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# ELECTRIC RENEWABLE PORTFOLIO STANDARD

# **ANNUAL COMPLIANCE REPORT FOR 2008**

October 1, 2009

Submitted to:

# THE LEGISLATIVE OVERSIGHT COMMITTEE ON ELECTRIC UTILITY RESTRUCTURING

Senator Jeb Bradley Representative Jacqueline Cali-Pitts Representative James Devine Representative James Garrity Representative Suzanne Harvey Representative Naida Kaen Senator Amanda Merrill

# TABLE OF CONTENTS

Introduction1Legislative Background2Electric Renewable Portfolio Standard Obligations3Renewable Energy Fund Proceeds5"Banking" of RECs and Impact for Future Compliance Years6Renewable Energy Fund Expenditures7Conclusion9Appendices10Appendix A: Projected RPS Obligations10Appendix B: NH Certified Facility Characteristics10Appendix C: New England RPS Obligations14	Executive Summary	
Electric Renewable Portfolio Standard Obligations3Renewable Energy Fund Proceeds5"Banking" of RECs and Impact for Future Compliance Years6Renewable Energy Fund Expenditures7Conclusion9Appendices10Appendix A: Projected RPS Obligations10Appendix B: NH Certified Facility Characteristics10	Introduction	
Renewable Energy Fund Proceeds5"Banking" of RECs and Impact for Future Compliance Years6Renewable Energy Fund Expenditures7Conclusion9Appendices10Appendix A: Projected RPS Obligations10Appendix B: NH Certified Facility Characteristics10	Legislative Background	2
<ul> <li>"Banking" of RECs and Impact for Future Compliance Years</li></ul>	Electric Renewable Portfolio Standard Obligations	
Renewable Energy Fund Expenditures       7         Conclusion       9         Appendices       10         Appendix A: Projected RPS Obligations       10         Appendix B: NH Certified Facility Characteristics       10	Renewable Energy Fund Proceeds	5
Conclusion       9         Appendices       10         Appendix A: Projected RPS Obligations       10         Appendix B: NH Certified Facility Characteristics       10	"Banking" of RECs and Impact for Future Compliance Years	6
Appendices10Appendix A: Projected RPS Obligations10Appendix B: NH Certified Facility Characteristics10	Renewable Energy Fund Expenditures	7
Appendix A: Projected RPS Obligations10Appendix B: NH Certified Facility Characteristics10	Conclusion	9
Appendix B: NH Certified Facility Characteristics	Appendices	
	Appendix A: Projected RPS Obligations	
Appendix C: New England RPS Obligations	Appendix B: NH Certified Facility Characteristics	
	Appendix C: New England RPS Obligations	

# TABLES

Table 1: Minimum Electric Renewable Portfolio Standards	3
Table 2: Electric Provider REC Obligation	4
Table 3: RECs Acquired for 2008 Compliance	5
Table 4: 2008 Alternative Compliance Payments Paid into the Renewable Energy Fund	l. 6
Table 5: RECs Banked for Future Compliance	7
-	

# **APPENDIX TABLES & FIGURES**

Appendix A, Table 1: Projected RPS Obligation in MWh	10
Appendix B: Table 1, NH Certified Facilities that produced RECs for the 2008	
Compliance Year, as of September 1, 2009	11
Appendix B: Table 2, NH Certified Facilities whose RECs will be used towards future	
compliance years, as of September 1, 2009	12
Appendix C, Figure 1: New England Class I RPS Obligations by State, 2009-2018	14

## Executive Summary

Since 2008, electric service providers have been subject to New Hampshire's Electric Renewable Portfolio Standard (RPS). RSA 362-F. Under the RPS statute, electric service providers have to purchase renewable energy certificates (RECs) in amounts that represent a percentage of their total electricity sales. The percentage requirements increase over time.

If RECs are not available for purchase, electric service providers have to make alternative compliance payments (ACPs). These payments are made to the Renewable Energy Fund (REF) which is administered by the Commission to support renewable energy initiatives such as incentive payments to residential owners of small renewable electric generation facilities powered by solar or wind.

During the first three months of the Commission's small renewable generator rebate program, the Commission received over 100 requests from residential owners of small renewable electric generation facilities totaling approximately \$680,000 in incentive payments. The Commission plans to expand the incentive payment programs to residential solar hot water heating systems and to commercial-scale thermal and renewable facilities of up to 100 kilowatts (or thermal equivalent).

Because of the market pricing for RECs and changing supply and demand, the Commission cannot predict with any certainty what funds will be available in future years.

#### Introduction

This report provides the Legislative Oversight Committee on Electric Utility Restructuring with an overview of the Public Utilities Commission's management of the REF established pursuant to RSA 362-F, New Hampshire's RPS law. The REF is supported by the ACPs that electricity providers must make to the REF if they do not purchase or obtain RECs to meet minimum percentage requirements of customer load from renewable energy sources. A REC represents a megawatt-hour (MWh) of electricity generated from a renewable generation source and is traded separately from such electricity in the New England market.

Pursuant to RSA 362-F:10, the Commission administers REF monies to support renewable energy initiatives and programs, and to offset the administrative costs of the RPS program. The REF supports the Commission's recently developed small residential renewable electric generation system incentive program that includes solar photovoltaic and wind power systems. The REF will also support the Commission's residential solar water heating and commercial-scale renewable electric and thermal generation system incentive programs that are currently under development. In addition, the REF may also be used to support renewable energy initiatives selected through a competitive request for proposals process. The four electric distribution utilities-- Public Service Company of New Hampshire (PSNH), Granite State Electric Company d/b/a National Grid (National Grid) Unitil Energy Systems, Inc. (UES) and the New Hampshire Electric Cooperative (NHEC)—and competitive energy suppliers file annual compliance reports with the Commission. Their reports indicate whether the RPS standard was met by the acquisition of the required RECs or by payments to the REF.

### Legislative Background

On May 11, 2007, Governor John Lynch signed into law House Bill 873, codified as RSA 362-F, which establishes New Hampshire's electric renewable portfolio standard law. RSA 362-F mandates that 23.8 percent of the state's electricity come from certain renewable sources by 2025. This closely aligns with the 25 x '25 initiative endorsed by Governor Lynch in August 2006, which calls for renewable resources to provide 25 percent of all of New Hampshire's energy requirements, including heat and transportation fuels as well as generation of electricity, by 2025.

The RPS law establishes four classes of renewable resources, each with their own minimum requirements:

- Class I represents generation facilities that began operation after January 1, 2006 and produce power from the following sources: wind, solar, geothermal, hydrogen (derived from biomass fuels or methane gas), ocean thermal, wave, current, tidal energy, methane gas, eligible biomass technologies, incremental generation and the displacement of electricity from solar water heating systems.
- Class II represents generation facilities that produce electricity from solar technologies and began operation after January 1, 2006.
- Class III represents existing landfill methane gas facilities and eligible biomass facilities that began operation on or before January 1, 2006.
- Class IV represents qualified hydroelectric facilities that began operation on or before January 1, 2006.

For the 2008 compliance year, electricity providers were required to obtain renewable energy certificates (RECs) only from Class III and Class IV sources.

House Bill 1628 (2008 N.H. Laws Ch. 268), which was signed into law on July 11, 2008, amended RSA 362-F:10 by requiring the Commission to administer incentive payments from the REF to residential owners of certain small renewable generation facilities that produce electricity with renewable technologies, typically solar electric panels or wind turbines. The incentive is a one-time payment of \$3 per watt of generation capacity, up to a maximum payment of \$6,000, or 50 percent of the system

New Hampshire Public Utilities Commission

costs, whichever is less. The renewable generation facility must qualify as a Class I or II source, have a total peak generation capacity of less than 5 kilowatts, have begun operation on or after July 1, 2008 and be located on or at the owner's residence. HB 1628 amended RSA 362-F:10 by providing that the "Commission, may, after notice and hearing, by order or rule, establish additional incentive or rebate programs for customersited thermal and renewable energy projects."

#### Electric Renewable Portfolio Standard Obligations

Electric service providers must comply with the RPS on a calendar-year basis and file reports regarding their compliance on July 1<sup>st</sup> of the following year. For the 2008 compliance year, electric service providers were required to purchase Class III RECs in an amount equal to 3.5 percent of total sales, and Class IV RECs in an amount equal to 0.5 percent of total sales. Six competitive electric service providers and the four New Hampshire electric distribution utilities filed compliance reports in July 2009. The RPS obligations by class and year are found in Table 1.

Calendar				
Year	Class I	Class II	Class III	Class IV
2008	0.00%	0.00%	3.50%	0.50%
2009	0.50%	0.00%	4.50%	1.00%
2010	1.00%	0.04%	5.50%	1.00%
2011	2.00%	0.08%	6.50%	1.00%
2012	3.00%	0.15%	6.50%	1.00%
2013	4.00%	0.20%	6.50%	1.00%
2014	5.00%	0.30%	6.50%	1.00%
2015	6.00%	0.30%	6.50%	1.00%
2016	7.00%	0.30%	6.50%	1.00%
2017	8.00%	0.30%	6.50%	1.00%
2018	9.00%	0.30%	6.50%	1.00%
2019	10.00%	0.30%	6.50%	1.00%
2020	11.00%	0.30%	6.50%	1.00%
2021	12.00%	0.30%	6.50%	1.00%
2022	13.00%	0.30%	6.50%	1.00%
2023	14.00%	0.30%	6.50%	1.00%
2024	15.00%	0.30%	6.50%	1.00%
2025	16.00%	0.30%	6.50%	1.00%

# Table 1: Minimum Electric Renewable Portfolio Standards

The minimum percentage requirements in Table 1 relate to the total megawatt hours (MWhs) of electricity supplied by the electric service provider to its end-use customers during the compliance year. (*See* Appendix A, Table 1 for projected RPS obligations in MWhs.) All together, New Hampshire electric service providers' reported that they supplied 10.5 million MWh in electricity to their customers in 2008.<sup>1</sup> For this amount of electricity, electric service providers had to acquire approximately 370,000 Class III RECs and 53,000 Class IV RECs.

	Total Retail Sales used to calculate obligation	Class III obligation	Class IV obligation
Distribution Utilities			
Granite State Electric Company d/b/a			
National Grid	659,504	23,083	3,298
New Hampshire Electric Cooperative	745,996	26,110	3,730
Public Service Company of New			
Hampshire	7,649,690	267,739	38,248
Unitil Energy Systems, Inc.	933,736	32,681	4,669
Distribution Utilities' Total	9,988,926	349,613	49,945
Competitive Suppliers' Total	561,615	19,657	2,809
New Hampshire Total	10,550,541	369,270	52,754

#### Table 2: Electric Provider REC Obligation (MWh)

Pursuant to the RPS statute, electric service providers are required to purchase or acquire RECs from suppliers through the New England Power Pool generation information system (NEPOOL GIS).<sup>2</sup> The NEPOOL GIS tracks all electricity generated within the ISO New England and electricity exchanged between the New England control area and adjacent control areas. The GIS also tracks the environmental attributes of each MWh sold. In the GIS system, a Renewable Energy Certificate, or REC, represents one MWh of electricity generated by renewable resources. Each renewable generation source is classified based on the source of energy (e.g. wind, solar, hydro, etc.) and may be purchased separately from the associated electricity. In addition, GIS assists the New England States in the implementation of RPS laws by identifying which RECs are eligible for purchase in each New England State.

The Commission has the authority to certify renewable facilities to produce New Hampshire RECs and notifies the GIS each time a certification is issued. Since 2007, the Commission has received 69 applications requesting certification to produce New Hampshire RECs. Thirteen of these applications are currently under review. Of the 51<sup>3</sup>

<sup>&</sup>lt;sup>1</sup> In accordance with the Commission administration rules, N.H. Code Admin. Rule Puc 2500, which implements the New Hampshire's RPS Program, electricity providers file annual compliance reports by July 1st of each year. The total retail MWh supplied to customers may not match the total retail sales reported by the distribution utilities in their FERC Form No. 1 Annual Reports because the competitive suppliers' RPS obligation excludes retail electricity, other than default service, sold under a supply contract executed prior to January 1, 2007. (*See* RSA 362-F:2 IX.)

<sup>&</sup>lt;sup>2</sup> Each provider's RPS obligation and the number of RECs acquired through the NEPOOL GIS was verified by the GIS reports submitted with the E-2500 Form RPS Compliance Reports.

<sup>&</sup>lt;sup>3</sup> The total number of facilities includes generation sites that have multiple facilities.

certified facilities, 12 facilities are certified to produce Class III RECs and 11 are certified to produce Class IV RECs.<sup>4</sup> Although the minimum requirements for Class I and Class II RECs do not begin until 2009 and 2010, respectively, the Commission has certified 21 Class I and 7 Class II facilities to produce RECs. (*See* Appendix B for the list of certified facilities.) RECs acquired from these facilities may be banked for future compliance. Of the 51 certified facilities, 14 facilities are located in New Hampshire, 23 in New England and 14 in New York.

	Class III RECs	Class IV RECs	Percent of Class III Obligation	Percent of Class IV Obligation
Distribution Utilities				
Granite State Electric Company d/b/a				
National Grid	0	0	0%	0%
New Hampshire Electric Cooperative	0	3,730	0%	100%
Public Service Company of New Hampshire	181,288	38,248	68%	100%
Unitil Energy Systems, Inc.	23,964	3,074	73%	66%
Distribution Utilities' Total	205,252	45,052	59%	90%
Competitive Suppliers' Total	14,776	820	76%	29%
New Hampshire Total	220,028	45,872	60%	87%

## Table 3: RECs Acquired for 2008 Compliance

Pursuant to the RPS statute, electricity service providers are required to either acquire RECs or make alternative compliance payments to meet RPS requirements. For 2008, electric service providers acquired or purchased a total of approximately 220,000 Class III RECs and 46,000 Class IV RECs. The majority of these RECs are associated with electricity generated in 2008.<sup>5</sup> The electric service providers met about 60 percent of their Class III REC obligation and 87 percent of their Class IV REC obligation by purchasing or acquiring RECs.

## **Renewable Energy Fund Proceeds**

The majority of the electric service providers met the remainder of their obligations by making ACPs.<sup>6</sup> If the electric service providers had not purchased any RECs and made only ACPs to meet their 2008 requirements, approximately \$12.1 million would have been deposited in the REF. However, because the electric service providers purchased or obtained RECs to meet a substantial portion of their RPS obligations,

<sup>&</sup>lt;sup>4</sup> Pursuant to the enactment of HB 229 in 2009, the N.H. Legislature certified six hydroelectric facilities to produce Class IV RECs for a limited time period (the second half of 2008 and the first quarter of 2009).

<sup>&</sup>lt;sup>5</sup> An exception is Public Service Company of New Hampshire (PSNH)'s acquisition of 80,321 Class III RECs associated with electricity generated during the first quarter of. 2009. RSA 362-F:7 allows electricity providers to acquire up to 30 percent of their obligation from certificates generated during the quarter following the compliance year.

<sup>&</sup>lt;sup>6</sup> The 2008 inflation adjusted Class III and Class IV ACP is \$28.72 per MWh.

approximately \$4.5 million was deposited in the REF, consisting of approximately \$4.3 million in Class III ACPs and about \$200,000 in Class IV ACPs.

	Class III ACPs	Class IV ACPs	Total ACPs
Distribution Utilities			
Granite State Electric Company d/b/a National Grid	\$662,944	\$94,719	\$757,662
New Hampshire Electric Cooperative	\$749,879	\$0	\$749,879
Public Service Company of New Hampshire	\$2,482,873	\$0	\$2,482,873
Unitil Energy Systems, Inc.	\$250,346	\$45,799	\$296,145
Distribution Utilities' Total	\$4,146,041	\$140,518	\$4,286,559
Competitive Suppliers' Total	\$140,228	\$57,129	\$197,358
New Hampshire Total	\$4,286,270	\$197,647	\$4,483,917

## Table 4: 2008 Alternative Compliance Payments Paid into the Renewable Energy Fund

For 2009 compliance, each electric service provider will have to purchase Class III RECs in an amount equal to 4.5 percent of total sales, Class IV RECs in an amount equal to 1.0 percent of total sales, and Class I RECs in an amount equal to 0.05 percent of total sales. As with any compliance year, if, providers cannot meet these increased requirements, they will have to make ACPs into the REF pursuant to RSA 362-F.<sup>7</sup>

#### "Banking" of RECs and Impact for Future Compliance Years

Pursuant to RSA 362-F:7, electric service providers may purchase RECs in excess of their requirements for a particular calendar year and hold or "bank" the RECs for future compliance periods. Table 5 provides a summary of banked RECs by electric service provider. As depicted on Table 5, electric service providers banked 2,000 Class III RECs and 5,000 Class IV RECs. These RECs can be used to meet RPS compliance requirements for the 2009 compliance year, thus reducing the amount of ACPs deposited in the REF.

Table 5 shows that 36,000 Class I RECs have been banked for use in future compliance years. For the 2009 compliance year, the Class I ACP amount is \$60.92 per REC and the use of these banked RECs for compliance in lieu of making the ACP payment will impact deposits into the REF. Similarly, 62 Class II RECs have been banked and the 2009 Class II ACP amount is \$159.98 per REC with similar impacts on deposits into the REF.

<sup>&</sup>lt;sup>7</sup> The 2009 inflation adjusted Class I ACP is \$60.92 per MWh and the ACP for Class III and Class IV is \$29.87 per MWh.

	Class I	Class II	Class III	Class IV
Distribution Utilities				
Granite State Electric Company				
d/b/a National Grid	227	0	0	0
New Hampshire Electric				
Cooperative	0	62	0	163
Public Service Company of New				
Hampshire	35,823	0	0	4,919
Unitil Energy Systems, Inc.	0	0	0	0
Distribution Utilities' Total	36,050	62	0	5,082
<b>Competitive Suppliers' Total</b>	0	0	2,036	180
New Hampshire Total	36,050	62	2,036	5,262

### Table 5: RECs Banked for Future Compliance

Many of the renewable energy facilities certified for RECs in New Hampshire are also certified to produce RECs for other states' RPS programs. *See* Appendix B. As a result, whether a certified facility will sell RECs to New Hampshire electric service providers depends on the New Hampshire REC market price relative to other states' market prices. For example, all of the New Hampshire Class III facilities (existing biomass and landfill methane gas) also qualify to receive Connecticut Class I RECs. Those generators may choose to sell RECs into the Connecticut market if the market price for Connecticut Class I RECs is higher than New Hampshire Class III RECs price, thereby restricting the supply of New Hampshire RECs.<sup>8</sup>

The market price for RECs is determined by the supply and demand for RECs in New Hampshire and New England. As is the case in New Hampshire, the New England demand for RECs is determined by state legislative requirements for electricity providers to provide a minimum percent of their sales to customers from renewable energy sources. (*See* Appendix C for more discussion on the regional REC market.) Class I, II, III and IV sources that qualify in other states may sell RECs into these other markets. Therefore, given the dynamic nature of the regional REC market, the availability and price of New Hampshire RECs in future compliance years is unpredictable.

#### **Renewable Energy Fund Expenditures**

Pursuant to RSA 362-F:10, the Commission may use REF monies to administer the RPS program. The budgeted 2010 fiscal year appropriation for fund expenditures is

<sup>&</sup>lt;sup>8</sup> According to Evolution Markets, as of September 11, 2009, 2009 vintage CT Class I RECs are currently trading at \$27.00 per REC. The most recent bid and offer prices for New Hampshire Class III RECs are \$26.00 and \$29.00 per REC, respectively. Any trades would be at a price between the bid and offer prices.

\$376,735.<sup>9</sup> These expenditures include a portion of the Commission's current expenses; personnel-related expenses such as salaries, benefits, training and educational services; consulting services; and transfers to other state agencies.

When establishing the budget, the Commission assumed that 2.5 full time equivalent positions and their associated overhead costs would be necessary to administer the RPS program, which includes the residential incentive payment program and development of additional incentive payment programs. Specifically, the tasks associated with RPS program administration include:

- Developing necessary application forms and reports and promulgating the necessary administrative rules for the program;
- Processing renewable energy source certification applications and making recommendations to the Commission;
- Compiling certification applications and posting data on the Commission's website;
- Receiving annual RPS compliance reports, and verifying the accuracy of the reports;
- Compiling compliance report data and reporting results to the legislature;
- Tracking changes to the NEPOOL GIS rules and reporting to the GIS Working Group;
- Working the Department of Environmental Services regarding facility certification issues; and
- Updating material regarding the RPS program on the Commission's website.

In addition to the budgeted expenses described above, the REF monies will be used to support thermal and electric renewable energy initiatives, including residential and commercial-scale incentive programs. The first of these programs, established pursuant to RSA 362-F:10, V, is the residential incentive program for small renewable electric generation systems that begin operation on or after July 1, 2008. Between July, 2009, when the REF monies first became available, and September 24, 2009, the Commission received 118 applications requesting incentive payments towards the cost of 93 solar electric and 25 wind power installations. As of September 24, 2009, the amount of funds requested by qualified applicants approximates \$680,000. While the law originally limited residential incentive payments to 10 percent of the REF, the Legislature

<sup>&</sup>lt;sup>9</sup> Because the Commission did not receive REF monies until July 2009, the start of the 2010 fiscal year, there was no budget for the 2009 fiscal year.

removed this limitation in 2009, thus allowing all qualified applicants to receive an incentive payment, subject to available funding.

The Commission is developing additional incentive payment programs for residential solar hot water systems, and commercial-scale thermal and electrical renewable technologies.

The Commission also has the authority to use REF monies to support renewable energy initiatives selected through a competitive request for proposals process. (*See* Puc 2507.03.) There are no immediate plans to issue an RFP, however, as the extent of the demand for incentive payments in the first year of REF funding is not yet known.

#### Conclusion

The electricity providers paid approximately \$4.5 million into the REF for 2008 RPS compliance. The REF monies received in future compliance years will largely depend on REC market conditions and any changes to New Hampshire's RPS law. The unpredictability of funding pose challenges for budgeting funds for existing and new rebate programs and initiatives. Changes in REC availability from year to year and the market price of RECs may affect the Commission's ability to support such programs. The Legislature can address the uncertainty of funding by allowing the Commission to allocate money from the Greenhouse Gas Emissions Reduction Fund to the REF if necessary to maintain the rebate programs.

## **Appendices**

## Appendix A: Projected RPS Obligations

	Total Retail Sales to				
Calendar Year	Retail Customers (MWh)*	Class I	Class II	Class III	Class IV
2008	10,828,984	0	0	379,014	54,145
2009	10,958,932	54,795	0	493,152	109,589
2010	11,090,439	110,904	4,436	609,974	110,904
2011	11,223,524	224,470	8,979	729,529	112,235
2012	11,358,207	340,746	17,037	738,283	113,582
2013	11,494,505	459,780	22,989	747,143	114,945
2014	11,632,439	581,622	34,897	756,109	116,324
2015	11,772,028	706,322	35,316	765,182	117,720
2016	11,913,293	833,930	35,740	774,364	119,133
2017	12,056,252	964,500	36,169	783,656	120,563
2018	12,200,927	1,098,083	36,603	793,060	122,009
2019	12,347,338	1,234,734	37,042	802,577	123,473
2020	12,495,506	1,374,506	37,487	812,208	124,955
2021	12,645,453	1,517,454	37,936	821,954	126,455
2022	12,797,198	1,663,636	38,392	831,818	127,972
2023	12,950,764	1,813,107	38,852	841,800	129,508
2024	13,106,173	1,965,926	39,319	851,901	131,062
2025	13,263,448	2,122,152	39,790	862,124	132,634

### Appendix A, Table 1: Projected RPS Obligation in MWh

\*2008 figure is based of MWH Sales reported by the distribution utilities in the 2008 FERC Form No. 1 Annual Reports and monthly migration reports. 2009 to 2025 figures assume 1.2 percent annual growth in sales.

#### Appendix B: NH Certified Facility Characteristics

Table 1 lists the Commission certified Class III and IV facilities that produced RECs eligible for 2008 compliance. Per HB 229, six hydroelectric facilities were eligible to receive RECs for electricity only produced during the second half of 2008 and the first quarter of 2009. These facilities include the North Gorham and Bar Mills projects, owned by FPL Energy Maine Hydro, LLC, and the Canaan, Gorham, Hooksett, and Jackman hydroelectric facilities, owned by Public Service Company of New Hampshire.

Docket	Name	Total Gross Nameplate Capacity (MW)	Туре	State	NH Certification Code #	Effective Date to Produce RECs	Certified in other states
	Class III Facilities						
08-147	Granby LFG	3.20	LFG Methane	MA	NH-III-09-014	02/12/09	yes
08-158	High Acres Landfill 1*	3.20	LFG Methane	NY	NH-III-09-001	12/10/08	yes
08-101	Johnston Landfill	16.20	LFG Methane	RI	NH-III-09-015	02/16/09	yes
08-176	Model City Landfill	5.60	LFG Methane	NY	NH-III-09-009	12/30/08	yes
08-177	Ontario Landfill	5.60	LFG Methane	NY	NH-III-09-012	02/19/09	yes
08-024	Pinetree Bethlehem	17.10	Biomass	NH	NH-III-08-004	06/09/08	yes
08-051	Pinetree Tamworth	23.80	Biomass	NH	NH-III-08-005	07/08/08	yes
08-175	Seneca Landfill*	5.60	LFG Methane	NY	NH-III-09-010	12/30/08	yes
08-175	Seneca Landfill*	5.60	LFG Methane	NY	NH-III-09-010	12/30/08	yes
	Total Class III Capacity	85.90					
	Class IV Facilities						
08-124	Bar Mills	4.00	Hydro	ME	NH-IV-08-016	09/25/08	
07-124	Benton Falls	4.47	Hydro	ME	NH-IV-08-001	01/01/08	yes
08-053	Canaan	1.10	Hydro	VT	NH-IV-08-007	08/27/08	no
09-055	Centennial Island Hydro	0.64	Hydro	MA	NH-IV-09-020	03/18/09	no
08-068	Cocheco Falls	0.75	Hydro	NH	NH-IV-08-013	08/22/08	yes
08-053	Gorham	2.15	Hydro	NH	NH-IV-08-008	08/27/08	yes
08-053	Hooksett	1.60	Hydro	NH	NH-IV-08-009	08/27/08	no
08-053	Jackman	3.20	Hydro	NH	NH-IV-08-010	08/27/08	no
08-123	North Gorham	2.25	Hydro	ME	NH-IV-08-015	09/25/08	yes
09-012	Salmon Falls Hydro	1.20	Hydro	ME	NH-IV-09-019	03/31/09	yes
08-059	West Springfield	1.20	Hydro	MA	NH-IV-08-003	05/03/08	yes
	Total Class IV Capacity	22.56					

## **Appendix B: Table 1, NH Certified Facilities that produced RECs for the 2008 Compliance Year, as of September 1, 2009**

\*Generation site includes multiple generation facilities.

These facilities produced 141,744 Class III and 51,450 Class IV RECs for a total of 193,194 RECs in 2008. Public Service Company of New Hampshire also used 80,321 Class III RECs that were produced during the first quarter of 2009 towards its 2008

obligation. These figures exceed the aggregated figures in Table 3, thereby demonstrating that some providers banked certificates.

Table 2 includes Commission certified Class I, II, III and IV facilities whose RECs will be eligible for future compliance years.

		Total Gross Nameplate Capacity			NH Certification	Effective Date to Produce	Certified in other
Docket	Name	(MW)	Туре	State	Code #	RECs	states
	Class I Facilities						
08-109	Beaver Ridge Wind	4.50	Wind	ME	NH-I-08-014	09/02/08	no
08-142	Chaffee Landfill	4.80	LFG Methane	NY	NH-I-08-019	11/10/08	yes
08-167	Colonie Landfill	4.80	LFG Methane	NY	NH-I-09-008	12/30/08	yes
09-056	Crossroads Landfill	3.20	LFG Methane	ME	NH-I-09-025	05/11/09	yes
08-173	DANC Landfill	4.80	LFG Methane	NY	NH-I-09-006	12/30/08	yes
09-026	Fitchburg Landfill	4.80	LFG Methane	MA	NH-I-09-016	02/13/09	yes
08-158	High Acres Landfill 2*	6.40	LFG Methane	NY	NH-I-09-002	12/10/08	yes
09-125	High Sheldon Wind Energy Center	112.50	Wind Power	NY	NH-I-09-028	07/13/09	ves
08-105	Lempster Wind	24.00	Wind	NH	NH-I-08-012	08/29/08	yes
09-121	Madison County Landfill	1.60	LFG Methane	NY	NH-I-09-027	06/22/09	no
	Mark Richey Woodworking Wind				NH-I-09-030,		
09-132	Farm	0.63	Wind Power	MA	NH-I-09-031	07/27/09	yes
08-143	Mill Seat Landfill	6.40	LFG Methane	NY	NH-I-08-020	11/10/08	yes
08-174	Modern Landfill	6.40	LFG Methane	NY	NH-I-09-007	12/30/08	yes
09-082	New Milford Landfill	2.40	LFG Methane	CT	NH-I-09-026	06/15/09	yes
08-044	Schiller Station # 5	50.00	Biomass	NH	NH-I-08-006	07/28/08	yes
08-175	Seneca Landfill**	6.40	LFG Methane	NY	NH-I-09-011	12/30/08	yes
08-042	Smith Hydro, J. Brodie**	17.60	Hydro	NH	NH-I-08-011	07/29/08	no
09-130	Sova, Charles E.	0.01	Wind Power	NH	NH-I-09-029	07/17/09	no
08-133	UNH CHP Plant*	7.90	LFG Methane	NH	NH-I-09-003	12/23/08	no
08-129	UNH Power Plant*	4.60	LFG Methane	NH	NH-I-09-004	12/23/08	no
09-046	Vergennes Hydro**	4.60	Hydro	VT	NH-I-09-018	03/09/09	yes
	Total Class I	278.34					
	Class II Facilities						
09-034	Aldi PV Project	0.50	Solar PV	СТ	NH-II-09-017	02/24/09	no
08-025	Brockton Brightfield	0.46	Solar PV	MA	NH-II-08-002	03/06/08	yes
09-064	Daymon PV Project	0.35	Solar PV	СТ	NH-II-09-021	04/06/09	no
08-150	Essex Meadows	0.10	Solar PV	СТ	NH-II-09-013	01/30/09	no
08-122	Lee Company	0.31	Solar PV	СТ	NH-II-08-017	10/16/08	yes

# **Appendix B: Table 2, NH Certified Facilities whose RECs will be used towards future compliance years, as of September 1, 2009**

# New Hampshire Public Utilities Commission

08-165	Pilgrim Furniture	0.33	Solar PV	СТ	NH-II-09-005	12/23/08	yes
08-128	Thule Corporation	0.32	Solar PV	СТ	NH-II-08-018	10/21/08	no
	Total Class II Capacity	2.36					
	<b>Class III Facilities</b>						
09-043	Fall River Landfill	5.70	LFG Methane	MA	NH-III-09- 024	05/04/09	yes
08-147	Granby LFG	3.20	LFG Methane	MA	NH-III-09- 014	02/12/09	yes
08-158	High Acres Landfill 1*	3.20	LFG Methane	NY	NH-III-09- 001	12/10/08	yes
08-101	Johnston Landfill	16.20	LFG Methane	RI	NH-III-09- 015	02/16/09	yes
08-176	Model City Landfill	5.60	LFG Methane	NY	NH-III-09- 009	12/30/08	yes
08-177	Ontario Landfill	5.60	LFG Methane	NY	NH-III-09- 012	02/19/09	yes
08-024	Pinetree Bethlehem	17.10	Biomass	NH	NH-III-08- 004	06/09/08	yes
08-051	Pinetree Tamworth	23.80	Biomass	NH	NH-III-08- 005	07/08/08	yes
08-175	Seneca Landfill*	5.60	LFG Methane	NY	NH-III-09- 010	12/30/08	yes
08-175	Seneca Landfill*	5.60	LFG Methane	NY	NH-III-09- 010	12/30/08	yes
09-083	Turnkey I Landfill*	3.20	LFG Methane	NH	NH-III-09- 022	04/30/09	yes
09-084	Turnkey II Landfill* Total Class III	6.20	LFG Methane	NH	NH-III-09- 023	06/17/09	yes
	Capacity	101.00					
	Class IV Facilities				NH-IV-08-		
07-124	Benton Falls	4.47	Hydro	ME	001	01/01/08	yes
09-055	Centennial Island Hydro	0.64	Hydro	MA	NH-IV-09- 020	03/18/09	no
08-068	Cocheco Falls	0.75	Hydro	NH	NH-IV-08- 013	08/22/08	yes
09-012	Salmon Falls Hydro	1.20	Hydro	ME	NH-IV-09- 019	03/31/09	yes
08-059	West Springfield	1.20	Hydro	MA	NH-IV-08- 003	05/03/08	yes
	Total Class IV Capacity	8.26					

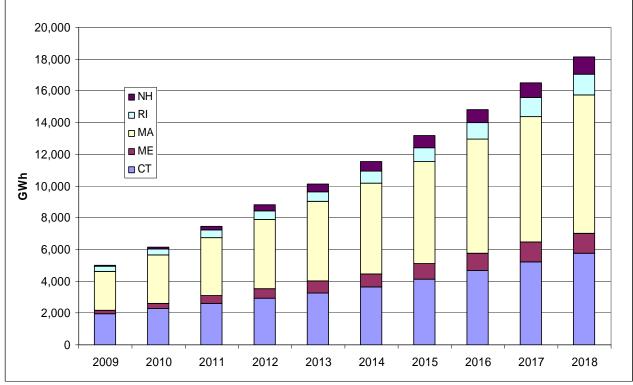
\*Generation site includes multiple generation facilities.

\*\* Only the electric output greater than the historical generation baseline is eligible to receive RECs.

## Appendix C: New England RPS Obligations

Figure 1 shows the Commission projection in the growth of demand for RECs in the five New England states that have similar, albeit not identical, mandates for new renewable energy generation. Those mandates include the Connecticut Class I, the new Maine RPS, Massachusetts Class I and the Rhode Island Renewable Energy Portfolio. The gigawatt-hour (GWh) projections for New Hampshire's Class I and Class II obligations are the same figures used in Appendix A Table 1. The forecasts for the other New England states are based on ISO-NE load growth projections.

Appendix C, Figure 1: New England Class I RPS Obligations by State, 2009-2018



Source: <u>www.dsireusa.org</u> ISO-NE CELT Report, 2009