in the United States Bureau of Labor Statistics Consumer Price Index, which may be made instead of standard means of compliance with the statute. The revised rate per megawatt-hour shall be published by the commission by January 31 of each year.

III. An electricity provider may discharge any annual class IB portfolio requirements by making a payment into the fund of $0 per megawatt-hour of renewable energy obligation in 2007 dollars, adjusted annually by the annual change in the United States Bureau of Labor Statistics Consumer Price Index, which may be made instead of standard means of compliance with this chapter. The commission by January 31 of each year shall publish the revised rate per megawatt-hour.

IV. An electricity provider may discharge any annual class II portfolio requirements by making a payment into the fund of $0 per megawatt-hour of renewable energy obligation in

2007 dollars, adjusted annually by the annual change in the United States Bureau of Labor Statistics Consumer Price Index, which may be made instead of standard means of compliance with this statute. The commission by January 31 of each year shall publish the revised rate per megawatt-hour.

374-G:7 Application.

I. The commission shall certify generation facilities as either renewable energy resources class I or class II by issuing a determination within 45 days of receipt of an application. The application shall contain the following:

(a) Name and address of applicant;

(b) Facility location and NEPOOL GIS identification number;

(c) Description of the facility, including fuel type, gross generation capacity, commercial operation date, and, in the case of a biomass renewable energy resource, NOx and particulate matter emission rates and a description of pollution control equipment or practices proposed for compliance with applicable NOx and particulate matter emission rates; and

(d) Such other information as the applicant may provide to assist in the determination of the generating facility as a renewable energy resource.

II. Biomass facilities otherwise meeting the requirements of a renewable energy resource shall be certified by the commission subject to compliance with the applicable NOx and particulate matter emission standards. Each such renewable energy resource shall file with the commission within 45 days of the end of each calendar quarter an affidavit attesting to the renewable energy resources average NOx emission rate in lbs/Mmbtu for such quarter and the particulate matter emission rate test results, in lbs/Mmbtu produced in accordance with RSA 374-G:8. Upon receipt of verification of emissions from the department of environmental services, the commission shall notify the GIS of such renewable energy resource's eligibility for certificates and trading as a renewable energy resource in New Hampshire.

374-G:8 Verification of Emissions. Any source seeking to qualify as an eligible biomass technology shall verify emissions in accordance with the following methods:

I. For nitrogen oxide emissions, the source shall install and operate continuous emissions monitors which meet department of environmental services' standards as codified in rules.

II. For particulate matter emissions, the source shall conduct stack tests in accordance with the New Hampshire department of environmental services' approved methods. Such tests shall be conducted annually for a period of 3 years. Upon completion of 3 annual tests which demonstrate compliance with the particulate matter emission rate specified in RSA 374-G:1, IV, the source may request, subject to New Hampshire department of environmental services' approval, to revise the particulate matter stack testing frequency to once every 3 years.

374-G:9 Rulemaking. The commission shall adopt rules as necessary, pursuant to RSA 541-A, to implement this program.

4 Effective Date. This act shall take effect 60 days after its passage.

EXHIBIT 4

hec

Date: April 17, 2007
Time: 1:15 p.m.
Room: State House Rooom 100

The Senate Committee on Energy, Environment and Economic Development held a hearing on the following:

HB 873-FN-L establishing minimum renewable standards for energy portfolios.

Members of Committee present:
Senator Fuller Clark
Senator Hassan
Senator Cilley
Senator Sgambati
Senator Barnes
Senator Odell

Senator Martha Fuller Clark, D. 24: I'd like to have the attention of everyone here before I actually have Senator Hassan open the hearing on HB 873. We have allowed two hours for this bill. You will know that the House Committee had an all-day hearing on this legislation, at which the members heard overwhelming support for the RPS bill. So far, looking at our list, that no one has signed up in opposition to this bill. So when many of you might like to speak, it's really important that we bring this hearing to a close around quarter of three, if at all possible. So I really would encourage you, if you have written testimony, to hand it in; but we'd like to be able to move this bill forward.

And so I just wanted -- and the first part of the hearing testimony will be an explanation for the Committee members from both Joanne Morin, from the Department of DES, who has provided extraordinary leadership as we have shaped and reshaped and reshaped this legislation, and also then from Ross Gittell, who will provide the information that looks at the economic impact. And then, after, but we'll let the sponsors or co-sponsors to be able to speak first, just to open the hearing, and then we will call on other individuals. So just so that you have a sense of how we're going to proceed, I wanted to lay that out at the very beginning. And now I would like Senator Hassan to open the hearing.

WHEREUPON, the hearing was formally opened by Vice-Chair, Senator Margaret Hassan, who recognized Senate sponsor, Senator Martha Fuller Clark, to introduce the legislation.

Senator Martha Fuller Clark, D. 24: I'd like to ask Susan -- Suzanne Harvey to come up with me, since we are the lead sponsors in both the House and the Senate.

Senator Margaret Wood Hassan, D. 23: And I should have said the prime -- Senate sponsor; Representative Harvey is the prime sponsor. Thank you.

Senator Martha Fuller Clark, D. 24: Representative Harvey and I are here today to speak in favor of HS 873-FN-L. I wanted to let you know that the five other New England states have had a renewable portfolio standards legislation on their books for a number of years. There has been an effort in the past for New Hampshire to also provide such incentive as part of state policy. I believe that our current legislation, which has really been crafted after looking at the successes and strengths of the other RPS legislation, not only in New England but in New Jersey and New York, that this is an excellent piece of legislation, because there were fourteen months put into crafting this legislation and many, many meetings with a variety of stakeholders to bring forth a very complex bill that we have before you today.

I think it's important to understand that the purpose of the bill is to spur economic development, reduce our dependence on imported fuel, mitigate energy prices and supply volatility, and reduce air emissions from our energy supply. I also think it's important to realize that the credits, that they have been formulated in this bill are directed so that New Hampshire can take maximum advantages of the many renewable energy resources that are available in this state. And that was a key component as we moved forward in this bill.

As I said to you, we have had excellent input from the Department of Environmental Services. In moving this bill forward, I have had extraordinary education, as I'm sure Suzanne feels as well, about this whole initiative and how, um, and why it's so necessary that we bring it forward to you at this time. Certainly, we saw last year what happened with our over-dependence on natural gas and home-heating oil from foreign sources, and we had no, or very limited alternatives in place to address this. It also clearly fits it in with the Governor's plan to have us move our energy availability, in terms of generation, to come from "25 x 25" of renewable resources.

You will see at the end of the bill as amended in the House that there is a fiscal note attached to it, and I would just like to point out to you the

language in that fiscal note at the beginning ... on page 12, which says that: "The Public Utilities Commission and the Department of Environmental Services states that this bill may increase state, county and local expenditures by an indeterminable amount in FY2008 and each year thereafter." And whether or not this bill will have no fiscal impact on state and county and local revenues, the issue is that, that this bill will only begin to have a financial impact in the year 2010, more than likely, and so that currently there is no impact on the state budget.

You will have the opportunity to hear from Professor Gittell from the UNH Whittemore School of Business and Economics, that shows how a small short-term cost is part of this legislation. But the whole purpose is to position us in the long term to be able to have lower energy costs in this state. There is no perfect bill, and we recognize that there may be the need to review this legislation in the future and make some changes or adjustments, and you will see that there is language in the bill that calls upon the PUC to re-evaluate this program in the year 2013.

So, with that, I'm going to conclude my testimony and turn it over to Suzanne Harvey, Representative Harvey, who has done a most admirable job of shepherding this bill through the House. So, thank you very much, and thank you, Suzanne.

Representative Suzanne Harvey, Hills/21: Thank you, Madam Chair, members of the Committee. For the record, I'm Representative Suzanne Harvey from Hillsborough 21, which is Nashua's Ward 2. And I, without trying to repeat anything that the Senator said, I do want to point out that I think HB 873 and the RPS is one important piece, one part of the solution to New Hampshire's energy future. There's a lot of different parts that have to fall together before New Hampshire is really secure with its energy, but this is a big part of it. And to me, a vote to pass this RPS is a vote for clean, renewable energy in the Granite State; a vote for in-state economic development, and a vote for energy diversity and less dependence on imported fuels.

As the Senator said, we had hours and hours of stakeholder meetings over many, many months. And among the people who participated in that, including the sponsors and other representatives, we had representatives from the utilities, trade associations, renewable developers, energy suppliers and environmental groups, plus significant help from DES, the PUC, the Office of Energy Planning, and the Office of Consumer Advocate. So we had a real big cross-section of stakeholders from all different angles coming to say what they would like in the bill, every one was listened to, all input was

considered, and we looked at what was the best for the interests of the Granite State. It was truly a collaborative effort in the truest sense.

The House Science, Technology and Energy Committee, of which I am vice-chair, held a full-day hearing for the bill in Reps' Hall, where we heard overwhelming support for the bill. Especially in terms of a New Hampshire RPS; there wasn't anyone who spoke against having an RPS in the state. The Committee voted 14 to 1, Ought to Pass, and then the House passed it, 253 to 37, which we were all very, very pleased with.

And, also, since New Hampshire is the only state in New England not yet to have an RPS, we had the benefit of reviewing other states' RPS plans and looking at what was working, what wasn't working, and structuring our bill to try to make it as best as we can for the future, for now and the future. We also had the economic analysis which was a great help, and you'll hear more about that later.

The RPS, what is it? Simply stated, it requires the state's electricity providers to offer a specific percentage of their energy from renewable energy sources. And the providers qualify for RECs, or renewable energy certificates, for each megawatt hour generated from renewable sources. This is where we hope to see a big incentive to our existing renewable sources so that they can be players in the regional market, and also to incent newcomers to come develop renewable facilities in the state. This is a regional market program, administered by ISO-New England, which tracks each megawatt of energy generated onto the electrical grid and issues the certificate. The certificates can be sold to other entities that cannot meet their renewable requirement.

So our proposed RPS program starts at a baseline percentage of renewables required, starting in 2008, and goes out to 2025, going up in percent where we reach almost 24 percent of our energy coming from renewable. And by including a broad selection of renewable sources, such as wind, solar, geothermal, biomass, hydroelectric and others, as eligible for RECs, the New Hampshire RPS maximizes our natural resources, giving parity to our existing sources by incenting management to add incremental capacity. And, again, just as important, we hope this will encourage new projects to be built. Personally, I have been getting calls from people out of state, really interested in this and wondering what's happening with the bill.

In conclusion, I hope that you will support HB 873 and allow New Hampshire to join the regional RPS market and ensure that Granite-Staters will have the benefit of increased use of clean, renewable energy, will have good jobs coming with this, and tax revenue. Joining the House in its Ought-to-Pass

vote for the RPS is a vote for economic development, energy security and reduced dependene on imported fuels, a hedge against rising and volatile energy costs, and a reduction of greenhouse gas emissions in our state. Thank you.

Senator Margaret Wood Hassan, D. 23: Questions. Senator Barnes.

Senator John S. Barnes, Jr., D. 17: Thank you, Madam Chair. The other New England states have this, is that correct?

Representative Suzanne Harvey: Yes.

Senator John S. Barnes, Jr., D. 17: Could you tell me what their build-out year is, what's ...

Representative Suzanne Harvey: Oh, I think each one is different. Every state customizes, number one, what they ... what they will accept as a renewable energy for credit, and also customizes the percentages, when they start and where they end, and at what year. So they're all different.

Senator John S. Barnes, Jr., D. 17: Thank you.

Senator Margaret Wood Hassan, D. 23: Any further questions. Seeing none, thank you both for your testimony.

Representative Suzanne Harvey: Thank you.

(Please see written testimony of Representative Harvey attached hereto as Attachment #1.)

Senator Margaret Wood Hassan, D. 23: And I think while they come back up, Joanne Morin and Bob Scott from DES.

Mr. Robert Scott, Director, Air Resources Division, NH Department of Environmental Services: Good morning -- ah, excuse me, good afternoon. My name is Bob Scott, I'm the director of the Air Resources Division with the New Hampshire Department of Environmental Services. I have some information being passed out, and, Senator Barnes, we have a graphic that shows exactly, I think, what you just asked that will answer your question directly.

Senator John S. Barnes, Jr., D. 17: Thank you very much.

Director Robert Scott: Very briefly, and again I know we're on a very quick time schedule here, so I'll try to hit some highlights that maybe haven't been hit as much on an RPS, Renewable Portfolio Standard. A couple things that I think you all know this from other hearings: obviously, New Hampshire is well placed for renewables, biomass, hydro, wind, tidal; there's a lot of things going on that can be, and should be, I think, the New Hampshire advantage. Fuel diversities, as you're aware, is a large concern in making sure we have a good energy portfolio. This goes towards that goal. Energy independence, which has been mentioned, is extremely important. Our estimate is that New Hampshire, in excess of $500 million, or half a billion dollars a year, go outside or offshore for fossil fuels. That's a lot of money that could potentially be reinvested in the state with a program like Renewable Portfolio Standards. I want to pose that question.

Also, another good advantage, other than certainly -- and I apologize for not mentioning this, the Department of Environmental Services, clearly clean air, as the air director, is one of my goals, and this is what we think helps a lot in this direction. Also, on climate change. You've heard a lot about climate change; this is a real tangible thing we can do, right now, to help address climate change; renewable energy sources that are in this bill, all are climate-neutral, yet produce power rather than adding to the climate issue with greenhouse gases.

Similarly, this bill -- I have called it in the House an "insurance policy." Why I say that is, this is a hedge; the more renewable energy you have in your portfolio as a state, the less susceptible you are to changes in fossil fuels, whether it's foreign issues, whether it's a war or crises in other parts of the globe, or a natural disaster like a "Katrina." So I have characterized this in the past, and I think it still is a fitting characterization, that an RPS is like an insurance company (sic): yes, it will cost you something, just like an insurance policy does; but it also, the reason why you pay into an insurance policy is that you have a good feeling that you're going to save money in the long term by insuring against these type of fluctuations. And that's exactly what this does.

We do have UNH here, and Ross Gittell, and he'll elaborate on that. Briefly, again, I know this has been discussed, that the program itself would set a percentage of all power sold in New Hampshire would have to meet the standards for renewable energy, and this would ratchet up in time. Given that as power goes on the grid, it's a regional grid, and you can't know where this electron came from; there's a separate system called a "renewable energy credit," or a "REC" you'll hear discussed that is the commodity that's sold.

The New Hampshire version of this RPS -- again, there's 23 other states that have done this already -- looks at not only incentivizing new renewable projects, but the thought was to also make sure that existing renewable energy providers here in the state are viable, also. There didn't seem much sense in incenting new development if the old development doing the same thing goes away.

This is not a free ride. For biomass plants, and again, I can talk about air pollution, New Hampshire has strict particulate matter and NOx controls that are required in order to certify for the New Hampshire program. And, similarly, even for the hydroelectric facilities that qualify, there's requirements for fish ladders. So these are expenditures, and there's a requirement for these sources to go above and beyond what they normally perhaps would be required.

As I mentioned, the REC market is a regional market. And with that, other states, facilities in other states, may be able to qualify and purchase New Hampshire credits. Similarly, (indiscernible) right now, Whitefield Power & Light in Whitefield, New Hampshire, and the new Northern Wood Project in, at Portsmouth, the old Schiller Station, both are selling into other states' markets right now. But that's where, again, what we tried to do, this bill has by some been criticized being: gee, this is a little complicated. Well, one of the reasons is the bill attempts to strike a balance: on one level we want more renewable energy for all the reasons I just discussed; on the other hand, we want to direct as much as possible, keeping interstate commerce regulations in mind, to direct these same funds to New Hampshire where possible. So with that, we have different classes, different categories, and, yes, frankly, this complicates the bill a little bit, but the intention is to have New Hampshire money, as much as possible, go into New Hampshire facilities. And that's the balance. As a free-market economist -- and I won't speak for Ross Gittell who will speak soon here -- generally, they would say no barriers whatsoever and let the market do its thing. But there's the tension right there; and that's why the bill is a little bit more complicated than some might suggest.

To assure again, that we get the percentages right, how we do this right, as mentioned, there are three required review periods where the Public Utilities Commission is required to open a docket and look at the program and make sure it's doing what we expect it to do; make sure the percentages are correct, make sure the prices make sense for New Hampshire; the costs, if there are any, or the benefits. And that's required at three different times: 2011, 2018 and 2025; and they're required to make recommendations to the General Court. And it's our hope to be -- again, we know this is probably not perfect,

we want to move ahead; we spent a lot of time on this, and this is our hope to, okay, if we do need to make a correction, there's a mechanism in place.

A couple other minor points. A lot of the comments we received over the past two years while working on this type of bill include some comments that long-term purchase power agreements could be a benefit to the ratepayers, so in this bill there's not a requirement, but there's ability for the voluntary use of long-term contracts. So this is removing a potential regulatory barrier, letting those who wish to enter into these contracts do that. Again, it's not a requirement.

Similarly, there are many who have commented that thermal energy from renewable sources, where are they, where are they in this mix? We agree that's an important part of this; the concern is, however, that's a very complicated part of this, and so the response was to put in here extra language to require a study to look at that very thing. So, again, how much can you do in one bill. Those are some of the major comments that have been done.

As has been mentioned, this is going on two years' worth of effort. Last year there was SB 314 for a renewable portfolio bill; we literally had dozens of stakeholder organizations involved, all supporting this bill. So, in summary, again, I think not only-- clearly, again we're the environmental agency, this bill is good for the environment; it really can be good for the New Hampshire economy, and I think that's -- given the world situation, our energy situation, those are important considerations.

In the packages that you have, again, are our testimony letter; we also have handouts of the report that UNH worked at our request, looking at the economics of an RPS. In the House last year, one of the House members and committee, in committee, made the comment: gee, this is good, I'm hearing a lot of environmental and conservation groups saying RPS is good for New Hampshire, I'd really like an economist to tell me this is good for New Hampshire; and I said, you know, you're right. So over the summer we worked with UNH and he was able to do this study which he'll talk about soon.

Also in your handout is a -- in 2002 there was a study on the economics of Renewable Portfolio Standards in the low-grade wood products industry by Eric Kingsley, and I gave you just the executive summary, along with, on the bottom there's a web site, also, so if anybody wants to see the full report. But that also bears out that financially this makes sense for New Hampshire. And, finally, I've done most the talking, but Joanne Morin here on my staff has been the brains of the outfit, as has been mentioned, and certainly within

the constraints of time we have a handout with some of the highlights of the bill, again, kind of summarizing it, but we can answer any detailed questions that you have. I don't want to cut your questions short; I just want to move along for time. So, with that, I'll end my comments, but certainly we're here for questions. And, again, we would like to bring the UNH professors to talk about the economics.

Senator Martha Fuller Clark, D. 24: I do have a question for Joanne Morin, and that is, could you briefly share with us what were some of the changes that were made in the House amendment?

Ms. Joanne Morin, New Hampshire Department of Environmental Services: The changes that were made were that the percentage for new renewables was increased over time; the percentage had stopped at 2015, it was moved up a little bit sooner, I think by one year, and increasing out to 2025, balanced by PUC reviews to see how the cost of RECs are going and see if this working in the way we thought it would, economically, so that we feel we have sort of a mechanism if it doesn't work as predicted.

Other major, we did add two more PUC reviews as well; people really thought that was a good mechanism to keep tabs on the bill and be able to adjust it over time. The purchase power agreements are long-term contracts that Bob Scott mentioned. The provision to allow those on a voluntary basis was added to the bill. In the bill that was passed ...the bill that was passed last year out of the Senate Committee because it didn't get amended in the House, there were discussions of further amendments, a municipal solid waste was one of the qualifying renewable energy resources, and that is no longer in the bill, after House discussion.

There was some slight refining of the hydroelectric category, making sure that there's adequate fish passage and language to that effect. There was a slight modification to Class II on the solar replacement; it used to say replacement of electric hot water with either the solar or biomass renewable resources. We were supportive, actually, of having that, the biomass renewable resources for replacing electric hot water, but there was a problem with that in that there is, um, outdoor wood boilers are becoming an issue and may be an issue for the State, they're uncontrolled. Bob Scott can speak to it better than I can. DES has a concern with how we're going to regulate those, and this might have been interpreted to give actually an incentive to outdoor wood burners and we need to deal with that before we get this into this bill. So we needed to take it out for now, because of that potential, unintended consequence.

We adjusted the alternative compliance payments. As you know, how you comply with this bill is either by buying RECs on the market; if RECs are not available because of a maximum price, the electric supplier can pay into an alternative compliance payment; it's basically a price cap on this, it's very common in RPS bills. And we wanted to -- we're trying to make a regional market and so we just matched our payments for new renewables to the Massachusetts market to make them more fluid and joint regional market that seems to be driving the prices as the mass market. But those are very slight adjustments.

And then, Bob Scott also spoke to the thermal study committee, and the thermal energy is energy to produce heat, if you're not familiar with that term. So, wood-pellet stoves for heating is the part that we'd like to try to get some incentive on the thermal side; in other words, producing heat with renewables. This is an electric Renewable Portfolio Standard for that study committee. So those are the main changes.

Senator Martha Fuller Clark, D. 24: Are there other questions for either Bob Scott or Joanne Morin? Senator Odell.

Senator Bob Odell, D. 8: Thank you, Madam Chair. Tell me a little bit about the fish ladders, and how important that is, and ... whether or not we've addressed the right kind of fish and things in this, I've heard we might not have, and --

(Laughter.)

Ms. Joanne Morin: I'll try. We might have to defer to stakeholders. But the idea being that we were -- the concept behind it is to incent those hydroelectric facilities that are more at risk of not being able to compete economically because they have additional requirements or that they're just very small, so that the economics are more difficult. So, and also there's a push-and-pull on hydro; you know, you know, some people think any hydro-electric is very positive renewable energy. There are some that feel that there's a environmental tradeoff in terms of impacts to streams and fishways and fish and so forth.

So what this says is that the ones that would get this RPS additional incentive would be ones that actually have both fish ladders for wild fish to migrate up and downstream. The word that was used would include things like migrating eels as well as things like salmon that spawn upstream, as opposed to eels that live upstream and go to the ocean to breed. So it's trying to do joint, as I understand it, and a stakeholder may have to -- I'm not an expert, but that's I think the layman's explanation.

Director Robert Scott: "Dianadromous" (laughing).

Ms. Joanne Morin: Diana ..., yeah. Which would include both the eels and the salmon; in other words, both the eels that need to come down and the salmon that need to come up to spawn.

Director Robert Scott: So the language now allows free flow of fish going both ways, basically.

Ms. Joanne Morin: Both ways. So we believe these to be the most -- you know, that's a lot of investment for a small dam, and those to warrant an economic incentive.

Senator Martha Fuller Clark, D. 24: Yes, follow-up.

Senator Bob Odell, D. 8: How do we get to the five megawatts, we're talking about hydro; who's included or who's not included?

Ms. Joanne Morin: We looked at that, it includes a large -- I don't have the percentage off the top of my head; we did look at New Hampshire's facilities, we believe it includes a large percentage, you know, greater than three-quarters of the facilities in New Hampshire. There are some large facilities in New Hampshire that would not be included. And we also feel there is relatively smaller competition from the other states at that level, so that's one consideration. Kind of a little bit of a favoring New Hampshire facilities.

Is it a scientific number, five versus six or seven? No. I can't say that it is. A little bit more of a level of magnitude in terms of being a very small number that everyone was comfortable with that tried to bring in as many small hydro projects in New Hampshire.

Director Robert Scott: And, again, as I mentioned, we were trying to tailor this as much as possible to New Hampshire; that overall we're worried about -- there's a concern that perhaps Quebec Hydro plants could just -- we'd basically be sending all our money to Quebec, and we didn't think that was such a good idea, so we were setting a limit, basically.

Senator Bob Odell, D. 8: Thank you. Thank you, Madam Chair.

(Please see above-referenced NH Department of Environmental Services packet attached hereto as Attachment #2.)

EXHIBIT 5

Date: February 14, 2006
Time: 3:55 P.M.
Room: LOB RM 102

The Senate Committee on Energy and Economic Development held a hearing on the following:

SB 314-FN-L establishing minimum renewable standards for energy portfolios.

Members of Committee present: Senator Odell
Senator Letourneau
Senator Boyce
Senator Bragdon
Senator Burling

The Chair, Senator Bob Odell, opened the hearing on SB 314-FN-L by calling upon the prime sponsor, Senator Fuller Clark to introduce the legislation.

Senator Martha Fuller Clark, D. 24: Thank you.

Senator Bob Odell, D. 8: Good afternoon.

Senator Martha Fuller Clark, D. 24: Thank you, very much, Senator Odell and members of the Committee. For the record, I'm Senator Martha Fuller Clark. I represent District 24, the City of Portsmouth and the surrounding seven communities. I'm here today as the prime sponsor for SB 314, which is to establish minimal renewable portfolio standards for the State of New Hampshire.

And before I begin, I just want to make sure that you have in front of you, it is not the official copy because as you're well aware, this hearing was moved up a week. But we do have this version. It says, amended 02/14/06, and I have additional copies here, they're redlined, if you would like them.

Please see Senator Martha Fuller Clark's Amended Legislation, dated 2-14-06, attached hereto and referred to as Attachment #1.

Senator Martha Fuller Clark, D. 24: No. And I'll tell you why. I think it has to do with the fact that all the other states already have their renewable energy standards in place. We've seen some companies here in New Hampshire going to Massachusetts, and going to Connecticut to be able to take advantage of those certificates, rather than making it happen here within the state. And, I think, given the scenario of the last six months, which we might not have predicted a year ago, then it makes sense to be able to move ahead as quickly as possible to allow all of these different renewable energy sources to have a crack at the support that this legislation would provide. And I think you're going to hear from a number of very innovative businesses and industries today, and the sooner that we could serve them; I think it will be better for the New Hampshire economy, better for the job market, and better our diversity of energy and of the cost process.

Senator Bob Odell, D. 8: Any other questions? Senator Letourneau.

Senator Robert J. Letourneau, D. 19: Just one. Thank you, Senator. Who wrote this language?

Senator Martha Fuller Clark, D. 24: Who wrote this language? Um, well, it was put together by Joanne Morin and Bob Scott in DES. But we also had, along the way, we've probably had three or four or five different work sessions and we have had different stakeholders suggest language. A lot of it was taken from Rhode Island, some taken from New Jersey, some taken from Connecticut, folded in to create the bill that you have before you today.

Senator Robert J. Letourneau, D. 19: Thank you, very much.

Senator Bob Odell, D. 8: Thank you, very much. Any other questions? Seeing none, thank you.

Senator Martha Fuller Clark, D. 24: You're very welcome. Thank you.

Senator Bob Odell, D. 8: I'm just going to go down the list of legislatures. Senator John Gallus has signed in, in favor, but does not wish to speak. Senator Bragdon has signed in, in favor, but does not wish to speak. Representative Susan Harvey has signed in, in favor, but does not wish to speak, and Representative Larry Ross is here, and has signed in, in favor, but does not wish to speak. And I'll call upon Alice Chamberlin from the Governor's office. She will speak in favor of the legislation. Good afternoon.

Alice Chamberlin, Governor's Office: Good afternoon. Thank you Senator, and members of the Committee. Before I read a letter from the

EXHIBIT 6

HB 873-FN-LOCAL – AS INTRODUCED

2007 SESSION

07-0208
06/04

HOUSE BILL ***873-FN-LOCAL***

AN ACT establishing minimum renewable standards for energy portfolios.

SPONSORS: Rep. Harvey, Hills 21; Rep. Phinizy, Sull 5; Rep. Borden, Rock 18; Rep. J. Garrity, Rock 6; Sen. Fuller Clark, Dist 24; Sen. Bragdon, Dist 11

COMMITTEE: Science, Technology and Energy

ANALYSIS

This bill:

I. Establishes minimum electric renewable portfolio standards.

II. Requires the commission to make reports to the general court.

III. Requires the use of renewable energy certificates.

IV. Establishes a commission to study minimum renewable standards for energy portfolios.

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.

07-0208
06/04

STATE OF NEW HAMPSHIRE

In the Year of Our Lord Two Thousand Seven

AN ACT establishing minimum renewable standards for energy portfolios.

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

1 New Chapter; Electric Renewable Portfolio Standard. Amend RSA by inserting after chapter 362-E the following new chapter:

CHAPTER 362-F

ELECTRIC RENEWABLE PORTFOLIO STANDARD

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

362-F:2 Definitions. In this chapter:

I. "Biomass fuels" means plant-derived fuel including clean and untreated wood such as brush, stumps, lumber ends and trimmings, wood pallets, bark, wood chips or pellets, shavings, sawdust and slash, agricultural crops, biogas, or liquid biofuels, but shall exclude any materials derived in whole or in part from construction and demolition debris.

II. "Certificate" means the record that identifies and represents each megawatt-hour generated by a renewable energy generating source under RSA 362-F:6.

III. "Commission" means public utilities commission.

IV. "Customer-sited source" means a source that is interconnected on the end-use customer's site of the retail electricity meter in such a manner that it displaces all or part of the metered consumption of the end-use customer.

V. "Default service" means electricity supply that is available to retail customers who are otherwise without an electricity supplier as defined in RSA 374-F:2, I-a.

VI. "Department" means the department of environmental services.

VII. "Eligible biomass technologies" means generating technologies that use biomass fuels as their primary fuel, provided that the generation unit:

(a) Has a quarterly average nitrogen oxide (NOx) emission rate of less than or equal to 0.075 pounds/million British thermal units (lbs/Mmbtu), and an annual average particulate emission rate of less than or equal to 0.02 lbs/Mmbtu as measured and verified under RSA 362-F:12; and

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

VIII. "End-use customer" means any person or entity that purchases electricity supply at retail in New Hampshire from another person or entity but shall not include:

(a) A generating facility taking station service at wholesale from the regional market administered by the independent system operator (ISO-New England) or self-supplying from its other generating stations; and

(b) Prior to January 1, 2010, a customer who purchases retail electricity supply, other than default service under a supply contract executed prior to January 1, 2007.

IX. "Historical generation baseline" means the average annual electrical production from a facility other than hydroelectric, stated in megawatt-hours, for the 3 years 2004 through 2006, or for the first 36 months after the facility began operation if that date is after December 31, 2001; provided that the historical generation baseline shall be measured regardless of whether or not the emissions from the facility during the baseline period meets emissions requirements of the class. Historical generation baseline for incremental hydroelectric under RSA 362-F:4, I(i) shall represent the historical average annual production over the life of the plant not attributable to the upgrade or expansion as determined during the certification process.

X. "Methane gas" means biologically derived methane gas from anaerobic digestion of organic materials from such sources as yard waste, food waste, animal waste, sewage sludge, septage, and landfill waste.

XI. "New England control area" means the term as defined in ISO-New England's transmission, markets and services tariff, FERC electric tariff no. 3, section II.

XII. "Primary fuel" means a fuel or fuels, either singly or in combination, that comprises at least 90 percent of the total energy input into a generating unit.

XIII. "Provider of electricity" means a distribution company providing default service or an electricity supplier as defined in RSA 374-F:2, II.

XIV. "Renewable energy source" or "renewable 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). 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. "Year" means a calendar year beginning January 1 and ending December 31.

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 customer 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%	1.0% Additional per year
Class II	0.0%	0.0%	0.04%	0.08%	0.15%	0.2%	0.3%	0.3%
Class III	3.5%	4.5%	5.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Class IV	0.5%	1%	1%	1%	1%	1%	1%	1%

362-F:4 Electric Renewable Energy Classes.

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

(a) Wind energy.

(b) Geothermal energy.

(c) Fuel cells utilizing hydrogen derived from biomass fuels or methane gas or from electricity generated by renewable sources.

(d) Ocean thermal, wave, current, or tidal energy.

(e) Methane gas.

(f) Eligible biomass technologies having a gross nameplate capacity of 50 megawatts or less.

(g) The equivalent displacement of electricity, as determined by the commission, by end-use customers, from solar and biomass hot water heating systems used instead of electric hot water heating.

(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. Within 45 days of receiving a request for certification under this subparagraph the commission shall employ a non-adjudicative process and complete its certification review. The determination of incremental production shall not be based on any operational changes at such facility not directly associated with the efficiency improvements or additions of capacity.

(j) The production of electricity from a class III or IV source that has been shut down for at least 3 years and significant capital investment directly related to restoring generation or increasing capacity has been made to restart the facility including department permitting requirements for new plants.

II. Class II (New Solar) shall include the production of electricity from solar technologies, provided the source began operation after January 1, 2006.

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.

IV. Class IV (Existing Small Hydroelectric) shall include the production of electricity from hydroelectric energy, provided the source began operation prior to January 1, 2006, has a gross nameplate capacity of 5 MWs or less, and has installed federally or state mandated upstream and downstream fish passages.

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, I.

VI. After notice and hearing, the commission may modify the class III and IV renewable portfolio standards requirements under RSA 362-F:3, I for calendar years beginning January 1, 2012 such that the requirements are equal to an amount between 85 percent and 95 percent of the reasonably expected potential annual output of available eligible sources.

362-F:5 Commission Review and Report. Commencing no later than January 31, 2011, 2018, and 2025 the commission shall conduct a review of the class requirements in RSA 362-F:3, I and other aspects of the electric renewable portfolio standard program established by this chapter. Thereafter, the commission shall make a report of its findings to the general court by November 1, 2011, 2018, and 2025, respectively, including any recommendations for changes to the class requirements or other aspects of the electric renewable portfolio standard program. The commission shall review, in light of the purposes of this chapter and with due consideration of the importance of stable long-term policies:

I. The adequacy or potential adequacy of sources to meet the class requirements of RSA 362-F:3;

II. The class requirements of all sources in light of existing and expected market conditions;

III. The potential addition of a thermal energy component to the electric renewable portfolio standard;

IV. Increasing the class requirements relative to classes I and II beyond 2025;

V. The possible introduction of any new classes or the consolidation of existing ones;

VI. The experience with and an evaluation of the benefits and risks of using multi-year purchase agreements for certificates, along with purchased power, relative to meeting the purposes and goals of this chapter at the least cost to consumers and in consideration of the restructuring policy principles of RSA 374-F:3; and

VII. Alternative methods for renewable portfolio standard compliance, such as competitive procurement through a centralized entity on behalf of all consumers in all areas of the state.

362-F:6 Renewable Energy Certificates.

I. The electric renewable portfolio standard program established in this chapter shall utilize the regional generation information system (GIS) of energy certificates administered by ISO-New England and the New England Power Pool (NEPOOL) or their successors. If the regional GIS certificate tracking program administered by the ISO-New England is no longer operational or accessible, the commission shall develop an alternative certificate program, after public notice and hearing, designed to provide at least the same information on the type and generation of renewable energy resources as the GIS certificate tracking program.

II. The commission shall establish procedures by which electricity 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. The production shall be monitored and verified by an independent entity designated by the commission, which may include electric distribution companies.

III. The commission shall designate in a timely manner New Hampshire eligible renewable sources together with any conditions pursuant to this chapter to the certificate program administrator under RSA 362-F:3, with such sources being the recipient of all certificates issued for purpose of this chapter.

IV.(a) Certificates issued for purposes of complying with this chapter shall come from sources within the ISO-New England region unless otherwise specified or unless:

(1) A unit-specific bilateral contract for sale and delivery of a source's electrical energy to the New England control area is in place for the time period during which renewable certificates are generated; and

(2) Such contract includes associated transmission rights for delivery of the source's electrical energy over the ties from an adjacent control area to the New England control area.

(b) The commission may impose such other requirements as it deems appropriate, including methods of confirming actual delivery of the electrical energy into the New England control area.

362-F:7 Sale, Exchange, and Use of Certificates.

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.

II. Certificates from behind-the-meter distributed generation shall be initially issued to the owner of the customer-sited source or their designee, regardless of whether the source has received assistance from the renewable energy fund established in RSA 362-F:10.

362-F:8 Information Collection. By July 1 of each year, each provider of electricity shall submit a report to the commission, in a form approved by the commission, documenting its compliance with the requirements of this chapter for the prior year. The commission may investigate compliance and collect any information necessary to verify and audit the information provided to the commission by providers of electricity.

362-F:9 Purchased Power Agreements.

I. The commission may authorize, after notice and hearing, electric distribution companies to enter into multi-year purchase agreements with renewable energy sources for certificates, in conjunction with purchased power agreements from such sources, to meet reasonably projected renewable portfolio requirements and default service needs, if it finds such agreements to be in the public interest.

II. Determination of the public interest under this section shall include but not be limited to, consideration and balancing of the following factors:

(a) The efficient and cost-effective realization of the purposes and goals of this chapter;

(b) The restructuring policy principles of RSA 374-F:3;.

(c) The extent to which such multi-year procurements are likely to create a reasonable mix of resources, in combination with the company's overall energy and capacity portfolio, in light of the energy policy set forth in RSA 378:37 and either the distribution company's integrated least cost resource plan pursuant to RSA 378:37-41, if applicable, or a portfolio management strategy for default service procurement that balances potential benefits and risks to default service customers;

(d) The extent to which such procurement is conducted in a manner that is administratively efficient and promotes market-driven competitive innovations and solutions; and

(e) Economic development and environmental benefits for New Hampshire.

III. The commission may authorize one or more distribution companies to coordinate or delegate procurement processes under this section.

362-F:10 Renewable Energy Fund.

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. Interest 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 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 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 under RSA 362-F:8, make payment to the commission for the 2008 compliance year at the following rates for each megawatt-hour not met for a given class obligation through the acquisition of certificates:

(a) Class I- $56.

(b) Class II - $150.

(c) Class III - $28.

(d) Class IV - $28.

III. Beginning in 2009, 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.

IV. The commission shall make an annual report by October 1 of each year, beginning in 2009, to the legislative oversight committee on electric utility restructuring under RSA 374-F:5 detailing how the renewable energy fund is being used and any recommended changes to such use.

362-F:11 Application.

I. The commission, in a non-adjudicative process, shall certify the classification of an existing or proposed generation facility by issuing a determination within 45 days of receiving from an applicant sufficient information to determine its classification. The application shall contain the following:

(a) Name and address of applicant.

(b) Facility location and NEPOOL GIS identification number, if available.

(c) Description of the facility, including fuel type, gross generation capacity, initial commercial operation date, and, in the case of a biomass source, NOx and particulate matter emission rates and a description of pollution control equipment or practices proposed for compliance with applicable NOx and particulate matter emission rates.

(d) Such other information as the applicant may provide to assist in determining the classification of the generating facility.

II. The commission shall certify applications of customer-sited sources in a manner that is compatible with the procedures established for recognizing such production under RSA 362-F:6, II.

III. Biomass facilities otherwise meeting the requirements of a source shall be conditionally certified by the commission subject to compliance with the applicable NOx and particulate matter emission standards. Within 10 days of verification of compliance with emissions standards from the department, as provided in RSA 362-F:12, III, the commission, in a non-adjudicative process, shall designate the facility as eligible pursuant to RSA 362-F:6, III.

362-F:12 Verification of Emissions From Biomass Sources. Any source seeking to qualify using an eligible biomass technology shall verify emissions in accordance with the following methods:

I. For nitrogen oxide emissions, the source shall install and operate a continuous emissions monitor that meets departmental standards as codified in rules.

II. For particulate matter emissions, the source shall conduct an annual stack test in accordance with methods approved by the department. Upon completion of 3 annual tests which demonstrate compliance, the source may request of the department for a decrease in the frequency of testing, but to not less than once every 3 years.

III. Each such source shall file with the department and the commission within 45 days of the end of each calendar quarter an affidavit and documentation attesting to the source's average NOx emission rate for such quarter and the most recent particulate matter stack test results. For purposes of initial certification under RSA 362-F:6, the results of a stack test may be filed with the department at any time to demonstrate compliance with both the particulate matter and nitrogen oxide emissions standards. Within 30 days of a filing, the department shall provide verification of the emissions reported in the filing to the commission.

362-F:13 Rulemaking. The commission shall adopt rules, under RSA 541-A to:

I. Administer the electric renewable portfolio standard program, including the electric renewable portfolio standard program, including the development of an alternative to the regional generation information system to the extent necessary.

II. Ascertain, monitor, and enforce compliance with the program.

III. Include within the program electric production not tracked by ISO-New England from eligible customer-sited sources.

IV. Administer the renewable energy fund and make expenditures from the fund.

V. Establish procedures for designating the classification of existing or proposed generation facilities, including any preliminary designation, and to verify the completion of capital investments required of certain class I resources.

VI. Define when a repowered generation unit qualifies as a new class I source under RSA 362-F:4.

VII. Verify emissions from biomass sources.

VIII. Otherwise discharge the responsibilities delegated to the commission under this chapter.

2 New Subparagraph; Application of Receipts; Renewable Energy Fund. Amend RSA 6:12, I(b) by inserting after subparagraph (252) the following new subparagraph:

(253) Moneys deposited in the renewable energy fund established under RSA 362-F:10.

3 Default Service. Amend RSA 374-F:3, V(c) to read as follows:

(c) Default service shall be designed to provide a safety net and to assure universal access and system integrity. Default service shall be procured through the competitive market and may be administered by independent third parties. ***Any prudent incurred costs arising from compliance with the renewable portfolio standards of RSA 362-F for default service shall be recovered through the default service charge.*** The allocation of the costs of administering default service shall be borne by the customers of default service in a manner approved by the commission. If the commission determines it to be in the public interest, the commission may implement measures to discourage misuse, or long-term use, of default service. Revenues, if any, generated from such measures shall be used to defray stranded costs.

4 Competitive Electricity Supplier Requirement. Amend RSA 374-F:7, III to read as follows:

III. The commission may assess fines against, revoke the registration of, and prohibit from doing business in the state, any competitive electricity supplier that violates the requirements of this section ***or RSA 362-F***.

5 Thermal Renewable Study Committee; Statement of Purpose.

I.(a) Thermal renewable energy technologies provide fuel diversity to New Hampshire and New England energy supply through use of local renewable fuels and resources and have the potential to lower and stabilize future energy costs by helping to minimize regional dependence on imported fossil fuels such as natural gas, propane, and oil for heating and cogeneration.

(b) The increased use in New Hampshire and New England of thermal energy generated using low emission, renewable energy technologies will help to reduce the amount of nitrogen oxide, sulfur dioxide, particulate matter, and greenhouse gas emissions transported into New Hampshire and also generated in the state, thereby improving air quality and public health.

(c) In addition to benefits stated above, it is in the public interest to stimulate economic development by investment in low emission thermal renewable energy technologies in New England and in particular, New Hampshire.

II.(a) The office of energy and planning in consultation with the energy planning advisory board established by 2004, 164 shall study, evaluate, and make recommendations including potential legislation on:

(1) Incentives or other mechanisms that will promote the use of high efficiency thermal renewable energy technology and fuels in residential, commercial, and industrial applications;

(2) Regulatory technological or other impediments to the rapid deployment of thermal renewable energy systems; and

(3) Recommendations to the state and local governments on programs and actions that can be implemented to encourage residential, commercial, and industrial use of thermal renewable energy.

(b) The committee shall solicit advice and expertise from members of the public representing thermal energy technology and fuels and shall solicit the advice and expertise of any individual, state agency or organization, or state employee.

(c) The committee shall report its findings and any recommendations for proposed legislation to the president of the senate, the speaker of the house of representatives, the senate clerk, the house clerk. the governor. and the state library on or before November 30. 2008.

6 Effective Date.

I. Sections 1-4 of this act shall take effect 60 days after its passage.

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

EXHIBIT 7

05Apr2007... 0857h
05Apr2007... 1033h

07-0208
06/04

STATE OF NEW HAMPSHIRE

In the Year of Our Lord Two Thousand Seven

AN ACT establishing minimum renewable standards for energy portfolios.

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

1 Findings. The general court finds that:

I. New Hampshire's electric utility restructuring policy principles in RSA 374-F:3, IX recognize that increased use of renewable resources can provide environmental, economic, and energy security benefits.

II. In 2005, 2.3 million megawatt hours of electricity was generated from renewable energy facilities, including hydroelectric, biomass, and landfill gas power plants, with a combined generating capacity of 576 megawatts. This equaled 10 percent of the total electricity generation and 20 percent of the total retail electricity sales in New Hampshire in 2005.

III. The 2002 state energy plan prepared by the governor's office of energy and community services pursuant to 2001, 121 recommended establishing a renewable portfolio standard to support indigenous renewable energy sources such as wood and hydroelectric, to encourage investments in new renewable power generation in the state, and to allow New Hampshire to benefit from the diversity, reliability, and economic benefits that come from clean power.

IV. The state energy policy commission, established by 2006, 257:1 identified in its December 1, 2006 interim report principles that the governor and general court should use to evaluate any new energy policy initiative. One principle is to increase the state's fuel diversity by reducing the fossil fuel component of the state's energy mix and promoting use of renewable energy resources to buffer against global instability.

V. The energy planning advisory board established by 2004, 164:2 received extensive comments supporting establishment of a state renewable portfolio standard during a stakeholder forum on energy policy held June 23, 2006.

VI. Governor Lynch has committed New Hampshire to a goal of meeting 25 percent of the state's energy needs from renewable energy resources by 2025. Enactment of a renewable portfolio standard in New Hampshire will be an important step in meeting this goal.

2 New Chapter; Electric Renewable Portfolio Standard. Amend RSA by inserting after chapter 362-E the following new chapter:

CHAPTER 362-F

ELECTRIC RENEWABLE PORTFOLIO STANDARD

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

362-F:2 Definitions. In this chapter:

I. "Begun operation" means the date that a facility, or a capital addition thereto, for the purpose of repowering to renewable energy is first placed in service for purposes of the implementing regulations of the Internal Revenue Code of 1986, as amended.

II. "Biomass fuels" means plant-derived fuel including clean and untreated wood such as brush, stumps, lumber ends and trimmings, wood pallets, bark, wood chips or pellets, shavings, sawdust and slash, agricultural crops, biogas, or liquid biofuels, but shall exclude any materials derived in whole or in part from construction and demolition debris.

III. "Certificate" means the record that identifies and represents each megawatt-hour generated by a renewable energy generating source under RSA 362-F:6.

IV. "Commission" means public utilities commission.

V. "Customer-sited source" means a source that is interconnected on the end-use customer's site of the retail electricity meter in such a manner that it displaces all or part of the metered consumption of the end-use customer.

VI. "Default service" means electricity supply that is available to retail customers who are otherwise without an electricity supplier as defined in RSA 374-F:2, I-a.

VII. "Department" means the department of environmental services.

VIII. "Eligible biomass technologies" means generating technologies that use biomass fuels as their primary fuel, provided that the generation unit:

(a) Has a quarterly average nitrogen oxide (NOx) emission rate of less than or equal to 0.075 pounds/million British thermal units (lbs/Mmbtu), and an average particulate emission rate of less than or equal to 0.02 lbs/Mmbtu as measured and verified under RSA 362-F:12; and

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

IX. "End-use customer" means any person or entity that purchases electricity supply at retail in New Hampshire from another person or entity but shall not include:

(a) A generating facility taking station service at wholesale from the regional market administered by the independent system operator (ISO-New England) or self-supplying from its other generating stations; and

(b) Prior to January 1, 2010, a customer who purchases retail electricity supply, other than default service under a supply contract executed prior to January 1, 2007.

X. "Historical generation baseline" means:

(a) The average annual electrical production from a facility other than hydroelectric, stated in megawatt-hours, for the 3 years 2004 through 2006, or for the first 36 months after the facility began operation if that date is after December 31, 2001; provided that the historical generation baseline shall be measured regardless of whether or not the emissions from the facility during the baseline period meets emissions requirements of the class.

(b) The average annual production of a hydroelectric facility from the later of January 1, 1986 or the date of first commercial operation through December 31, 2005. If the hydroelectric facility experienced an upgrade or expansion during the historical generation baseline period, actual generation for that entire period shall be adjusted to estimate the average annual production that would have occurred had the upgrade or expansion been in effect during the entire historical generation baseline period.

XI. "Methane gas" means biologically derived methane gas from anaerobic digestion of organic materials from such sources as yard waste, food waste, animal waste, sewage sludge, septage, and landfill waste.

XII. "New England control area" means the term as defined in ISO-New England's transmission, markets and services tariff, FERC electric tariff no. 3, section II.

XIII. "Primary fuel" means a fuel or fuels, either singly or in combination, that comprises at least 90 percent of the total energy input into a generating unit.

XIV. "Provider of electricity" means a distribution company providing default service or an electricity supplier as defined in RSA 374-F:2, II.

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). 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.

XVI. "Year" means a calendar year beginning January 1 and ending December 31.

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 customer 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 III	3.5%	4.5%	5.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Class IV	0.5%	1%	1%	1%	1%	1%	1%	1%	1%

* Class I increases an additional one 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.

362-F:4 Electric Renewable Energy Classes.

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

(a) Wind energy.

(b) Geothermal energy.

(c) Hydrogen derived from biomass fuels or methane gas.

(d) Ocean thermal, wave, current, or tidal energy.

(e) Methane gas.

(f) Eligible biomass technologies.

(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.

(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.

II. Class II (New Solar) shall include the production of electricity from solar technologies, provided the source began operation after January 1, 2006.

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.

IV. Class IV (Existing Small Hydroelectric) shall include the production of electricity from hydroelectric energy, provided the source began operation prior to January 1, 2006, has a gross nameplate capacity of 5 MWs or less, has installed upstream and downstream dianadromous fish passages that have been required and approved under the terms of its license or exemption from the Federal Energy Regulatory Commission, and when required, has documented applicable state water quality certification pursuant to section 401 of the Clean Water Act for hydroelectric projects.

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.

VI. After notice and hearing, the commission may modify the class III and IV renewable portfolio standards requirements under RSA 362-F:3 for calendar years beginning January 1, 2012 such that the requirements are equal to an amount between 85 percent and 95 percent of the reasonably expected potential annual output of available eligible sources after taking into account demand from similar programs in either states.

362-F:5 Commission Review and Report. Commencing in January 2011, 2018, and 2025 the commission shall conduct a review of the class requirements in RSA 362-F:3 and other aspects of the electric renewable portfolio standard program established by this chapter. Thereafter, the commission shall make a report of its findings to the general court by November 1, 2011, 2018, and 2025, respectively, including any recommendations for changes to the class requirements or other aspects of the electric renewable portfolio standard program. The commission shall review, in light of the purposes of this chapter and with due consideration of the importance of stable long-term policies:

I. The adequacy or potential adequacy of sources to meet the class requirements of RSA 362-F:3;

II. The class requirements of all sources in light of existing and expected market conditions;

III. The potential for addition of a thermal energy component to the electric renewable portfolio standard;

IV. Increasing the class requirements relative to classes I and II beyond 2025;

V. The possible introduction of any new classes such as an energy efficiency class or the consolidation of existing ones;

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;

VII. The experience with and an evaluation of the benefits and risks of using multi-year purchase agreements for certificates, along with purchased power, relative to meeting the purposes and goals of this chapter at the least cost to consumers and in consideration of the restructuring policy principles of RSA 374-F:3; and

VIII. Alternative methods for renewable portfolio standard compliance, such as competitive procurement through a centralized entity on behalf of all consumers in all areas of the state.

362-F:6 Renewable Energy Certificates.

I. The electric renewable portfolio standard program established in this chapter shall utilize the regional generation information system (GIS) of energy certificates administered by ISO-New England and the New England Power Pool (NEPOOL) or their successors. If the regional GIS certificate tracking program administered by the ISO-New England is no longer operational or accessible, the commission shall develop an alternative certificate program, after public notice and hearing, designed to provide at least the same information on the type and generation of renewable energy resources as the GIS certificate tracking program.

II. The commission shall establish procedures by which electricity 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. The production shall be monitored and verified by an independent entity designated by the commission, which may include electric distribution companies.

III. The commission shall designate in a timely manner New Hampshire eligible renewable sources together with any conditions pursuant to this chapter to the certificate program administrator under paragraph I, with such sources being the recipient of all certificates issued for purpose of this chapter.

IV.(a) Certificates issued for purposes of complying with this chapter shall come from sources within the New England control area unless the source is located in a control area adjacent to the New England control area and the energy produced by the source is actually delivered into the New England control area for consumption by New England customers. The delivery of such energy from the source into the New England control area shall be verified by:

(1) A unit-specific bilateral contract for sale and delivery of a source's electrical energy to the New England control area is in place for the time period during which renewable certificates are generated;

(2) Confirmation from ISO-New England that the sale of the renewable energy was actually settled in the ISO market system; and

(3) Confirmation through the North American Electric Reliability Corporation tagging system that the import of energy into the New England control area actually occurred.

(b) The commission may impose such other requirements as it deems appropriate, including methods of confirming actual delivery of the electrical energy into the New England control area.

362-F:7 Sale, Exchange, and Use of Certificates.

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.

II. Certificates from behind-the-meter distributed generation shall be initially issued to the owner of the customer-sited source or their designee, regardless of whether the source has received assistance from the renewable energy fund established in RSA 362-F:10.

362-F:8 Information Collection. By July 1 of each year, each provider of electricity shall submit a report to the commission, in a form approved by the commission, documenting its compliance with the requirements of this chapter for the prior year. The commission may investigate compliance and collect any information necessary to verify and audit the information provided to the commission by providers of electricity.

362-F:9 Purchased Power Agreements.

I. Upon the request of one or more electric distribution companies and after notice and hearing, the commission may authorize such company or companies to enter into multi-year purchase agreements with renewable energy sources for certificates, in conjunction with or independent of purchased power agreements from such sources, to meet reasonably projected renewable portfolio requirements and default service needs to the extent of such requirements, if it finds such agreements or such an approach, as may be conditioned by the commission, to be in the public interest.

II. In determining the public interest, the commission shall find that the proposal is, on balance, substantially consistent with the following factors:

(a) The efficient and cost-effective realization of the purposes and goals of this chapter;

(b) The restructuring policy principles of RSA 374-F:3;

(c) The extent to which such multi-year procurements are likely to create a reasonable mix of resources, in combination with the company's overall energy and capacity portfolio, in light of the energy policy set forth in RSA 378:37 and either the distribution company's integrated least cost

resource plan pursuant to RSA 378:37-41, if applicable, or a portfolio management strategy for default service procurement that balances potential benefits and risks to default service customers;

(d) The extent to which such procurement is conducted in a manner that is administratively efficient and promotes market-driven competitive innovations and solutions; and

(e) Economic development and environmental benefits for New Hampshire.

III. The commission may authorize one or more distribution companies to coordinate or delegate procurement processes under this section.

IV. Rural electric cooperatives for which a certificate of deregulation is on file with the commission shall not be required to seek commission authorization for multi-year purchased power agreements or certificate purchase agreements under this paragraph.

362-F:10 Renewable Energy Fund.

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- $57.12.

(b) Class II - $150.

(c) Class III - $28.

(d) Class IV - $28.

III. Beginning in 2008, 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.

IV. The commission shall make an annual report by October 1 of each year, beginning in 2009, to the legislative oversight committee on electric utility restructuring under RSA 374-F:5 detailing how the renewable energy fund is being used and any recommended changes to such use.

362-F:11 Application.

I. The commission, in a non-adjudicative process, shall certify the classification of an existing or proposed generation facility by issuing a determination within 45 days of receiving from an applicant sufficient information to determine its classification. The application shall contain the following:

(a) Name and address of applicant.

(b) Facility location, ISO–New England asset identification number, and NEPOOL GIS facility code, if available.

(c) Description of the facility, including fuel type, gross generation capacity, initial commercial operation date, and, in the case of a biomass source, NOx and particulate matter emission rates and a description of pollution control equipment or practices proposed for compliance with applicable NOx and particulate matter emission rates.

(d) Such other information as the applicant may provide to assist in determining the classification of the generating facility.

II. The commission shall certify applications of customer-sited sources in a manner that is compatible with the procedures established for recognizing such production under RSA 362-F:6, II.

III. Biomass facilities otherwise meeting the requirements of a source shall be conditionally certified by the commission subject to compliance with the applicable NOx and particulate matter emission standards. Within 10 days of verification of compliance with emissions standards from the department, as provided in RSA 362-F:12, III, the commission, in a non-adjudicative process, shall designate the facility as eligible pursuant to RSA 362-F:6, III.

362-F:12 Verification of Emissions From Biomass Sources. Any source seeking to qualify using an eligible biomass technology shall verify emissions in accordance with the following methods:

I. For nitrogen oxide emissions, the source shall install and operate a continuous emissions monitor that meets departmental standards as codified in rules.

II. For particulate matter emissions, the source shall conduct an annual stack test in accordance with methods approved by the department. Upon completion of 3 annual tests which demonstrate compliance, the source may request of the department for a decrease in the frequency of testing, but to not less than once every 3 years.

III. Each such source shall file with the department and the commission within 45 days of the end of each calendar quarter an affidavit and documentation attesting to the source's average NOx emission rate for such quarter and the most recent particulate matter stack test results. For purposes of initial certification under RSA 362-F:6, the results of a stack test may be filed with the department at any time to demonstrate compliance with both the particulate matter and nitrogen oxide emissions standards. Within 30 days of a filing, the department shall provide verification of the emissions reported in the filing to the commission.

362-F:13 Rulemaking. The commission shall adopt rules, under RSA 541-A to:

I. Administer the electric renewable portfolio standard program including the development of an alternative to the regional generation information system to the extent necessary.

II. Ascertain, monitor, and enforce compliance with the program to the extent not addressed in the department's rules.

III. Include within the program electric production not tracked by ISO-New England from eligible customer-sited sources.

IV. Administer the renewable energy fund and make expenditures from the fund.

V. Establish procedures for the classification of existing or proposed generation facilities, including a provision for a preliminary designation option, and to verify the completion of capital investments required of certain class I resources.

VI. Define when a repowered generation unit qualifies as a new class I source under RSA 362-F:4.

VII. Otherwise discharge the responsibilities delegated to the commission under this chapter.

3 New Subparagraph; Application of Receipts; Renewable Energy Fund. Amend RSA 6:12, I(b) by inserting after subparagraph 252 the following new subparagraph:

(253) Moneys deposited in the renewable energy fund established under RSA 362-F:10.

4 Default Service. Amend RSA 374-F:3, V(c) to read as follows:

(c) Default service should be designed to provide a safety net and to assure universal access and system integrity. Default service should be procured through the competitive market and may be administered by independent third parties. ***Any prudently incurred costs arising from compliance with the renewable portfolio standards of RSA 362-F for default service or purchased power agreements shall be recovered through the default service charge.*** The allocation of the costs of administering default service should be borne by the customers of default service in a manner approved by the commission. If the commission determines it to be in the public interest, the commission may implement measures to discourage misuse, or long-term use, of default service. Revenues, if any, generated from such measures should be used to defray stranded costs.

5 Competitive Electricity Supplier Requirement. Amend RSA 374-F:7, III to read as follows:

III. The commission is authorized to assess fines against, revoke the registration of, and prohibit from doing business in the state, any competitive electricity supplier which violates the requirements of this section ***or RSA 362-F.***

6 Thermal Renewable Study; Statement of Purpose.

I.(a) Thermal renewable energy technologies provide fuel diversity to New Hampshire and New England energy supply through use of local renewable fuels and resources and have the potential to lower and stabilize future energy costs by helping to minimize regional dependence on imported fossil fuels such as natural gas, propane, and oil for heating and cogeneration.

(b) The increased use in New Hampshire and New England of thermal energy generated using low emission, renewable energy technologies will help to reduce the amount of nitrogen oxide, sulfur dioxide, particulate matter, and greenhouse gas emissions transported into New Hampshire and also generated in the state, thereby improving air quality and public health.

(c) In addition to benefits stated above, it is in the public interest to stimulate economic development by investment in low emission thermal renewable energy technologies in New England and in particular, New Hampshire.

II.(a) The office of energy and planning in consultation with the energy planning advisory board established by 2004, 164 shall study, evaluate, and make recommendations including potential legislation on:

(1) A thermal renewable portfolio standard and other incentives or mechanisms that will promote the use of high efficiency low emission thermal renewable energy technology and fuels in residential, commercial, and industrial applications;

(2) Regulatory, technological, or other impediments to the rapid deployment of thermal renewable energy systems; and

(3) Recommendations to the state and local governments on programs and actions that can be implemented to encourage residential, commercial, and industrial use of thermal renewable energy.

(b) The office of energy and planning shall solicit advice and expertise from members of the public representing thermal energy technology and fuels and may solicit the advice and expertise of any individual, state agency or organization, or state employee.

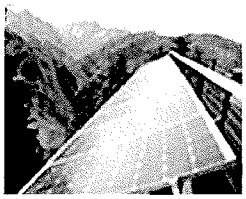
(c) The office of energy and planning shall report its findings and any recommendations for proposed legislation to the president of the senate, the speaker of the house of representatives, the senate clerk, the house clerk, the governor, and the state library on or before November 30, 2008.

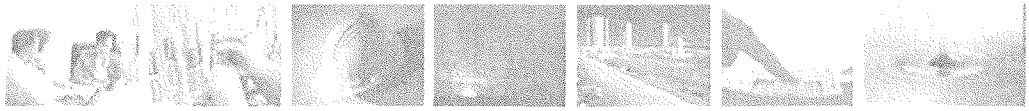
7 Effective Date.

I. Sections 1-4 of this act shall take effect 60 days after its passage.

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

EXHIBIT 8





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Electric Renewable Portfolio Standard (RPS)

New Hampshire 's RPS statute, RSA 362-F, requires each electricity provider to meet customer load by purchasing or acquiring certificates representing generation from renewable energy based on total megawatt-hours supplied. New Hampshire 's RPS statute divides renewable energy sources into four separate classes that include the following:

- Class I resources include generation facilities that began operation after January 1, 2006 and produce electricity from: wind energy; geothermal energy; hydrogen derived from biomass fuel or methane gas; ocean thermal, wave, current, or tidal energy; methane gas; or biomass. Displacement of electricity by end-use customers from solar hot water heating systems, incremental new production from Class III and IV sources, and existing hydropower and biomass facilities that began operation as a new facility through capital investment also qualify as class I sources.
- Class II sources include generation facilities that produce electricity from solar technologies and began operation after January 1, 2006 .
- Class III sources include generation facilities that began operation on or before January 1, 2006 and produce electricity from eligible biomass technologies having a gross nameplate capacity of 25 megawatts or less or methane gas facilities.
- Class IV sources include hydroelectric generation facilities that began operation on or before January 1, 2006 and have a gross nameplate capacity of 5 megawatts or less, has installed upstream and downstream diadromous fish passages approved by FERC and have obtained all necessary water quality certifications under section 401 of the Clean Water Act.

For 2008, the total RPS obligation is 4.0 percent of total generation supplied to customers. The RPS requirement increases to 7.5% for 2010, 13.8% for 2015 and 23.8% for 2025. The RPS obligations by class and year are:

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

Under the RPS statute, electricity providers are required to generate or purchase renewable energy certificates from suppliers through the New England Power Pool generation information system (NEPOOL-GIS). A renewable energy certificate represents 1 megawatt-hour of electricity produced

from eligible renewable energy sources and may be sold separately from the associated electricity.

If the electricity providers are not able to meet the RPS requirements by purchasing or acquiring renewable energy certificates, they must pay alternative compliance payments (ACPs). The 2011 alternative compliance payment prices by class are:

Inflation Adjusted Alternative Compliance Payment per Megawatt-hour				
Class	**2008**	**2009**	**2010**	**2011**
Class I	$58.58	$60.92	$60.93	$62.13
Class II	$153.84	$159.98	$160.01	$163.16
Class III	$28.72	$29.87	$29.87	$30.46
Class IV	$28.72	$29.87	$29.87	$30.46

Proceeds from the ACPs are then used to fund qualified renewable energy initiatives and projects.

On an annual basis, the New Hampshire Public Utilities Commission will review electricity providers' compliance with the previous year's RPS requirements. Electricity providers include New Hampshire 's competitive electricity suppliers and electric distribution utilities (Public Service Company of New Hampshire, Granite State Electric Company, Unitil Energy Systems, Inc. and the New Hampshire Electric Cooperative). In accordance with the Commission administration rules, Chapter Puc 2500 which implements the New Hampshire 's RPS Program, electricity providers file annual compliance reports by July 1 st of each year.

- The FORM E-2500 Annual RPS Compliance Filing for the 2009 compliance year is due on July 1, 2010. Click here for the FORM E-2500
- Summary of the ACPs paid into the renewable energy fund for the 2008 compliance year
- Information on how to apply for Renewable Energy Source Eligibility
- Status of completed or pending Renewable Energy Facility applications. (Excel)
- Electric Renewable Portfolio Standard - Annual Compliance Payments for 2009

If you have any questions about the RPS program, please check our Frequently Asked Questions for answers or contact Maureen Reno at (603)271-2431 or maureen.reno@puc.nh.gov

The information on this website is a summary of New Hampshire 's RPS program. For more details see the Puc 2500 Rules.

- Review RPS Law

EXHIBIT 9

Work Session #1: RPS Class Requirements

Minutes

March 15, 2010, 9:00 AM

Call-in Phone Number: 1-866-951-1151**, Conference Room number:** 5518132

I. **Adequacy of sources to meet class requirements**

A. Baseline data sources—what are they (ISO-NE, NEPOOL GIS, utilities, PUC, etc.)?

1. Should we measure supply in terms of energy (kWh) or capacity (kW)?
   - Current requirements are based on a percentage of load measured in kWh, so we should start with generation sources and assume a given level of output per source.
   - Would capacity be related to peak load? Suggestion made that the regulations be adjusted to require a capacity-test (weighted value for generation that has low capacity values).

2. NH sources vs. New England & New York resources
   - NYSERDA completed an RPS review study in 2009.
   - CT Clean Energy Fund Board is studying the CT RPS program (with assistance from consulting firm Sustainable Energy Advantage and NREL), and will release results in April.

3. What assumptions should be used to estimate current supply and demand?
   - Suggestion made that the Commission use the NEPOOL – GIS database to determine the eligible facilities and publicly provide a redacted version (mask generators names).
   - ISO-NE interconnection queue is very long, only about 30% of projects in queue historically get built. Or may be best to use a range. Others agreed that due to siting and financing issues, this assumption is reasonable.
   - When relying on the ISO-NE Interconnection queue, add a 1 year lag to the estimated operation date.
   - Commission should consider using a range of technology-specific capacity factors.
   - Suggestion to use a modeling straw proposal.

B. Class I-IV: Where are the surpluses and shortfalls?

1. Factors contributing to surpluses and shortfalls
2. Should surpluses/shortfalls be addressed? If so, how?
   - There is an oversupply of Class III RECs due to the unforeseen supply of RECs from New York-based LFG facilities. In-state biomass facilities cannot compete in current REC market because the market price is so far below the breakeven price of $85 per MWh. Biomass facilities rely on the REC revenues to recover operation costs (transportation and woodchips).
   - Suggestion made that NH change the Class III in-service date from 2006 to 1998: this would effectively disqualify the newer New York State LFG facilities.

- The Class III market depends on the CT Class I market, such that, when the CT market rebounds, there will be a shortage of NH Class III RECs. As a result, it is uncertain how long the current surplus in Class III RECs will exist.
- There is a shortage of Class IV RECs due to market barriers, such as the 5 MW size maximum and the fish passage requirement (costly to install and reduces output). The Nature Conservancy went on record that it would not support any changes to the current fish passage requirements. Heidi Kroll for Granite State Hydro Association expressed concern on how the PUC may rule in the Holyoke Case (DE 10-151).
- Suggestion made to reduce the Class IV REC requirement.
- There is currently a surplus in Class I RECs. There will be an excess supply of Class II RECs due to the unforeseen plethora of out-of-state sources that are certified. As a result, the price of Class I and Class II RECs has dropped precipitously.

Other Questions:

a) Given that NH represents approximately 9% of the ISO-NE load, how much would an increase in Class requirements affect the market REC price (of each Class)? How would such an increase impact retail electricity rates?
   - NHEC stated that there is a one-to-one impact of REC price increase/decrease on retail rates. Suggestion made for the Commission to use modeling to confirm such an impact.

b) Do you find the REC price of [insert Class] to be adequate toward viable financing of a renewable energy project located in NH?
   - No, the price of Class II RECs is so low that sources must rely on both REC and rebates.

c) What is the overall state of the current REC market [as a tool to increase renewable energy resources in NH]?
   - Everyone agreed that NH ratepayers are supporting too many out-of-state sources. Both RECs and rebates are drivers for investments in Class II sources. There is significant concern that if current REC prices fall any lower than existing levels, than many sources, particularly biomass, will not remain in operation. The current market values existing sources more than new sources.

II. Class requirements in light of current and expected market conditions

A. Factors influencing the REC market and retail electricity market

B. Forecasting and modeling
   1. Pros and Cons
   2. Available forecasting/modeling tools
   3. What assumptions do these tools employ?

- Multiple recommendations to use consulting firm Sustainable Energy Advantage (SEA), which offers a New England REC market forecasting model (REMO). REMO has done an excellent job of forecasting the impact of REC imports from NY and Canada. An SEA analyst stated that the REMO model has been pretty accurate in projecting REC prices when reviewing past predictions and price trends.

Other Questions:

d) If you could change the class requirements, would you? How?

- Add a thermal component with a different eligible operation date to the RPS requirements. Another suggestion was made that landfill gas should have its own class. A counterpoint was made that more classes lead to less flexibility. DES pointed out that very few landfills in NH could become eligible for any class of RECs, given the way they were originally constructed.

- In addition to a price cap (which is currently the alternative compliance payment; the ACP), NH could consider adding a price support mechanism similar to the Massachusetts SREC (solar REC) suggested price minimum that is set equal to project cost. Setting an outright price floor is another option. Supporting in-state sources through the use of multipliers is another option. Many expressed the need to create and maintain certainty in the market, particularly as the biomass facilities rely greatly on REC revenues to operate.

- There was significant discussion about the need for the Commission or the legislature to reduce the burden of reading the meters (or verifying the production) of small net-metered sources. Tie monitoring to system performance and let owner report data. Utility suggestion that the RECs should go to the host utility. Discussion ensued on the topic of REC ownership. Owners of small sources want the easiest approach and are rarely interested in playing in the REC market.

e) Where do you expect the REC market to go in the near term? Medium term?

f) What role does the perception of the future REC market play in a decision to develop a renewable energy project in NH? Elsewhere in New England?

III. Increase (Extension) in requirements beyond 2025 (Class I & II, statute as a whole)

A. Should an increase be recommended? Why or why not?

B. Would an extension reduce the uncertainty of investing in renewable energy?

- There was a near unanimous consensus that the RPS requirements for all classes must be extended beyond 2025 because all sources have a 20 to 25 years life and rely on this revenue stream through the majority of that project life. It may be instructive to follow the development of the Laidlow project case and SB 118, which proposes to remedy this issue by inserting the word "thereafter."

IV. Transition of new sources to existing sources (Class I & II)

A. When should new sources be re-classified as existing sources, if at all?

1. Methodology for transition

- It may be premature to consider a reclassification at this time. Any re-classification date should be tied to the life (life-cycle) of a given technology.

Workshop adjourned at approximately 11:45 am.

Please email all written comments pertaining to the topics of this workshop to rpsreview@puc.nh.gov no later than 4/12/2011.